PART #	DESCRIPTION	LIST PRICE

FUNCTIONAL TEST INSTRUMENTATION AND SUB-SYSTEM PRICE LIST

All North American prices are ExWorks - Origin unless noted otherwise.

Payment terms unless otherwise noted are 30 days.

Price, product design, configuration and specifications subject to change without notice.

PART # DESCRIPTION LIST PRICE

FUNCTIONAL INSTRUMENTATION TABLE OF CONTENTS

PART # DESCRIPTION LIST PRICE

Warranty notes

Standard hardware and software is defined to be that listed in the Price List with Teradyne Part Numbers.

WARRANTY

These notes applicable to the warranty do not replace any warranty statement but are notes in addition to standard warranty statements.

1. Software warranty is 1 year. The software shipped with the test system has one year of software support included in the purchase price of the test system.
2. For non-standard (not in the price list) OEM hardware, Teradyne will provide one year of exact swap support (E-Swap). This one year commences upon shipment or installation, if installed by Teradyne. E-Swap support is the repair and return of the same instrument sent in for repair. For non-standard (not in the price list) OEM software, Teradyne will pass on to the customer the warranty of the manufacturer. This will be the full warranty or whatever is remaining on it at the time of shipment.

INSTALLATION

1. Prices for systems and options ordered with systems include installation by Teradyne Global Field Service.
2. If the customer wishes Teradyne Field Service to install hardware and software options and upgrades ordered subsequent to system order, installation must be quoted at standard rates. Exceptions to this are options where installation is specifically stated as included.
3. For non-standard (not in the Price List) OEM hardware and / or software, installation is not included unless specifically quoted.

PART #	DESCRIPTION	LIST PRICE

Policy Statements

1. All customers are required to sign a Teradyne Software License Agreement.

2. Shipments are made F.O.B. Factory (North Reading).

3. This information is proprietary to Teradyne, and is to be used only for the purpose of preparing quotations or placing orders for the products listed herein.

4. If non-standard (not in the Price List) OEM instrumentation and/or software is provided as part of a Spectrum Series system quotation, Teradyne policy is to quote at 33% (x1.33) mark-up over the OEM's published U.S. list price. When the non-standard OEM instrumentation and/or software plus ICA and ITA cable kit price exceeds 30% of the total recurring system price, the price of the non-standard OEM instrumentation and/or software will be marked up an additional 50% (x1.5), for a total markup of 99.5% (*1.995).Integration and handling charges are quoted separately.

5. If non-standard (not in Price List) miscellaneous integration materials (e.g. cables, connectors, tools, computer components, Card Cages and mechanical assemblies) are provided as part of a quotation, Teradyne policy is to quote at 150% (x 2.5) mark-up over OEM published U.S. list price. Integration charges are quoted separately.

6. For BAE TUA's (Adaptors, Cables, Load Boards) for CTS, Teradyne's policy is to quote at 75% (x 1.75) mark-up over BAE published U.S. list price when purchased with a CTS system. Standalone BAE TUA's will be quoted at 150% (x 2.5) mark-up over BAE published U.S. list price.

7. For Third Party Services, Teradyne's policy is to quote 66% (x1.66) mark up over OEM published U.S. list prices for all third party services incorporated into any support agreement.

8. For all non-Teradyne manufactured instruments purchased after the system is purchased (installed & spares), the price will be marked up an additional 50%. Non-Teradyne manufactured spares purchased with a new system will be marked up an additional 50%.

9. For all customer furnished instruments there will be a processing, handling, and integration charge equal to 25% of the vendor list price for the item. If more than 2 of the same instrument are provided to Teradyne as CFE for the same order, and same delivery time, instruments after the first 2 will have the CFE capped at $1000 per additional instrument. When the non-standard OEM instrumentation and/or software plus ICA and ITA cable kit price exceeds 30% of the total recurring system price when priced per policy statements 4 & 5, or the CFE is supplied to Teradyne independent of a system purchase, the price of the customer furnished instruments will be

PART #	DESCRIPTION	LIST PRICE

marked up an additional 50% (x1.5), for a total markup of 37.5% (*1.375). Teradyne does not calibrate CFE instruments as part of the integration.

10. For all customer furnished hardware and misc items there will be a processing, handling, and integration charge equal to 100% of the vendor list price for the item. If more than 2 of the same item are provided to Teradyne as CFE for the same order, and same delivery time, items after the first 2 will have the CFE capped at $1000 per additional item.

11. Third party NRE (Non-Recurring Engineering) required to implement custom solutions will be marked up 100% over Teradyne cost.

12. Support Agreements less than 1 year in duration may be subject to a 10% administrative fee.

13. For ITA's and associated materials (Adapters, cables, load boards) that are delivered with, or in support of a Teradyne developed TPS, Teradyne policy is to quote at 100% (x2.0) mark-up over vendor list price for the materials, or completed ITA assembly. Design and integration of the ITA is quoted separately

14. When Teradyne provides pricing beyond 60 days, pricing will be escalated 2.9% per year.

15. For support contracts that are based on system list price, that list price is determined by taking the list price at the time of the most recent sale or quotation and esclating by 2.9% per year.

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PART #	DESCRIPTION	LIST PRICE

Section A: ANALOG TEST SUBSYSTEMS

AI-761-10 — **8 CHANNEL MULTI-FUNCTION ANALOG (MFA) INSTRUMENT** — **$ 42950**

Analog Test Instrumentation:

- High-density VXI C-Size instrument for high-performance operational and parallel test
- (8) Multi-Function Analog (MFA) Tester-Per-Pin Channels
  - 200 MHz Timer/Counter (T/C)
  - 200 MS/s, 14-bit Arbitrary Waveform Generator (AWG)
  - 50 MS/s, 12-bit Digitizer

`

NOTES:

Hardware Maintenance and Service Support for One Year:

- One-year warranty on Teradyne manufactured PC boards
- 90 days Advanced Replacement Service

VXI Chassis:

- Ai-76x hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Ai-76x instruments

Development Support:

For first time integration of the Ai-760 in new or updated test systems, Teradyne recommends the following integration support items:

- 093-403-00 Ai-760 Developer Cable Kit

Software:

- Includes software license to use the AI-76x on the test system that includes this instrument and on stand alone computers used for program development at the same site as the instrument
- If physical media is required order 601-196-00 Ai-760 System Software Media Kit

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AI-762-20	**AI-762-20 GENERATION 2 HIGH-PERFORMANCE ANALOG INSTRUMENTATION SUBSYSTEM**
	
	Analog Test Instrumentation:
	• High-density VXI C-Size instrument for high-performance operational and parallel test
	• (8) Multi-Function Analog (MFA) Tester-Per-Pin Channels
	  • 1ns resolution Timer/Counter (T/C)
	  • 200 MS/s, 14-bit Arbitrary Waveform Generator (AWG)
	  • 50 MS/s, 12-bit Digitizer
	• 6½ Digital Multimeter (DMM)
	• 2-Channel 2 GS/s Digital Sampling Oscilloscope (DSO)
	
	NOTES:
	Hardware Maintenance and Service Support for One Year:
	• One-year warranty on Teradyne manufactured PC boards
	• 90 days Advanced Replacement Service
	
	VXI Chassis:
	• Ai-76x hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Ai-76x instruments
	
	Development Support:
	For first time integration of the Ai-760 in new or updated test systems, Teradyne recommends the following integration support items:
	  • 093-403-00 Ai-760 Developer Cable Kit
	
	Software:
	• Includes software license to use the AI-76x on the test system that includes this instrument and on stand alone computers used for program development at the same site as the instrument
	• If physical media is required order 601-196-00 Ai-760 System Software Media Kit
	
	Interfaces:
	• It is recommended that the MFA Common Interface Board (CIB) P/N # 608-441-50 be used with the instrument. The CIB provides additional SSMB connections for trigger access.
		$ 57210

PART #	DESCRIPTION	LIST PRICE

AI-762-10	**AI-762-10 GENERATION 2 HIGH-PERFORMANCE ANALOG INSTRUMENTATION SUBSYSTEM**
	
	Analog Test Instrumentation:
	• High-density VXI C-Size instrument for high-performance operational and parallel test
	• (8) Multi-Function Analog (MFA) Tester-Per-Pin Channels
	  • 1ns resolution Timer/Counter (T/C)
	  • 200 MS/s, 14-bit Arbitrary Waveform Generator (AWG)
	  • 50 MS/s, 12-bit Digitizer
	• 6½ Digital Multimeter (DMM)
	
	NOTES:
	
	Hardware Maintenance and Service Support for One Year:
	• One-year warranty on Teradyne manufactured PC boards
	• 90 days Advanced Replacement Service
	
	VXI Chassis:
	• Ai-76x hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Ai-76x instruments
	
	Development Support:
	For first time integration of the Ai-760 in new or updated test systems, Teradyne recommends the following integration support items:
	  • 093-403-00 Ai-760 Developer Cable Kit
	
	Software:
	• Includes software license to use the AI-76x on the test system that includes this instrument and on stand alone computers used for program development at the same site as the instrument
	• If physical media is required order 601-196-00 Ai-760 System Software Media Kit
	
	Interfaces:
	• It is recommended that the MFA Common Interface Board (CIB) P/N # 608-441-50 be used with the instrument. The CIB provides additional SSMB connections for trigger access.
		$ 45520

PART #	DESCRIPTION	LIST PRICE

AI-762-60	**AI-762-60 GENERATION 2 8 CHANNEL MULTI-FUNCTION ANALOG (MFA) INSTRUMENT**
	Analog Test Instrumentation:
	• High-density VXI C-Size instrument for high-performance operational and parallel test
	• (8) Multi-Function Analog (MFA) Tester-Per-Pin Channels
	  • 1ns resolution Timer/Counter (T/C)
	  • 200 MS/s, 14-bit Arbitrary Waveform Generator (AWG)
	  • 50 MS/s, 12-bit Digitizer
	`
	NOTES:
	
	Hardware Maintenance and Service Support for One Year:
	• One-year warranty on Teradyne manufactured PC boards
	• 90 days Advanced Replacement Service
	
	VXI Chassis:
	• Ai-76x hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Ai-76x instruments
	
	Development Support:
	For first time integration of the Ai-760 in new or updated test systems, Teradyne recommends the following integration support items:
	  • 093-403-00 Ai-760 Developer Cable Kit
	
	Software:
	• Includes software license to use the AI-76x on the test system that includes this instrument and on stand alone computers used for program development at the same site as the instrument
	• If physical media is required order 601-196-00 Ai-760 System Software Media Kit
	
	Interfaces:
	• It is recommended that the MFA Common Interface Board (CIB) P/N # 608-441-50 be used with the instrument. The CIB provides additional SSMB connections for trigger access.
		$ 39200

PART #	DESCRIPTION	LIST PRICE

AI-762-70	**AI-762-70 GENERATION 2 16 CHANNEL MULTI-FUNCTION ANALOG (MFA) INSTRUMENT**
	
	Analog Test Instrumentation:
	• High-density VXI C-Size instrument for high-performance operational and parallel test
	• (16) Multi-Function Analog (MFA) Tester-Per-Pin Channels
	  • 1ns resolution Timer/Counter (T/C)
	  • 200 MS/s, 14-bit Arbitrary Waveform Generator (AWG)
	  • 50 MS/s, 12-bit Digitizer
	
	NOTES:
	
	Hardware Maintenance and Service Support for One Year:
	• One-year warranty on Teradyne manufactured PC boards
	• 90 days Advanced Replacement Service
	
	VXI Chassis:
	• Ai-76x hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Ai-76x instruments
	
	Development Support:
	For first time integration of the Ai-760 in new or updated test systems, Teradyne recommends the following integration support items:
	  • 093-403-00 Ai-760 Developer Cable Kit
	
	Software:
	• Includes software license to use the AI-76x on the test system that includes this instrument and on stand alone computers used for program development at the same site as the instrument
	• If physical media is required order 601-196-00 Ai-760 System Software Media Kit
	
	Interfaces:
	• It is recommended that the MFA Common Interface Board (CIB) P/N # 608-441-50 be used with the instrument. The CIB provides additional SSMB connections for trigger access.
		$ 55970

PART #	DESCRIPTION	LIST PRICE
AI-762-50	**AI-762-50 GENERATION 2 HIGH-PERFORMANCE ANALOG INSTRUMENTATION SUBSYSTEM** **Analog Test Instrumentation:** • High-density VXI C-Size instrument for high-performance operational and parallel test • 2-Channel 2 GS/s Digital Sampling Oscilloscope (DSO) **NOTES:** **Hardware Maintenance and Service Support for One Year**: • One-year warranty on Teradyne manufactured PC boards • 90 days Advanced Replacement Service **VXI Chassis**: • Ai-76x hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Ai-76x instruments **Development Support:** For first time integration of the Ai-760 in new or updated test systems, Teradyne recommends the following integration support items: • 093-403-00 Ai-760 Developer Cable Kit **Software:** • Includes software license to use the AI-76x on the test system that includes this instrument and on stand alone computers used for program development at the same site as the instrument • If physical media is required order 601-196-00 Ai-760 System Software Media Kit	**$ 28870**

PART #	DESCRIPTION	LIST PRICE

AI-760-20	**HIGH-PERFORMANCE ANALOG INSTRUMENTATION SUBSYSTEM**
	Analog Test Instrumentation:
	• High-density VXI C-Size instrument for high-performance operational and parallel test
	• (8) Multi-Function Analog (MFA) Tester-Per-Pin Channels
	  • 200 MHz Timer/Counter (T/C)
	  • 200 MS/s, 14-bit Arbitrary Waveform Generator (AWG)
	  • 50 MS/s, 12-bit Digitizer
	• 6½ Digital Multimeter (DMM)
	• 2-Channel 1 GS/s Digital Sampling Oscilloscope (DSO)
	
	NOTES:
	
	Hardware Maintenance and Service Support for One Year:
	• One-year warranty on Teradyne manufactured PC boards
	• 90 days Advanced Replacement Service
	
	VXI Chassis:
	• Ai-76x hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Ai-76x instruments
	
	Development Support:
	For first time integration of the Ai-760 in new or updated test systems, Teradyne recommends the following integration support items:
	  • 093-403-00 Ai-760 Developer Cable Kit
	
	Software:
	• Includes software license to use the AI-76x on the test system that includes this instrument and on stand alone computers used for program development at the same site as the instrument
	• If physical media is required order 601-196-00 Ai-760 System Software Media Kit
		$ 61370

PART #	DESCRIPTION	LIST PRICE

AI-760-10	**HIGH-PERFORMANCE ANALOG INSTRUMENTATION SUBSYSTEM**
	Analog Test Instrumentation:
	• High-density VXI C-Size instrument for high-performance operational and parallel test
	• (8) Multi-Function Analog (MFA) Tester-Per-Pin Channels
	  • 200 MHz Timer/Counter (T/C)
	  • 200 MS/s, 14-bit Arbitrary Waveform Generator (AWG)
	  • 50 MS/s, 12-bit Digitizer
	• 6½ Digital Multimeter (DMM)
	
	NOTES:
	
	Hardware Maintenance and Service Support for One Year:
	• One-year warranty on Teradyne manufactured PC boards
	• 90 days Advanced Replacement Service
	
	VXI Chassis:
	• Ai-76x hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Ai-76x instruments
	
	Development Support:
	For first time integration of the Ai-760 in new or updated test systems, Teradyne recommends the following integration support items:
	• 093-403-00 Ai-760 Developer Cable Kit
	
	Software:
	• Includes software license to use the AI-76x on the test system that includes this instrument and on stand alone computers used for program development at the same site as the instrument
	• If physical media is required order 601-196-00 Ai-760 System Software Media Kit
		$ 49080

PART #	DESCRIPTION	LIST PRICE

AI-761-20	**16 CHANNEL MULTI-FUNCTION ANALOG (MFA) INSTRUMENT**
	Analog Test Instrumentation:
	• High-density VXI C-Size instrument for high-performance operational and parallel test
	• (16) Multi-Function Analog (MFA) Tester-Per-Pin Channels
	  • 200 MHz Timer/Counter (T/C)
	  • 200 MS/s, 14-bit Arbitrary Waveform Generator (AWG)
	  • 50 MS/s, 12-bit Digitizer
	
	NOTES:
	
	Hardware Maintenance and Service Support for One Year:
	• One-year warranty on Teradyne manufactured PC boards
	• 90 days Advanced Replacement Service
	
	VXI Chassis:
	• Ai-76x hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Ai-76x instruments
	
	Development Support:
	For first time integration of the Ai-760 in new or updated test systems, Teradyne recommends the following integration support items:
	  • 093-403-00 Ai-760 Developer Cable Kit
	
	Software:
	• Includes software license to use the AI-76x on the test system that includes this instrument and on stand alone computers used for program development at the same site as the instrument
	• If physical media is required order 601-196-00 Ai-760 System Software Media Kit
		$ 61370

608-441-50	**AI-762(GEN 2) MFA TRIGGER CIB** This CIB provdes access to MFA channel triggers using industry standard SMB connectors	**$ 1200**
609-688-00	**AI-760-20 CALIBRATION CABLE KIT** The Ai-760-20 calibration cable kit includes the following items: (1) Ai-760 DMM calibration cable interface board (1) Ai-760 DMM cable set (1) Ai-760 MFA calibration cable interface board (1) Ai-760 MFA calibration cable set (1) Ai-760 DSO calibration cable set	**$ 5790**

PART #	DESCRIPTION	LIST PRICE
609-688-01	**AI-762 CALIBRATION CABLE KIT** The Ai-762 calibration cable kit includes the following items: (1) Ai-762 DMM calibration cable interface board (1) Ai-762 DMM cable set (1) Ai-762 MFA calibration cable interface board (1) Ai-762 MFA calibration cable set (1) Ai-762 DSO calibration cable set	**$ 5790**
628-525-00	**AI-760 MFA ATTENUATOR CIB**	**$ 2070**
601-196-00	**AI-760 SYSTEM SOFTWARE MEDIA KIT** **iStudio for Ai-760 Analog Test Instrument** • iStudio Software License • Graphical User Interface Software • Function Panels • Software Media and Documentation on CD-ROM **IVI Compliant Instrument Software :** • Instrument Driver License • C and C# Instrument Driver API Software • Self-Test and Calibration Software • Software Simulation • Software Media and Documentation on CD-ROM **Note:** • The license to use this software is included with the Ai-760 instruments. • This software may also be used on stand alone computers used in program development at the same site as the instrument	**$ 1200**
093-403-00	**AI-760 DEVELOPER CABLE KIT** Ai-760 connection and adapter cables for use during TPS program development and debug. Contains the following cables and interface accessories: • (2) Developer DSO Probe Adapter Cable 4" SSMB plug to BNC jack probe adapter cables • (1) Developer DMM Adapter Cable DB15 to 5 banana plugs cable • (5) Developer SSMB Channel Cable 24" RG316/U SSMB plug to SSMB plug connector cables • (5) BNC Channel Cable 24" RG316/U SSMB plug to BNC plug connector cables • (1) Strain relief bracket Aluminum bracket (and attachment screws) and (20) tie wraps to provide cable strain relief for Ai-760 front panel connections	**$ 1460**

PART #	DESCRIPTION	LIST PRICE
AI-705-00	**HIGH DENSITY 8 CHANNEL MULTIFUNCTION ANALOG INSTRUMENTATION SUBSYSTEM** A High-Density VXI C-Size Instrument for Parallel Analog Test includes 8 channels with voltage ranges from -12 to +12V **Each Ai-705-00 channel has 6 independent instruments including** • Function Generator • Arbitrary Waveform Generator • Digitizer • DMM • Limit Detector • Timer Counter **VXI plug&play Software for Windows NT Framework:** • Driver • Soft Front Panel • Function Panel • Self-Test and Calibration Software • Software Media and Documentation on CD-ROM **Hardware Maintenance and Service Support for One Year**: • One Year Warranty on Teradyne Manufactured PC Boards • 90 days Advanced Replacement Service CE Certification **Notes** • Includes software license to use Ai-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.	**$ 32200**

PART #	DESCRIPTION	LIST PRICE
AI-710-00	**HIGH DENSITY 32 CHANNEL MULTIFUNCTION ANALOG INSTUMENTATION SUBSYSTEM** A High-Density VXI C-Size Instrument for Parallel Analog Test includes 32 channels with voltage ranges from -12 to +12V. **Each Ai-710-00 channel has 6 independent instruments including** • Function Generator • Arbitrary Waveform Generator • Digitizer • DMM • Limit Detector • Timer Counter **VXI plug&play Software for Windows NT Framework:** • Driver • Soft Front Panel • Function Panel • Self-Test and Calibration Software • Software Media and Documentation on CD-ROM **Hardware Maintenance and Service Support for One Year**: • One Year Warranty on Teradyne Manufactured PC Boards • 90 days Advanced Replacement Service CE Certification **Notes** • Includes software license to use Ai-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.	**$ 47580**

PART #	DESCRIPTION	LIST PRICE

Section B: BUS TEST INSTRUMENTS

BI-411-00 **4-MODULE EXTENDED BUS TEST INSTRUMENT** **$ 68010**

- A High-Density VXI C-Size Instrument for Serial Bus Test Emulation
- Includes 4 Bus Modules
- Supports the Bi-4 Series Basic Bus Set (MIL-STD-1553 A/B, ARINC 429, ARINC 573, RS-232, RS-422, RS-423, RS-485)

Each Bi4-Series channel has:

- Bi-Directional Differential Pin Electronics
- VXI plug&play Software
  - Driver
  - Soft Front Panel
  - Function Panel
  - Self-Test Software

Hardware Maintenance and Service Support for One Year:

- One Year Warranty on Teradyne Manufactured PC Boards
- 90 days Advanced Replacement Service
- CE Certification

Notes

- Includes software license to use Bi-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.

PART #	DESCRIPTION	LIST PRICE

BI-411-01	**4-MODULE EXTENDED BUS TEST INSTRUMENT**
	• A High-Density VXI C-Size Instrument for Serial Bus Test Emulation
	• VXI 4.0 Compliant
	• Includes 4 Bus Modules
	• Supports the Bi-4 Series Basic Bus Set (MIL-STD-1553 A/B, ARINC 429, ARINC 573, RS-232, RS-422, RS-423, RS-485)
	
	Each Bi4-Series channel has:
	• Bi-Directional Differential Pin Electronics
	• VXI plug&play Software:
	  • Driver
	  • Soft Front Panel
	  • Function Panel
	  • Self-Test Software
	
	Hardware Maintenance and Service Support for One Year:
	• One Year Warranty on Teradyne Manufactured PC Boards
	• 90 days Advanced Replacement Service
	• CE Certification
	Notes
	• Includes software license to use Bi-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
		$ 68010

PART #	DESCRIPTION	LIST PRICE

BI-410-00	**4 MODULE BUS TEST INSTRUMENT**
	• A High-Density VXI C-Size Instrument for Serial Bus Test and Emulation includes 4 Bus Modules.
	• Supports the Bi-4 Series Basic Bus Set (Mil-STD-1533 A/B, ARINC 429, ARINC 573, RS-232, RS-422, RS-423, RS-485)
	
	Each Bi4-Series channel has:
	• Bi-Directional Differential Pin Electronics
	• VXI plug&play Software
	  • Driver
	  • Soft Front Panel
	  • Function Panel
	  • Self-Test Software
	
	Hardware Maintenance and Service Support for One Year:
	• One Year Warranty on Teradyne Manufactured PC Boards
	• 90 days Advanced Replacement Service
	• CE Certification
	
	Notes
	• Includes software license to use Bi-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
		$ 64750

PART #	DESCRIPTION	LIST PRICE

BI-410-01	**4 MODULE BUS TEST INSTRUMENT**
	• A High-Density VXI C-Size Instrument for Serial Bus Test and Emulation includes 4 Bus Modules.
	• Supports the Bi-4 Series Basic Bus Set (Mil-STD-1533 A/B, ARINC 429, ARINC 573, RS-232, RS-422, RS-423, RS-485)
	• VXIbus 4.0 compatible covers
	
	Each Bi4-Series channel has:
	• Bi-Directional Differential Pin Electronics
	• VXI plug&play Software:
	  • Driver
	  • Soft Front Panel
	  • Function Panel
	  • Self-Test Software
	
	Hardware Maintenance and Service Support for One Year:
	• One Year Warranty on Teradyne Manufactured PC Boards
	• 90 days Advanced Replacement Service
	• CE Certification
	
	Notes
	• Includes software license to use Bi-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
		$ 64750

PART #	DESCRIPTION	LIST PRICE

BI-410-20	**2 MODULE BUS TEST INSTRUMENT**
	• A High-Density VXI C-Size Instrument for Serial Bus Test and Emulation includes 2 Bus Modules.
	• Supports the BI-4 Series Basic Bus Set (MIL-STD-1553 A/B, ARINC 429, ARINC 573, RS-232, RS-422, RS-423, RS-485)
	
	Each Bi4-Series channel has:
	• Bi-Directional Differential Pin Electronics
	• VXI plug&play Software
	  • Driver
	  • Soft Front Panel
	  • Function Panel
	  • Self-Test Software
	
	Hardware Maintenance and Service Support for One Year:
	• One Year Warranty on Teradyne Manufactured PC Boards
	• 90 days Advanced Replacement Service
	• CE Certification
	Notes
	• Includes software license to use Bi-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
		$ 41700

BI-420-02	**BI4-SERIES 1394B 2 MODULES**
	Each Bi4-Series channel has:
	• Bi-Directional Differential Pin Electronics
	• VXI plug&play Software:
	  • Driver
	  • Soft Front Panel
	  • Function Panel
	  • Self-Test Software
	
	Hardware Maintenance and Service Support for One Year:
	• One Year Warranty on Teradyne Manufactured PC Boards
	• 90 days Advanced Replacement Service
	• CE Certification
	Notes
	• Includes software license to use Bi-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
		$ 39660

PART #	DESCRIPTION	LIST PRICE

BI-420-04	**BI4-SERIES 1394B 4 MODULES**
	Each Bi4-Series channel has:
	• Bi-Directional Differential Pin Electronics
	• VXI plug&play Software:
	  • Driver
	  • Soft Front Panel
	  • Function Panel
	  • Self-Test Software
	
	Hardware Maintenance and Service Support for One Year:
	• One Year Warranty on Teradyne Manufactured PC Boards
	• 90 days Advanced Replacement Service
	• CE Certification
	Notes
	• Includes software license to use Bi-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
		$ 55780

BI-411-73	**2-MODULE BUS TEST INSTRUMENT (ARINC573 ONLY)** A High-Density VXI C-Size Instrument for Serial Bus Test Emulation • 2 modules dedicated to support of ARINC-573 Each Bi4-Series channel has: • Bi-Directional Differential Pin Electronics • VXI plug&play Software • Driver • Soft Front Panel • Function Panel • Self-Test Software Hardware Maintenance and Service Support for One Year: • One Year Warranty on Teradyne Manufactured PC Boards • 90 days Advanced Replacement Service • CE Certification **Notes** • Includes software license to use Bi-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.	**$ 25490**
M-996-85	**BI-411 MIC AND CAN CIB** Cable Interface Board for the Bi-411 that adds capability for the dual-redundant version of the MIC-UBIC bus and the CAN bus protocols. Pass-through capability for 70 ohm shielded twisted pair (MIL-STD-1553) and 50 ohm coax (RS232, 422, 485, ARINC 429). Includes programmable pull-ups/pull-downs and switchable termination.	**$ 12740**

PART #	DESCRIPTION	LIST PRICE
607-264-00	**BI4-SERIES MULTIPLE BUS INTERFACE ADAPTER** Cable interface adapter (CIB) for four (4) channel Bi-410 and Bi-411 Bus Test Instruments. This adapter enables fixed cable connections between the Bi-4 Series modules and multiple interface test connectors used for multiple standard serial busses. This CIB eliminates the need for wiring to a switch assembly in order to test the following busses: • ARINC 429 • ARINC 573 • TIA/EIA - 232 • TIA/EIA - 422 • TIA/EIA - 485 • MIL-STD-1553 • MIL-STD-1773 **Note:** Customers ordering this item for use in US Navy CASS and CASS compatible test systems must order Teradyne Part Number M-996-55 listed in Price Catalog Section K: CASS Subsystems and Options	**$ 5880**
620-311-00	**CABLE INTERFACE BOARD TO ITT CANNON CONNECTORS FOR 2-MODULE BI-420-02**	**$ 1930**
620-311-50	**CABLE INTERFACE BOARD TO ITT CANNON CONNECTORS FOR 4-MODULE BI-420-04**	**$ 3800**

PART #	DESCRIPTION	LIST PRICE

Section C: VXI DIGITAL TEST INSTRUMENT & OPTIONS

DI-050-02 **DI-SERIES GENERATION 1 50 MHZ 64-CHANNEL CHANNEL CARD** **$ 96770**

Modular Digital Test Instrument:

- A high-density VXI C-Size instrument for flexible, high-performance parallel digital test
- 64 bi-directional channels packaged in a single VXI slot.
- 50 MHz maximum data rate for general-purpose applications
- 2.5 ns timing resolution for drive and detect edges and pattern period
- Ranges covering ±30V with up to a 30V swing
- Phases/windows/levels programmable per channel
- Drive and detect voltage accuracy of 1% ±125 mV on voltage ranges below ±15V
- Differential and LVDS capability by pairing of adjacent channels
- 8M pattern Deep Serial Memory per channel
- Programmable as multiple independent Instruments on 32-channel boundaries
- Programmable asynchronous handshake engine

NOTES:

Hardware Maintenance and Service Support for One Year:

- One Year Warranty on Teradyne Manufactured PC Boards
- 90 days Advanced Replacement Service

VXI Chassis & PC Controller:

Di-Series hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Di-Series Channel Cards

Requires low-latency connection to controlling PC which requires one of:

- Embedded (in chassis) VXI controller PC
- Controller for external PC
  - NI MXI-VXI-Express
  - NI MXI-2s

Software:

- Includes software license to use Di-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
- If physical media is required order 602-977-00 DI-SERIES SOFTWARE MEDIA KIT

PART #	DESCRIPTION	LIST PRICE

DI-050-01	**DI-SERIES GENERATION 1 50 MHZ 32-CHANNEL CHANNEL CARD**
	Modular Digital Test Instrument:
	• A high-density VXI C-Size instrument for flexible, high-performance parallel digital test
	• 32 bi-directional channels packaged in a single VXI slot.
	• 50 MHz maximum data rate for general-purpose applications
	• 2.5 ns timing resolution for drive and detect edges and pattern period
	• Ranges covering ±30V with up to a 30V swing
	• Phases/windows/levels programmable per channel
	• Drive and detect voltage accuracy of 1% ±125 mV on voltage ranges below ±15V
	• Differential and LVDS capability by pairing of adjacent channels
	• 8M pattern Deep Serial Memory per channel
	• Programmable as multiple independent Instruments on 32-channel boundaries
	• Programmable asynchronous handshake engine
	
	NOTES:
	Hardware Maintenance and Service Support for One Year:
	• One Year Warranty on Teradyne Manufactured PC Boards
	• 90 days Advanced Replacement Service
	
	VXI Chassis & PC Controller:
	Di-Series hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Di-Series Channel Cards
	
	Requires low-latency connection to controlling PC which requires one of:
	• Embedded (in chassis) VXI controller PC
	• Controller for external PC
	  • NI MXI-VXI-Express
	  • NI MXI-2
	
	Software:
	• Includes software license to use Di-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
	• If physical media is required order 602-977-00 Di-Series Software Media Kit
		$ 62240

PART #	DESCRIPTION	LIST PRICE

DI-050-12	**DI-SERIES GENERATION 2 50 MHZ 64-CHANNEL CHANNEL CARD**
	Modular Digital Test Instrument:
	• A high-density VXI C-Size instrument for flexible, high-performance parallel digital test
	• 64 bi-directional channels packaged in a single VXI slot.
	• 50 MHz maximum data rate for general-purpose applications
	• 1 ns timing resolution for drive and detect edges and pattern period
	• Ranges covering ±30V with up to a 30V swing
	• Phases/windows/levels programmable per channel
	• Drive and detect voltage accuracy of 1% ±50 mV on voltage ranges below ±15V
	• Differential and LVDS capability by pairing of adjacent channels
	• 8M pattern Deep Serial Memory per channel
	• Programmable as multiple independent Instruments on 32-channel boundaries
	• Programmable asynchronous handshake engine
	
	NOTES:
	Hardware Maintenance and Service Support for One Year:
	• One Year Warranty on Teradyne Manufactured PC Boards
	• 90 days Advanced Replacement Service
	
	VXI Chassis & PC Controller:
	Di-Series hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Di-Series Channel Cards
	
	Requires low-latency connection to controlling PC which requires one of:
	• Embedded (in chassis) VXI controller PC
	• Controller for external PC
	  • NI MXI-VXI-Express
	  • NI MXI-2s
	
	Software:
	• Includes software license to use Di-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
	• If physical media is required order 602-977-00 Di-Series Software Media Kit
		$ 96250

PART #	DESCRIPTION	LIST PRICE

DI-050-11	**DI-SERIES GENERATION 2 50 MHZ 32-CHANNEL 30V CHANNEL CARD**
	Modular Digital Test Instrument:
	• A high-density VXI C-Size instrument for flexible, high-performance parallel digital test
	• 32 bi-directional channels packaged in a single VXI slot.
	• 50 MHz maximum data rate for general-purpose applications
	• 1 ns timing resolution for drive and detect edges and pattern period
	• Ranges covering ±30V with up to a 30V swing
	• Phases/windows/levels programmable per channel
	• Drive and detect voltage accuracy of 1% ±50 mV on voltage ranges below ±15V
	• Differential and LVDS capability by pairing of adjacent channels
	• 8M pattern Deep Serial Memory per channel
	• Programmable as multiple independent Instruments on 32-channel boundaries
	• Programmable asynchronous handshake engine
	
	NOTES:
	Hardware Maintenance and Service Support for One Year:
	• One Year Warranty on Teradyne Manufactured PC Boards
	• 90 days Advanced Replacement Service
	
	VXI Chassis & PC Controller:
	Di-Series hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Di-Series Channel Cards
	
	Requires low-latency connection to controlling PC which requires one of:
	• Embedded (in chassis) VXI controller PC
	• Controller for external PC
	  • NI MXI-VXI-Express
	  • NI MXI-2
	
	Software:
	• Includes software license to use Di-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
	• If physical media is required order 602-977-00 Di-Series Software Media Kit
		$ 60180

PART #	DESCRIPTION	LIST PRICE
DI-050-22	**DI-SERIES GENERATION 2 50 MHZ 64-CHANNEL 15V CHANNEL CARD**	**$ 81830**

Modular Digital Test Instrument:
- A high-density VXI C-Size instrument for flexible, high-performance parallel digital test
- 64 bi-directional channels packaged in a single VXI slot.
- 50 MHz maximum data rate for general-purpose applications
- 1 ns timing resolution for drive and detect edges and pattern period
- Ranges covering ±15V with up to a 20V swing
- Phases/windows/levels programmable per channel
- Drive and detect voltage accuracy of 1% ±50 mV on voltage ranges below ±15V
- Differential and LVDS capability by pairing of adjacent channels
- 8M pattern Deep Serial Memory per channel
- Programmable as multiple independent Instruments on 32-channel boundaries
- Programmable asynchronous handshake engine

NOTES:
Hardware Maintenance and Service Support for One Year:
- One Year Warranty on Teradyne Manufactured PC Boards
- 90 days Advanced Replacement Service

VXI Chassis & PC Controller:
Di-Series hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Di-Series Channel Cards

Requires low-latency connection to controlling PC which requires one of:
- Embedded (in chassis) VXI controller PC
- Controller for external PC
  - NI MXI-VXI-Express
  - NI MXI-2

Software:
- Includes software license to use Di-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
- If physical media is required order 602-977-00 Di-Series Software Media Kit

PART #	DESCRIPTION	LIST PRICE
DI-050-21	**DI-SERIES GENERATION 2 50 MHZ 32-CHANNEL 15V CHANNEL CARD**	**$ 51730**

Modular Digital Test Instrument:
- A high-density VXI C-Size instrument for flexible, high-performance parallel digital test
- 32 bi-directional channels packaged in a single VXI slot.
- 50 MHz maximum data rate for general-purpose applications
- 1 ns timing resolution for drive and detect edges and pattern period
- Ranges covering ±15V with up to a 20V swing
- Phases/windows/levels programmable per channel
- Drive and detect voltage accuracy of 1% ±50 mV
- Differential and LVDS capability by pairing of adjacent channels
- 8M pattern Deep Serial Memory per channel
- Programmable as multiple independent Instruments on 32-channel boundaries
- Programmable asynchronous handshake engine

NOTES:
Hardware Maintenance and Service Support for One Year:
- One Year Warranty on Teradyne Manufactured PC Boards
- 90 days Advanced Replacement Service

VXI Chassis & PC Controller:
Di-Series hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Di-Series Channel Cards

Requires low-latency connection to controlling PC which requires one of:
- Embedded (in chassis) VXI controller PC
- Controller for external PC
- NI MXI-VXI-Express
- NI MXI-2

Software:
- Includes software license to use Di-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
- If physical media is required order 602-977-00 Di-Series Software Media Kit

PART #	DESCRIPTION	LIST PRICE
DI-050-30	**DI-SERIES GENERATION 1 UTILITY CARD** Optional Supplemental DI-Series Support: • Requires one or more Di-Series Channel Cards • Requires 602-977-00 Di-Series System Software • Includes PS-133-00 Di-Series Diagnostic Software License • Guided Probe Electronics • 32 Utility (High Voltage) Pins • Supplemental Dynamic Control and Timing Signals • Provides full M-918 CRB functionality except Sync Resources and User Clock • Compatible with Di-Series instruments with 2.5ns drive and detect timing resolution (including Di-025-01, Di-025-02, Di-050-01 and Di-050-02) **NOTES:** • If Guided Probe capability is required, the Utility Instrument requires one of Di-002-00,Di-002-01 or Di-002-03 Di-Series Guided Probe and Cable Kits. • The Di-050-30 Utility Card should be located in the card cage to the right and adjacent to the associated Di-Series Channel Cards. • Includes PS-133-00 Di-Series Diagnostic Software License and media.	**$ 24540**
DI-050-31	**DI-SERIES GENERATION 2 UTILITY INSTRUMENT** Optional Supplemental DI-Series Support: • Requires one or more Di-Series Channel Cards • Includes PS-133-00 Di-Series Diagnostic Software License • Guided Probe Electronics • 32 Utility (High Voltage) Pins • Supplemental Dynamic Control and Timing Signals • Provides full M-918 CRB functionality • Compatible with Di-Series instruments with 1 ns drive and detect timing resolution (including Di-025-11, Di-025-12, Di-025-21, Di-025-22, Di-050-11, Di-050-12,Di-050-21 and Di-050-22) **NOTES:** • If Guided Probe capability is required, the Utility Instrument requires one of Di-002-00,Di-002-01 or Di-002-03 Di-Series Guided Probe and Cable Kits. • The Di-050-31 Utility Card should be located in the card cage to the right and adjacent to the associated Di-Series Channel Cards. • If physical media is required order 602-977-00 Di-Series Software Media Kit • Includes PS-133-00 Di-Series Diagnostic Software License and media.	**$ 23730**

PART #	DESCRIPTION	LIST PRICE

DI-050-35	**DI-SERIES GENERATION 2 UTILITY INSTRUMENT AND BOUNDARY SCAN CARD**
	
	Optional Supplemental DI-Series Support:
	• Requires one or more Di-Series Channel Cards
	• Requires 602-977-00 Di-Series System Software
	• Includes PS-133-00 Di-Series Diagnostic Software License
	• Guided Probe Electronics
	• 32 Utility (High Voltage) Pins
	• Supplemental Dynamic Control and Timing Signals
	• Provides full M-918 CRB functionality
	• Compatible with Di-Series instruments with 1 ns drive and detect timing resolution (including Di-025-11, Di-025-12, Di-025-21, Di-025-22, Di-050-11, Di-050-12,Di-050-21 and Di-050-22)
	
	Di-Series 50 MHz Dedicated Boundary Scan Channels
	• 20 Channels for support of up to four IEEE-STD-1149.1 Test Access Port signals
	• Operates in a separate Di-Series Virtual Instrument independent of any other additional Di-Series channel card instruments
	• Ranges covering ±15V with up to 20V swing
	• Differential and LVDS capability by pairing adjacent channels (up to two TAP ports)
	• 256K patterns of conventional pattern memory works in conjunction with up to 128M patterns of Deep Serial Memory
	• Reconfigurable Deep Serial Memory
	  • 8M TAP cycles of data behind each channel of four TAP ports
	  OR
	  • Up to 128M TAP cycles behind TDI and TDO of a single TAP port
	Software:
	• Includes software license to use Di-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
	• If physical media is required order 602-977-00 Di-Series Software Media Kit
	• Includes PS-133-00 Di-Series Diagnostic Software License and media.
	VXI Chassis & PC Controller:
	• Di-Series hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Di-Series Channel Cards
	• Requires low-latency connection to controlling PC which requires one of:
	  • Embedded (in chassis) VXI controller PC
	  • Controller for external PC
	  • NI MXI-VXI-Express
	  • NI MXI-2
		$ 45070

PART #	DESCRIPTION	LIST PRICE

DI-025-02	**DI-SERIES GENERATION 1 25 MHZ 64-CHANNEL CHANNEL CARD**
	Modular Digital Test Instrument:
	• A high-density VXI C-Size instrument for flexible, high-performance parallel digital test
	• 64 bi-directional channels packaged in a single VXI slot.
	• 25 MHz maximum data rate for general-purpose applications
	• 2.5 ns timing resolution for drive and detect edges and pattern period
	• Ranges covering ±30V with up to a 30V swing
	• Phases/windows/levels programmable per channel
	• Drive and detect voltage accuracy of 1% ±125 mV on voltage ranges below ±15V
	• Differential and LVDS capability by pairing of adjacent channels
	• 8M pattern Deep Serial Memory per channel
	• Programmable as multiple independent Instruments on 32-channel boundaries
	• Programmable asynchronous handshake engine
	
	NOTES:
	Hardware Maintenance and Service Support for One Year:
	• One Year Warranty on Teradyne Manufactured PC Boards
	• 90 days Advanced Replacement Service
	
	VXI Chassis & PC Controller:
	Di-Series hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Di-Series Channel Cards
	
	Requires low-latency connection to controlling PC which requires one of:
	• Embedded (in chassis) VXI controller PC
	• Controller for external PC
	  • NI MXI-VXI-Express
	  • NI MXI-2
	
	Software:
	• Includes software license to use Di-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
	• If physical media is required order 602-977-00 Di-Series Software Media Kit
		$ 79660

PART #	DESCRIPTION	LIST PRICE

DI-025-01	**DI-SERIES GENERATION 1 25 MHZ 32-CHANNEL CHANNEL CARD**
	Modular Digital Test Instrument:
	• A high-density VXI C-Size instrument for flexible, high-performance parallel digital test
	• 32 bi-directional channels packaged in a single VXI slot.
	• 25 MHz maximum data rate for general-purpose applications
	• 2.5 ns timing resolution for drive and detect edges and pattern period
	• Ranges covering ±30V with up to a 30V swing
	• Phases/windows/levels programmable per channel
	• Drive and detect voltage accuracy of 1% ±125 mV on voltage ranges below ±15V
	• Differential and LVDS capability by pairing of adjacent channels
	• 8M pattern Deep Serial Memory per channel
	• Programmable as multiple independent Instruments on 32-channel boundaries
	• Programmable asynchronous handshake engine
	
	NOTES:
	Hardware Maintenance and Service Support for One Year:
	• One Year Warranty on Teradyne Manufactured PC Boards
	• 90 days Advanced Replacement Service
	
	VXI Chassis & PC Controller:
	Di-Series hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Di-Series Channel Cards
	
	Requires low-latency connection to controlling PC which requires one of:
	• Embedded (in chassis) VXI controller PC
	• Controller for external PC
	  • NI MXI-VXI-Express
	  • NI MXI-2
	
	Software:
	• Includes software license to use Di-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
	• If physical media is required order 602-977-00 Di-Series Software Media Kit
		$ 49790

PART #	DESCRIPTION	LIST PRICE
DI-025-12	**DI-SERIES GENERATION 2 25 MHZ 64-CHANNEL 30V CHANNEL CARD**	**$ 77010**

Modular Digital Test Instrument:
- A high-density VXI C-Size instrument for flexible, high-performance parallel digital test
- 64 bi-directional channels packaged in a single VXI slot.
- 25 MHz maximum data rate for general-purpose applications
- 1 ns timing resolution for drive and detect edges and pattern period
- Ranges covering ±30V with up to a 30V swing
- Phases/windows/levels programmable per channel
- Drive and detect voltage accuracy of 1% ±50 mV
- Differential and LVDS capability by pairing of adjacent channels
- 8M pattern Deep Serial Memory per channel
- Programmable as multiple independent Instruments on 32-channel boundaries
- Programmable asynchronous handshake engine

NOTES:
Hardware Maintenance and Service Support for One Year:
- One Year Warranty on Teradyne Manufactured PC Boards
- 90 days Advanced Replacement Service

VXI Chassis & PC Controller:
Di-Series hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Di-Series Channel Cards

Requires low-latency connection to controlling PC which requires one of:
- Embedded (in chassis) VXI controller PC
- Controller for external PC
  - NI MXI-VXI-Express
  - NI MXI-2

Software:
- Includes software license to use Di-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
- If physical media is required order 602-977-00 Di-Series Software Media Kit

PART #	DESCRIPTION	LIST PRICE
DI-025-11	**DI-SERIES GENERATION 2 25 MHZ 32-CHANNEL 30V CHANNEL CARD**	**$ 48120**

Modular Digital Test Instrument:
- A high-density VXI C-Size instrument for flexible, high-performance parallel digital test
- 32 bi-directional channels packaged in a single VXI slot.
- 25 MHz maximum data rate for general-purpose applications
- 1 ns timing resolution for drive and detect edges and pattern period
- Ranges covering ±30V with up to a 30V swing
- Phases/windows/levels programmable per channel
- Drive and detect voltage accuracy of 1% ±50 mV
- Differential and LVDS capability by pairing of adjacent channels
- 8M pattern Deep Serial Memory per channel
- Programmable as multiple independent Instruments on 32-channel boundaries
- Programmable asynchronous handshake engine

NOTES:
Hardware Maintenance and Service Support for One Year:
- One Year Warranty on Teradyne Manufactured PC Boards
- 90 days Advanced Replacement Service

VXI Chassis & PC Controller:
Di-Series hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Di-Series Channel Cards

Requires low-latency connection to controlling PC which requires one of:
- Embedded (in chassis) VXI controller PC
- Controller for external PC
  - NI MXI-VXI-Express
  - NI MXI-2

Software:
- Includes software license to use Di-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
- If physical media is required order 602-977-00 Di-Series Software Media Kit

PART #	DESCRIPTION	LIST PRICE
DI-025-22	**DI-SERIES GENERATION 2 25 MHZ 64-CHANNEL 15V CHANNEL CARD**	**$ 66160**

Modular Digital Test Instrument:
- A high-density VXI C-Size instrument for flexible, high-performance parallel digital test
- 64 bi-directional channels packaged in a single VXI slot.
- 25 MHz maximum data rate for general-purpose applications
- 1 ns timing resolution for drive and detect edges and pattern period
- Ranges covering ±15V with up to a 20V swing
- Phases/windows/levels programmable per channel
- Drive and detect voltage accuracy of 1% ±50 mV
- Differential and LVDS capability by pairing of adjacent channels
- 8M pattern Deep Serial Memory per channel
- Programmable as multiple independent Instruments on 32-channel boundaries
- Programmable asynchronous handshake engine

NOTES:
Hardware Maintenance and Service Support for One Year:
- One Year Warranty on Teradyne Manufactured PC Boards
- 90 days Advanced Replacement Service

VXI Chassis & PC Controller:
Di-Series hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Di-Series Channel Cards

Requires low-latency connection to controlling PC which requires one of:
- Embedded (in chassis) VXI controller PC
- Controller for external PC
  - NI MXI-VXI-Express
  - NI MXI-2

Software:
- Includes software license to use Di-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
- If physical media is required order 602-977-00 Di-Series Software Media Kit

PART #	DESCRIPTION	LIST PRICE
DI-025-48	**DI-SERIES GENERATION 2 25 MHZ 48-CHANNEL 15V CHANNEL CARD**	**$ 57620**

Modular Digital Test Instrument:
- A high-density VXI C-Size instrument for flexible, high-performance parallel digital test
- 48 bi-directional channels packaged in a single VXI slot.
- 25 MHz maximum data rate for general-purpose applications
- 1 ns timing resolution for drive and detect edges and pattern period
- Ranges covering ±15V with up to a 20V swing
- Phases/windows/levels programmable per channel
- Drive and detect voltage accuracy of 1% ±50 mV
- Differential and LVDS capability by pairing of adjacent channels
- 8M pattern Deep Serial Memory per channel
- Programmable as multiple independent Instruments on 32-channel boundaries
- Programmable asynchronous handshake engine
- Factory upgradable to full 64-channel capability

NOTES:
Hardware Maintenance and Service Support for One Year:
- One Year Warranty on Teradyne Manufactured PC Boards
- 90 days Advanced Replacement Service

VXI Chassis & PC Controller:
Di-Series hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Di-Series Channel Cards

Requires low-latency connection to controlling PC which requires one of:
- Embedded (in chassis) VXI controller PC
- Controller for external PC
  - NI MXI-VXI-Express
  - NI MXI-2

Software:
- Includes software license to use Di-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
- If physical media is required order 602-977-00 Di-Series Software Media Kit

PART #	DESCRIPTION	LIST PRICE
DI-025-49	**DI-SERIES GENERATION 2 25 MHZ 48-CHANNEL 30V CHANNEL CARD**	**$ 69880**

Modular Digital Test Instrument:
- A high-density VXI C-Size instrument for flexible, high-performance parallel digital test
- 48 bi-directional channels packaged in a single VXI slot.
- 25 MHz maximum data rate for general-purpose applications
- 1 ns timing resolution for drive and detect edges and pattern period
- Ranges covering ±30V with up to a 30V swing
- Phases/windows/levels programmable per channel
- Drive and detect voltage accuracy of 1% ±50 mV
- Differential and LVDS capability by pairing of adjacent channels
- 8M pattern Deep Serial Memory per channel
- Programmable as multiple independent Instruments on 32-channel boundaries
- Programmable asynchronous handshake engine
- Factory upgradable to full 64-channel capability

NOTES:
Hardware Maintenance and Service Support for One Year:
- One Year Warranty on Teradyne Manufactured PC Boards
- 90 days Advanced Replacement Service

VXI Chassis & PC Controller:
Di-Series hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Di-Series Channel Cards

Requires low-latency connection to controlling PC which requires one of:
- Embedded (in chassis) VXI controller PC
- Controller for external PC
  - NI MXI-VXI-Express
  - NI MXI-2

Software:
- Includes software license to use Di-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
- If physical media is required order 602-977-00 Di-Series Software Media Kit

PART #	DESCRIPTION	LIST PRICE
DI-050-48	**DI-SERIES GENERATION 2 50 MHZ 48-CHANNEL 15V CHANNEL CARD** Modular Digital Test Instrument: • A high-density VXI C-Size instrument for flexible, high-performance parallel digital test • 48 bi-directional channels packaged in a single VXI slot. • 50 MHz maximum data rate for general-purpose applications • 1 ns timing resolution for drive and detect edges and pattern period • Ranges covering ±15V with up to a 20V swing • Phases/windows/levels programmable per channel • Drive and detect voltage accuracy of 1% ±50 mV • Differential and LVDS capability by pairing of adjacent channels • 8M pattern Deep Serial Memory per channel • Programmable as multiple independent Instruments on 32-channel boundaries • Programmable asynchronous handshake engine • Factory upgradable to full 64-channel capability NOTES: Hardware Maintenance and Service Support for One Year: • One Year Warranty on Teradyne Manufactured PC Boards • 90 days Advanced Replacement Service VXI Chassis & PC Controller: Di-Series hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Di-Series Channel Cards Requires low-latency connection to controlling PC which requires one of: • Embedded (in chassis) VXI controller PC • Controller for external PC • NI MXI-VXI-Express • NI MXI-2 Software: • Includes software license to use Di-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument. • If physical media is required order 602-977-00 Di-Series Software Media Kit	**$ 67990**

PART #	DESCRIPTION	LIST PRICE
DI-050-49	**DI-SERIES GENERATION 2 50 MHZ 48-CHANNEL 30V CHANNEL CARD**	**$ 85280**

Modular Digital Test Instrument:
- A high-density VXI C-Size instrument for flexible, high-performance parallel digital test
- 48 bi-directional channels packaged in a single VXI slot.
- 50 MHz maximum data rate for general-purpose applications
- 1 ns timing resolution for drive and detect edges and pattern period
- Ranges covering ±30V with up to a 30V swing
- Phases/windows/levels programmable per channel
- Drive and detect voltage accuracy of 1% ±50 mV
- Differential and LVDS capability by pairing of adjacent channels
- 8M pattern Deep Serial Memory per channel
- Programmable as multiple independent Instruments on 32-channel boundaries
- Programmable asynchronous handshake engine
- Factory upgradable to full 64-channel capability

NOTES:
Hardware Maintenance and Service Support for One Year:
- One Year Warranty on Teradyne Manufactured PC Boards
- 90 days Advanced Replacement Service

VXI Chassis & PC Controller:
Di-Series hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Di-Series Channel Cards

Requires low-latency connection to controlling PC which requires one of:
- Embedded (in chassis) VXI controller PC
- Controller for external PC
  - NI MXI-VXI-Express
  - NI MXI-2

Software:
- Includes software license to use Di-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
- If physical media is required order 602-977-00 Di-Series Software Media Kit

PART #	DESCRIPTION	LIST PRICE
DI-025-21	**DI-SERIES GENERATION 2 25 MHZ 32-CHANNEL 15V CHANNEL CARD**	**$ 40900**

Modular Digital Test Instrument:
- A high-density VXI C-Size instrument for flexible, high-performance parallel digital test
- 32 bi-directional channels packaged in a single VXI slot.
- 25 MHz maximum data rate for general-purpose applications
- 1 ns timing resolution for drive and detect edges and pattern period
- Ranges covering ±15V with up to a 20V swing
- Phases/windows/levels programmable per channel
- Drive and detect voltage accuracy of 1% ±50 mV
- Differential and LVDS capability by pairing of adjacent channels
- 8M pattern Deep Serial Memory per channel
- Programmable as multiple independent Instruments on 32-channel boundaries
- Programmable asynchronous handshake engine

NOTES:
Hardware Maintenance and Service Support for One Year:
- One Year Warranty on Teradyne Manufactured PC Boards
- 90 days Advanced Replacement Service

VXI Chassis & PC Controller:
Di-Series hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Di-Series Channel Cards

Requires low-latency connection to controlling PC which requires one of:
- Embedded (in chassis) VXI controller PC
- Controller for external PC
  - NI MXI-VXI-Express
  - NI MXI-2

Software:
- Includes software license to use Di-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
- If physical media is required order 602-977-00 Di-Series Software Media Kit

PART #	DESCRIPTION	LIST PRICE
DI-025-24	**DI-SERIES GENERATION 2 25 MHZ 64-CHANNEL -3V TO +6V CHANNEL CARD**	**$ 53860**

Modular Digital Test Instrument:
- A high-density VXI C-Size instrument for flexible, high-performance parallel digital test
- 64 bi-directional channels packaged in a single VXI slot.
- 25 MHz maximum data rate for general-purpose applications
- 1 ns timing resolution for drive and detect edges and pattern period
- Single range providing drive and detect levels between -3V and +6V
- Phases/windows/levels programmable per channel
- Drive and detect voltage accuracy of 1% ±50 mV
- Does not support Differential and LVDS capability by pairing of adjacent channels
- 8M pattern Deep Serial Memory per channel
- Programmable as multiple independent Instruments on 32-channel boundaries
- Programmable asynchronous handshake engine
- Does not support external analog matrix connections to the channels

NOTES:
Hardware Maintenance and Service Support for One Year:
- One Year Warranty on Teradyne Manufactured PC Boards
- 90 days Advanced Replacement Service

VXI Chassis:
Di-Series hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Di-Series Channel Cards

Software:
- Includes software license to use Di-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
- If physical media is required order 602-977-00 Di-Series Software Media Kit

VXI Chassis & PC Controller:
Di-Series hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Di-Series Channel Cards

Requires low-latency connection to controlling PC which requires one of:
- Embedded (in chassis) VXI controller PC
- Controller for external PC
  - NI MXI-VXI-Express
  - NI MXI-2

PART #	DESCRIPTION	LIST PRICE

DI-050-63	**DI-SERIES GENERATION 2 50 MHZ 32-CHANNEL IFTE(NGATS) CARD**
	Modular Digital Test Instrument:
	(2) Di-050 modules in a VXI slot each providing:
	• 16 full function 50 MHz channels
	• 8 programmable channels for IFTE control signals
	• Utility signals for control signals
	• Factory upgradable to full 64-channels capability
	
	NOTES:
	Hardware Maintenance and Service Support for One Year:
	• One Year Warranty on Teradyne Manufactured PC Boards
	• 90 days Advanced Replacement Service
	
	VXI Chassis:& PC Controiller
	Di-Series hardware requires an integrated high-power VXI chassis such as the Teradyne 600-528-00 (5.7 KW C-Size) which supports up to 12 Di-Series Channel Cards
	
	Requires low-latency connection to controlling PC which requires one of:
	• Embedded (in chassis) VXI controller PC
	• Or controller for external PC
	  • NI MXI-VXI-Express
	  • NI MXI-2
	
	Software:
	• Includes software license to use Di-Series System Software on the test system that includes the instrument and on stand alone computers used to for program development at the same site as the instrument.
	• If physical media is required order 602-977-00 Di-Series Software Media Kit
		$ 64970

615-175-00	**DI-SERIES 50 MHZ 64-CHANNEL 15V CHANNEL CARD AND CIB ASSEMBLY** Assembly consists of: • (1) Di-050-22 50 MHz Digital Channel Card • (2) 600-689-51 Cable Interface Boards • VXibus 4.0 compatible enclosing covers Cable interface boards provide access to: • Di-050-22 test channels • Di-050-22 calibration verification signals • Di-050-22 advanced test capability signals	**$ 84240**
615-176-00	**DI-SERIES UTILITY INSTRUMENT AND CIB ASSEMBLY** Assembly consists of: • (1) Di-050-31 Utility Instrument • (1) 613-261-50 Cable Interface Board • VXIbus 4.0 compatible enclosing covers	**$ 26010**

PART #	DESCRIPTION	LIST PRICE
668-571-00	**M-9 SERIES REPLACEMENT KIT FOR 192 CHANNEL M-917-02 BASED SYSTEM** Kit contining the parts to replace an obsolete 192 channel M-917-02 based digital subsystem consiting of : (3) DI-SERIES 25 MHZ 64-CHANNEL CARD w FUNNEL (1) DI-SERIES UTILITY MODULE w FUNNEL (1) DI PROBE AND CABLE (1) Replacement FPU B Power Supply Module	**$ 148800**
626-414-00	**DI-SERIES GENERATION 2 25 MHZ 48-CHANNEL 15V CHANNEL CARD (DI-025-48) W/VPC INTERFACE** Teradyne 25 MHz 48-Channel Digital Channel Card with -15 volt to +15 volt drive/detect levels, hybrid relay connections, plus VP-90 receiver funnel wiring and self-evaluation fixture wiring.	**$ 64990**
638-518-00	**DI-SERIES GENERATION 2 50 MHZ 48-CHANNEL 30V CHANNEL CARD (DI-050-49) W/VPC INTERFACE** Teradyne 50 MHz 48-Channel Digital Channel Card with -30 volt to +30 volt drive/detect levels, hybrid relay connections, plus VP-90 receiver funnel wiring and self-evaluation fixture wiring.	**$ 92610**
651-713-00	**DI-SERIES GENERATION 2 25 MHZ 48-CHANNEL 30V CHANNEL CARD (DI-025-49) W/VPC INTERFACE** Teradyne 25 MHz 48-Channel Digital Channel Card with -30 volt to +30 volt drive/detect levels, hybrid relay connections, plus VP-90 receiver funnel wiring and self-evaluation fixture wiring.	**$ 77220**
626-417-00	**DI-SERIES GENERATION 2 UTILITY INSTRUMENT (DI-050-31) W/VPC INTERFACE** Teradyne Utility module Includes PS-133-00 Di-Series Diagnostic Software License, Guided Probe Electronics, 32 Utility (High Voltage) Pins, Supplemental Dynamic Control and Timing Signals, plus VP-90 receiver funnel wiring and self-evaluation fixture wiring.	**$ 28740**
638-519-00	**UPGRADE OF DI-025-49 TO DI-050-49** Upgrade of a Di-025-49 Di-Series 25 MHz 48-Channel Channel Card to the capabilities of a Di-050-49 50 MHz 48-Channel Channel Card. The upgrade increases the available maximum data rate from 25 MHz to 50 MHz while maintaining the +/- 30V voltage range and 30V swing. The Di-025-49 must be returned to Teradyne for upgrading to Di-050-49.	**$ 19250**

PART #	DESCRIPTION	LIST PRICE

602-977-00	**DI-SERIES SYSTEM SOFTWARE MEDIA KIT**
	Software for on-system support of one or more Di-Series Digital Test Instruments
	
	• iStudio graphical development and debugging environment
	• Instrument self-test software
	• Test importers from Teradyne test generation products
	  • VICTORY Boundary Scan SVF format
	  • LASAR Simulation LSRTAP (IEEE-1445) format
	• Software Media and Documentation on CD-ROM
	Multiple Applications Programming Interfaces for instrument control:
	• Microsoft .NET Framework interface driver
	• IVI-C instrument-specific driver
	• M9-Series VXI-plug&play replacement driver
	• Teradyne Digital Runtime Environment & L-Series C-shell Applications Programming Interface
	
	NOTES:
	• The license to use the DI-Series Digital Test Instrument is included with the instrument.
	• This software may also be used on stand alone computers used in program development at the same site as the instrument
		$ 1060

PART #	DESCRIPTION	LIST PRICE

Section D : HIGH SPEED SUBSYSTEM & OPTIONS

611-038-02 — **$ 30820**

HSSUB-1020 HIGH SPEED SUBSYSTEM FOUNDATION WITH EXTERNAL 4U COMPUTER AND GENERATION 2 CHASSIS

This Foundation provides the prerequisites for adding Teradyne HSSub instrumentation consisting of one or more Core Instruments, optional I/O Expansion Instruments, and other integrated PXI products. The HSSub-1020 Foundation consists of:

- HSSub controlled by host ATE computer as an LXI instrument,or operated as a standalone, self-contained system
- HSSub 18 slot (16 HSSub instrument slots) 3U PXI Express Generation 2 Chassis
- 4U External computer containing
  - o >=2 GHz Intel Xeon server motherboard
  - o 16 GB DDR3 ECC memory
  - o Window 10 64-bit Operating System
  - o (2) 128 GB removable eSATA SSD drives
  - o DVD RW
  - o Rackmount Installation Kit with 20" sliding rail
  - o PXI MXI Express Generation 2 controller interface to PXI Express chassis
  - o Ethernet (LXI) connectivity to host ATE computer
- HSSub PC-resident TriFlex Integration Software
- Teradyne HSSub Test Station Driver for host ATE computer

PART #	DESCRIPTION	LIST PRICE
611-038-06	**HSSUB-1050 RUGGEDIZED HIGH SPEED SUBSYSTEM ATE-ANCILLARY FOUNDATION** This Foundation systems allows for adding Teradyne HSSub instrumentation consisting of Core Instruments, optional I/O Expansion Instruments, and other Teradyne-integrated PXI products. The HSSub-1050 Ruggedized HIgh Sped Subsystem consists of : • 18-slot 3U PXI Express Generation 2 Chassis • 1U Computer o >= 2 GHz processor o >= 16 GB memory o Windows 10 64-bit Operating System o Ethernet connectivity to host ATE computer o PXI MXI Express Generation 2 controller interface to PXI Express chassis • Timing Controller Module • HSSub TriFlex Integration Software including communications modules to Alpha/VMS CASS software • Virginia Panel G20 Receiver Frame • Ruggedized container with CASS-compatible mechanical mounting mechanism • Direct Connect Panel" with MIL-38999 connectors for Fibre Channel I/O and additional future critical connections • AC power input monitoring"	**$ 87700**
611-038-07	**HSSUB-1031 HIGH-SPEED SUBSYSTEM FOUNDATION W/1U PC AND VPC G20** This Foundation provides the prerequisites for adding Teradyne HSSub instrumentation consisting of one or more Core Instruments, optional I/O Expansion Instruments, and other integrated PXI products. The HSSub-1031 Foundation consists of HSSub controlled by host ATE computer as an LXI instrument, or operated as a standalone, self-contained system; • HSSub 18 slot (16 HSSub instrument slots) 3U PXI Express Generation 2 Chassis • 1U External HSSub Win10 Computer • Timing Controller Module • Timing Controller Module Funnel • VPC G20 Receiver with 19" rack mount integration kit • HSSub PC-resident TriFlex Integration Software • Teradyne HSSub Test Station Driver for host ATE computer	**$ 41110**

PART #	DESCRIPTION	LIST PRICE
611-038-12	**HSSUB-1020 HIGH-SPEED SUBSYSTEM FOUNDATION** This Foundation provides the prerequisites for adding Teradyne HSSub instrumentation consisting of one or more Core Instruments, optional I/O Expansion Instruments, and other integrated PXI products. The HSSub-1020 Foundation consists of: • HSSub controlled by host ATE computer as an LXI instrument • HSSub 18 slot (16 HSSub instrument slots) 3U Generation 2 x8 PXI Express chassiss • HSSub PXI Express Computer Controller containing o NI PXIe-8880 with 8 core Xeon processor o >= 2 GHz processor o >= 8 GB memory o Window 7 64-bit Operating System o Ethernet (LXI) connectivity to host ATE computer • Timing Controller module • HSSub PC-resident TriFlex Integration Software • Teradyne HSSub Test Station Driver for host ATE computer	**$ 34770**
611-038-13	**HSSUB-1031 HIGH SPEED SUBSYSTEM FOUNDATION WITH EXTERNAL 1U COMPUTER AND GENERATION 2 CHASSIS** This Foundation provides the prerequisites for adding Teradyne HSSub instrumentation consisting of one or more Core Instruments, optional I/O Expansion Instruments, and other integrated PXI products. The HSSub-1031 Foundation consists of: • HSSub controlled by host ATE computer as an LXI instrument,or operated as a standalone, self-contained system • HSSub 18 slot (16 HSSub instrument slots) 3U PXI Express Generation 2 Chassis • 1U External computer containing o >=2 GHz Intel Xeon server motherboard o 16 GB DDR3 ECC memory o Window 10 64-bit Operating System o (2) 128 GB removable eSATA SSD drives o DVD RW o Rackmount Installation Kit with 20" sliding rail o PXI MXI Express Generation 2 controller interface to PXI Express chassis o Ethernet (LXI) connectivity to host ATE computer • Timing Controller module • HSSub PC-resident TriFlex Integration Software • Teradyne HSSub Test Station Driver for host ATE computer	**$ 30010**
611-038-14	**HSSUB-1014 FOUNDATION, NI GEN3, PXIE-1085, PXIE-8880, WIN 10, TM, FOR FUNCTIONAL TEST**	**$ 41070**

PART #	DESCRIPTION	LIST PRICE
611-038-15	**HSSUB-1015 HIGH-SPEED SUBSYSTEM FOUNDATION (NO EMBEDDED CONTROLLER)**	**$ 25690**
611-038-08	**HSSUN-1032 HIGH SPEED SUBSYSTEM FOUNDATION WITH EXTERNAL 1U COMPUTER AND TERADYNE GENERATION 2 CHASSIS & CONTROLLERS**	**$ 30010**
611-038-40	**HSSUB-1125 HIGH-SPEED SUBSYSTEM FOUNDATION** This Foundation provides the prerequisites for adding Teradyne HSSub instrumentation consisting of one or more Core Instruments, optional I/O Expansion Instruments, and other integrated PXI products. The HSSub-1125 Foundation consists of HSSub controlled by host ATE computer as an LXI instrument, or operated as a standalone, self-contained system; • HSSub 6 slot (5 HSSub instrument slots) 3U PXI Express Generation 2 Chassis • Embedded HSSub Win10 Computer • HSSub PC-resident TriFlex Integration Software • Teradyne HSSub Test Station Driver for host ATE computer	**$ 20190**
611-038-41	**HSSUB-1221 FOUNDATION, P1821, P921, GEN2, WIN 10, TM, FOR FUNCTIONAL TEST**	**$ 34770**
611-038-42	**HSSUB-1231 HIGH SPEED SUBSYSTEM FOUNDATION PXIE GEN3 18-SLOT W/ EMBEDDED WIN10 IOT PC & TIMING MODULE**	**$ 41070**
611-038-17	**HSSUB-1222 HSUB FOUNDATION KIT WITH 2U WIN10 IOT PC TERADYNE GEN2 CHASSIS AND VPC G20 INTERFACE PLATE** The HSSub-1222 Foundation consists of • HSSub controlled by host ATE computer as an LXI instrument, or operated as a standalone, self-contained system • 660-057-00 P1821 Teradyne 18 slot (16 HSSub instrument slots) 3U PXI Express Generation 2 Chassis • 660-055-00 P821 PCIe/PXIe Remote Controller Kit with cable • 650-949-40 2U Rackmount Computer with TPM 2.0 chip, Win10 IoT Enterprise LTSC 64-bit OS • 618-129-00 HSSub software and documentation • 637-353-00 G20 Interface Plate with integration mechanics	**$ 35100**

PART #	DESCRIPTION	LIST PRICE
611-038-96	**HSSUB-1220 HIGH SPEED SUBSYSTEM FOUNDATION WITH EXTERNAL 4U COMPUTER AND TERADYNE GENERATION 2 CHASSIS** This Foundation provides the prerequisites for adding Teradyne HSSub instrumentation consisting of one or more Core Instruments, optional I/O Expansion Instruments and other integrated PXI products. The HSSub-1220 Foundation consists • HSSub controlled by host ATE computer as an LXI instrument, or operated as a standalone, self-contained system o 660-057-00 P1821 Teradyne 18 slot (16 HSSub instrument slots) 3U PXI Express Generation 2 Chassis o 660-055-00 P821 PCIe/PXIe Remote Controller Kit with 5m cable o 616-616-30 4U Rackmount Computer, Win10 64-bit OS o 618-129-00 HSSub software and documentation	**$ 31900**
637-353-04	**HSSUB-1125 HSUB FOUNDATION KIT WITH EMBEDDED WIN10 PRO PC TERADYNE GEN2 6-SLOT CHASSIS AND VPC G20 INTERFACE PLATE** This HSSub Foundation Kit consists of • 611-038-40 HSSub-1125 HSSub Foundation controlled by host ATE computer as an LXI instrument, or operated as a standalone, self-contained system • 618-129-00 HSSub software and documentation • 637-353-00 G20 Interface Plate with integration mechanics	**$ 33490**
618-493-01	**HSSUB-AK SYSTEM**	**$ 308270**
618-493-03	**HSSUB-AK SELF-TEST ITA** • Provides wraparound self-test interconnections for the HSSub-AK configuration of HSSub • Employs a test adapter (ITA) that uses the standard HSSub Virginia Panel G20 interface • Supported hardware • 2) Serial Core Instruments • 1) LVTTL IO Expansion Instrument • 1) RS485/HOTLink/ECL Flexible IO Expansion Instrument • 1) Ethernet/RS232/IRIG-B Flexible IO Expansion Instrument	**$ 22170**
639-803-00	**HSSUB-AK SYSTEM WITH WRAP PLUG KIT**	**$ 355080**

PART #	DESCRIPTION	LIST PRICE
618-807-00	**HSSUB LOOPBACK KIT FOR FIBER OPTIC APPLICATIONS** Complete cable kit for performing wraparound selftest on Teradyne Fibre Channel Applications that employ two sets of four optical channels and auxiliary Ethernet and eSATA capability. MIL D38999 connectors are used for all interfaces.	**$ 17330**
618-807-03	**HSSUB-AK DIRECT CONNECT PANEL WRAP PLUGS** • Provides wraparound self-test interconnections for the MIL-DTL-38999 connectors on the Direct Connect Panel of the HSSub-AK • Supported connectors: • (2) Four-Channel optical connectors with Multi-Gigabit Serial channels • (1) Two-Channel optical Ethernet connector • (2) One-Channel Ethernet ports	**$ 17790**
618-807-06	**HSSUB-AK I2 AND DIRECT CONNECT WRAP PLUGS** Provides wraparound self-test interconnections for the MIL-DTL-38999 connectors on the Direct Connect Panel of the HSSub-AK: (2) Four-Channel optical connectors with Multi-Gigabit Serial channels (1) Two-Channel optical Ethernet connector (2) One-Channel Ethernet ports Provides wraparound self-test interconnections employing Virginia Panel i2 plugs for each HSSub-AK instrument: (2) Serial Core Instruments (1) LVTTL IO Expansion Instrument (1) Timing Module (1) RS232/IRIG-B/Ethernet Flexible IO Expansion Instrument (1) RS485/HOTLink/ECL Flexible IO Expansion Instrument	**$ 46810**
618-673-01	**HSS POWER CABLE** AC power cable that connects HSSub-AK to CASS, RTCASS or eCASS station power	**$ 230**
618-674-02	**HSS TO CASS ETHERNET COMMUNICATION CABLE** Ethernet cable that allows HSSub-AK to communicate with CASS station.	**$ 3840**
651-183-00	**HSS RTCASS ETHERNET COMMUNICATION ADAPTER CABLE** Ethernet cable that allows HSSub-AK to communicate with RTCASS station	**$ 620**
660-367-00	**HSS ECASS ETHERNET COMMUNICATION ADAPTER CABLE** Ethernet cable that allows HSSub-AK to communicate with eCASS station	**$ 620**

PART #	DESCRIPTION	LIST PRICE
618-679-00	**EXTERNAL SSD WITH DRIVE CARRIER FOR HSSUB 1U PC**	**$ 730**
622-573-00	**HSSUB- EXTERNAL 1U COMPUTER** 1U External computer containins • >=2 GHz Intel Xeon server motherboard • Windows 7 Professional 64-bit • 16 GB DDR3 ECC memory • (2) 128 GB (minimum) removable tandem eSATA SSD drives • DVD RW • Rackmount Installation Kit with 20" sliding rail Not to be used for new sales opportunities.	**$ 8710**
616-616-40	**RACKMOUNT SPECTRUM WINDOWS 10 IOT ENTERPRISE LTSC WITH TPM2.0 CHIP COMPUTER (4U), X10 MOTHERBOARD**	**$ 9040**
622-573-30	**HSSUB – EXTERNAL 1U WIN10 IOT ENT OS 64-BIT COMPUTER** 1U External computer contains: • >=2 GHz Intel Xeon server motherboard with TPM2.0 chip • Windows 10 IoT Enterprise LTSC • 16 GB DDR3 ECC memory • 500 GB (minimum) removable eSATA SSD drive • Spare 500 GB (minimum) removable eSATA SSD drive • Blue Ray DVD RW • Rackmount Installation Kit with 20" sliding rail	**$ 11320**
650-949-40	**RACKMOUNT SPECTRUM WINDOWS 10 IOT ENTERPRISE LTSC WITH TPM2.0 CHIP COMPUTER (2U), X10 MOTHERBOARD**	**$ 9040**
666-779-00	**WIN10 OS 4U SYSTEM CONTROLLER KIT** Win10 4U System Controller, NI PXIe Remote Controllers and Software Pre-load Kit This kit consists of: • 616-616-30 Spectrum 4U Win10 System Controller • 605-197-46 PCIe-8381 MXI Express PCIe Controller for computer • 605-197-45 PXIe-8381 MXI Express Controller for PXI Chassis • 615-215-02 1 meter Cable for MXI Express Controllers • 618-129-00 HSSub TriFlex Software & Doc Kit • 663-770-00 VERTA Software • 654-577-03 TIOS Project Software, v1.4	**$ 15460**

PART #	DESCRIPTION	LIST PRICE
666-779-10	**WIN10 IOT ENTERPRISE 4U SYSTEM CONTROLLER, NI PXIE REMOTE CONTROLLER KIT AND TIOS SOFTWARE PRE-LOAD KIT**	**$ 16710**
626-851-00	**PXI EXPRESS GEN 2 16-SLOT CHASSIS KIT** The PXI Express Gen 2x8 16-Slot Chassis Kit ncludes: * 18 hybrid slots (16 instrument slots) * US power cable * (3) slot blockers * Filler panels * Front-mounting kit	**$ 19650**
626-851-01	**ELEC-MECH, PXIE-1085 CHASSIS KIT WITHOUT RACK MOUNT, FOR FUNCTIONAL TEST**	**$ 18190**
605-197-45	**MXI EXPRESS CONTROLLER FOR PXI CHASSIS** • PCIe Gen2x8 connectivity	**$ 2850**
605-197-46	**MXI EXPRESS PCIE CONTROLLER FOR COMPUTER** • PCIe Gen2x8 connectivity	**$ 2850**
630-681-01	**ELEC-MECH, PXIE-6672 W/G20 EMI, FOR FUNCTIONAL TEST**	**$ 8300**
630-681-02	**PXIE-6672 TIMING MODULE WITH CLOCK IO & G20 EMI FUNNEL**	**$ 8770**
357-604-18	**G20 MX FUNNEL FOR TIMING AND SYNCHRONIZATION MODULE**	**$ 2730**
661-648-00	**TIMING AND SYNCHRONIZATION MODULE WITH TCXO 780063-01 W/17025 CAL 960457-04**	**$ 6970**
361-778-06	**TIMING AND SYNCHRONIZATION MODULE**	**$ 6300**

PART #	DESCRIPTION	LIST PRICE
622-572-00	**TIMING MODULE FUNNEL ADAPTER (PLASTIC)**	**$ 2730**
622-572-03	**WIRE VERIFICATION TEST MATERIAL AND INTEGRATION OF THE WIRE VERIFICATION TEST FOR THE 361-778-06 TIMING AND SYNCHRONIZATION CONTROLLER** This item contains the self evaluation fixture wiring, and integration of wire verification selftest. NOTE: This item is only available when configured in a new HSSub, or Spectrum HS system containing the 361-778-06 Timing and Synchronization Controller and 622-572-00 Timing Module Funnel.	**$ 1320**
660-865-00	**WRAP BLOCK FOR TIMING MODULE - MX** Includes material, build, design, and documentation for the PXI timing module	**$ 1320**
615-215-02	**1 METER CABLE FOR MXI EXPRESS CONTROLLERS**	**$ 530**
640-741-00	**CABLE, I-PASS X8, 1 METER, W/ CONN**	**$ 650**
660-677-03	**X1 MXI-EXPRESS CABLE, 3M**	**$ 940**
638-949-00	**PXIE-8880 CONTROLLER, WIN7 64-BIT, 16GB RAM**	**$ 23880**
660-051-00	**P0621 PXIE CHASSIS – 6 SLOT, GEN 2, 5 HYBRID SLOTS, WITH RACKMOUNT KIT**	**$ 11430**
660-057-00	**TERADYNE PXIE CHASSIS – 18 SLOT, GEN 2, 10 HYBRID SLOTS, WITH RACKMOUNT KIT**	**$ 19390**
660-512-00	**P921 PC – EMBEDDED PCI EXPRESS GEN 2, 240GB SSD, WIN10**	**$ 14420**
660-055-00	**TERADYNE REMOTE PCIE- PXIE GEN 2 CONTROLLER KIT, 5M CABLE**	**$ 6140**
660-056-00	**P831 REMOTE CONTROLLER PCI EXPRESS GEN 3 KIT WITH 5M CABLE**	**$ 7160**
660-045-00	**P1831 PXIE CHASSIS – 18 SLOT, GEN 3, WITH RACKMOUNT KIT**	**$ 22600**
660-058-00	**P931 PC – EMBEDDED PCI EXPRESS GEN 3, 240GB SSD, WIN10**	**$ 17310**
658-921-00	**APT FOUNDATION SYSTEM**	**$ 141490**

PART #	DESCRIPTION	LIST PRICE
660-112-00	**HSSUB AUGMENTATION KIT - CONFIGURATION A** HSSub Augmentation Kit for consisting of: • 611-038-07 HSSub-1031 High-Speed Subsystem Foundation w/1U PC and VPC G20 Receiver Panel o 660-057-00 Teradyne P1821 PXIe Gen 2 Chassis, 18-slot o 637-353-00 VPC Single Tier G20 Interface Plate Kit o 660-055-00 Teradyne P821, Gen 32 PCIe/PXIe Remote Controller Kit, 1m MXI-Express cable o 622-573-30 1U Rackmount Win10 64-bit OS computer o 630-681-02 PXIe-6672 w/ G20 EMI Funnel o 618-129-00 HSSub Software and Doc • 638-681-90 HSSub-9100 RS485 64-CH FIOXI w/ G20 EMI Funnel • 622-295-95 HSSub-9030 RS485/HOTLink/ECL FIOXI w/ G20 EMI Funnel • 656-290-90 HSSub-9110 RS232/HOTLink/ECL FIOXI w/ G20 EMI Funnel • 609-494-90 HSSub-5020 RT Processor Module w/ G20 EMI Funnel • 660-112-05 HSSub Software Kit	**$ 148740**
660-112-10	**HSSUB AUGMENTATION KIT – CONFIGURATION B** HSSub Augmentation Kit consisting of • 626-851-00 NI PXIe-1085 PXIe Chassis • 637-353-01 VPC Single Tier G20 PXI Receiver with interlock and handle • 605-197-46 NI PCIe-8381, x8 Gen 2 MXI-Express for Computer • 605-197-45 NI PXIe-8381, x8 Gen 2 MXI-Express for PXI Chassis • 638-048-00 MXI-Express Cable, Gen 2 x8, Copper, 5m • 630-681-02 PXIe-6672 w/ G20 EMI Funnel • 638-681-90 HSSub-9100 RS485 64-CH FIOXI w/ G20 EMI Funnel • 622-295-95 HSSub-9030 RS485/HOTLink/ECL FIOXI w/ G20 EMI Funnel • 656-290-90 HSSub-9110 RS232/HOTLink/ECL FIOXI w/ G20 EMI Funnel • 609-494-90 HSSub-5020 RT Processor Module w/ G20 EMI Funnel • 618-129-00 HSSub Software and Doc • 660-112-05 HSSub Software Kit	**$ 161995**

PART #	DESCRIPTION	LIST PRICE
660-112-03	**HSSUB LOOPBACK KIT** Self-test Loopback Kit for HSSub Augmentation Kit (660-112-00 or 660-112-10) This kit consists of: • 622-463-13 WVT Module for HSSub RS485 FIOXI (Qty 3) • 622-462-13 WVT Module for HSSub RS232/IRIG-B FIOXI (Qty 1) • 622-464-13 WVT Module for HSSub HOTLink/ECL FIOXI (Qty 2) • 357-603-65 WVT Module for Timing Module (Qty 1) • 662-280-00 Carry Case for Loopback Kit (7 module)	**$ 16550**
660-283-00	**HSSUB KIT FOR FACTORY INTEGRATION**	**$ 77700**
660-347-00	**HSSUB DTI INTERFACE FAT UNIT AND SUPPORTING DOCUMENTATION**	**$ 159770**
614-380-80	**HSSUB-7010 REMOTE TESTHEAD CONTROLLER FOR FOUNDATION** 2-slot PXI Express card that plugs into the HSSub Foundation chassis to control one HSSub-7050 remote IO chassis. Provides both data connection and test sync signals. Includes three meter optical connection cable.	**$ 6930**
614-381-80	**HSSUB-7050 REMOTE TESTHEAD CHASSIS KIT** 4-slot remote chassis that accepts up to four HSSub IO Expansion instruments. Requires HSSub-7010 Remote IO Controller located in the HSSub Foundation chassis.	**$ 21400**
636-604-00	**QSFP TO QSFP 40G CABLE, 5 METER FOR RTH CONTROL CABLE**	**$ 1000**
660-149-07	**CABLE, RTH CONTROL W/ GEN2 OPTICAL I/O FOR TESTER, 7M LENGTH**	**$ 13910**
660-150-00	**RTH CONTROL W/GEN2 OPTICAL I/O CABLE FOR AUTOMATION TRAY (EXPANDED BEAM TO MTP)**	**$ 13690**
660-759-00	**RTH CONTROL CABLE FOR TESTER (QSFP TO LC)**	**$ 790**
660-760-00	**GEN2 OPTICAL I/O CABLE FOR TESTER (QTY. 4 LC TO LC)**	**$ 540**
660-761-00	**RTH CONTROL CABLE FOR AUTOMATION TRAY (QSFP TO MTP)**	**$ 790**
356-136-06	**MXI-EXPRESS/EXPRESSCARD MXI CABLE, 7M**	**$ 695**

PART #	DESCRIPTION	LIST PRICE
664-836-00	**HSSUB SLIMRTH** 4-slot remote chassis that accepts up to four HSSub IO Expansion instruments. Requires HSSub-7010 Remote IO Controller located in the HSSub Foundation chassis.	**$ 19070**
664-841-00	**PM TO 8G HYBRID IO INSTRUMENT CABLE ASSEMBLY**	**$ 25125**
668-055-00	**SLIMRTH PM KIT** HSSub Augmentation Kit consisting of: • 664-836-00 HSSub-7055 SlimRTH Chassis Kit • (2) 664-840-80 8G Hybrid IO Instrument • (2) 664-841-00 PM to 8G Hybrid IO Instrument Cable Assembly	**$ 108600**
605-197-24	**NI PCIE-8362, 2 PORT MXI-EXPRESS INTERFACE**	**$ 2780**
	HSSUB-5020 RT PROCESSOR MODULE The HSSub-5020 RT Processor Module consists of the following: • 1-slot wide 3U PXI Express module • Four-core Power Architecture real-time processor with Wind River VxWorks RTOS • Software compatible with Real-time Processor in the LVDS and Serial Core Instruments	
605-197-25	**VXI-8360T, VXI-MXI-EXPRESS TRIGGER BOARD**	**$ 17550**
609-494-90	**HSSUB-5020 RT PROCESSOR MODULE WITH FUNNEL** HSSub-5020 RT Processor Module with Funnel assembly for Virginia Panel G20 receiver with one QuadraPaddle receiver modules supporting full ITAs and i2 MX ITA connectors	**$ 12130**

PART #	DESCRIPTION	LIST PRICE
611-039-00	**HSSUB-5010 LVDS CORE INSTRUMENT** The HSSub-5010 LVDS Core Instrument consists of the following: • 2-slot wide 3U PXI Express Runtime Defined Instrument • Four-core Power Architecture real-time processor with Wind River VxWorks RTOS • Reprogrammable Xilinx Virtex-6 Test-Defined FPGA for direct I/O and for general purpose test processing • Real-time processor and Test-Defined FPGA are programmable by the end-user if required • May provide direct I/O to the UUT • May control one or more IO Expansion Instruments for I/O to the UUT • 64 data pair LVDS direct I/O support o Up to 400 Mbps per pair (SDR) or 800 Mbps (DDR) o Organized as four data ports of: • 16 data pairs (input or output) • One clock pair per port • One utility pair per port	**$ 46170**
611-039-90	**HSSUB-5010 LVDS CORE INSTRUMENT WITH FUNNEL ASSEMBLY** This instrument is a two-slot, fully integrated and tested assembly that includes: • One 611-039-00 HSSub-5010 LVDS Core Instrument • Virginia Panel G20 Funnel The HSSub-5010 LVDS Core Instrument consists of the following: • 2-slot wide 3U PXI Express Runtime Defined Instrument • Four-core Power Architecture real-time processor with Wind River VxWorks RTOS • Reprogrammable Xilinx Virtex-6 Test-Defined FPGA for direct I/O and for general purpose test processing • Real-time processor and Test-Defined FPGA are programmable by the end-user if required • May provide direct I/O to the UUT • May control one or more IO Expansion Instruments for I/O to the UUT • 64 data pair LVDS direct I/O support o Up to 400 Mbps per pair (SDR) or 800 Mbps (DDR) o Organized as four data ports of: • 16 data pairs (input or output) • One clock pair per port • One utility pair per port	**$ 54580**

PART #	DESCRIPTION	LIST PRICE
611-039-95	**HSSUB-5010 LVDS CORE INSTRUMENT WITH FUNNEL ASSEMBLY** The HSSub-5010 LVDS Core Instrument with funnel is a two-slot, fully integrated and tested assembly that provides LVDS parallel I/O and consists of the following: • One 611-039-00 HSSub-5010 LVDS Core Instrument • "One Virginia Panel G20 Funnel with two receiver modules supporting full ITAs and i2 MX ITA connectors	**$ 54580**
611-181-80	**HSSUB-5110 FPGA AND RT PROCESSOR DEBUG BOARD** Provides debug access to the real-time processor and FPGAs within the HSSub-5010 LVDS Core Instrument and the HSSub-505X Serial Core Instruments for use during TPS development. • Works with Wind River ICE 2 debugger hardware and Wind River Workbench development software for debugging real-time processor code • Works with Xilinx ChipScope tools for debugging FPGA code • Includes serial cable for connection to computer running the debugger software .	**$ 880**

PART #	DESCRIPTION	LIST PRICE
613-892-00	**HSSUB-5050 SERIAL CORE INSTRUMENT** The HSSub-5050 Serial Core Instrument is typically used to test standardized high-speed serial buses and consists of the following: • 2-slot wide 3U PXI Express Runtime Defined Instrument • Four-core Power Architecture real-time processor with Wind River VxWorks RTOS • Reprogrammable Xilinx Virtex-6 Test-Defined FPGA for direct I/O and for general purpose test processing • Real-time processor and Test-Defined FPGA are programmable by the end-user if required • May provide direct I/O to the UUT • May control one or more IO Expansion Instruments for I/O to the UUT • Provides 16 Multi-Gigabit Transceivers (MGT) o Four groups of four transceivers o Each transceiver includes a receive pair and a transmit pair o Eight transceivers with AC coupling capacitors on all transmit pairs as required for PCI Express o Eight transceivers with AC coupling capacitors on all receive pairs as required by most buses other than PCI Express o Each group includes a receive clock and a transmit clock o Supports up to 3.125 Gbps per pair • Provides four LVDS I/O pairs with one clock pair (input or output)	**$ 46170**

PART #	DESCRIPTION	LIST PRICE

613-892-90	**HSSUB-5050 SERIAL CORE INSTRUMENT WITH FUNNEL ASSEMBLY**
	This instrument is a two-slot, fully integrated and tested 2-slot wide assembly that includes:
	• One 613-892-00 HSSub-5050 Serial Core Instrument
	• One Virginia Panel G20 Funnel with two receiver modules
	The HSSub-5050 Serial Core Instrument is typically used to test standardized high-speed serial buses and consists of the following:
	• 2-slot wide 3U PXI Express Runtime Defined Instrument
	• Four-core Power Architecture real-time processor with Wind River VxWorks RTOS
	• Reprogrammable Xilinx Virtex-6 Test-Defined FPGA for direct I/O and for general purpose test processing
	• Real-time processor and Test-Defined FPGA are programmable by the end-user if required
	• May provide direct I/O to the UUT
	• May control one or more IO Expansion Instruments for I/O to the UUT
	
	Funnel provides access to 12 Multi-Gigabit Transceiver Channels (MGT)
	• Each transceiver includes a receive pair and a transmit pair
	• Supports up to 3.125 Gbps per pair
	• Four transceiver channels accessible via a connector on top of the funnel for connection to an Optical IO Expansion Instrument
	• Eight channels in two groups of four channels for wired access via Virginia Panel receiver modules
	  • Four transceivers with AC coupling capacitors on all transmit pairs as required for PCI Express
	  • Four transceivers with AC coupling capacitors on all receive pairs as required by most buses other than PCI Express
	  • Each group includes a receive clock and a transmit clock
	  • Multi-Gigabit Transceivers accessed on the right-side Virginia Panel Quadrax connector module
	• Provides four LVDS I/O pairs with one clock pair (input or output)
	• Provides signals required to connect to 611-181-80 Debug Board on the left-side Virgina Panel QuadraPaddle connector module
		$ 59630

PART #	DESCRIPTION	LIST PRICE

613-892-95	**HSSUB-5050 SERIAL CORE INSTRUMENT WITH FUNNEL ASSEMBLY**
	This instrument is a two-slot, fully integrated and tested 2-slot wide assembly that includes:
	• One 613-892-00 HSSub-5050 Serial Core Instrument
	• One Virginia Panel G20 Funnel with two receiver modules supporting full ITAs and i2 MX ITA connectors
	The HSSub-5050 Serial Core Instrument is typically used to test standardized high-speed serial buses and consists of the following:
	• 2-slot wide 3U PXI Express Runtime Defined Instrument
	• Four-core Power Architecture real-time processor with Wind River VxWorks RTOS
	• Reprogrammable Xilinx Virtex-6 Test-Defined FPGA for direct I/O and for general purpose test processing
	• Real-time processor and Test-Defined FPGA are programmable by the end-user if required
	• May provide direct I/O to the UUT
	• May control one or more IO Expansion Instruments for I/O to the UUT
	
	Funnel provides access to 12 Multi-Gigabit Transceiver Channels (MGT)
	• Each transceiver includes a receive pair and a transmit pair
	• Supports up to 3.125 Gbps per pair
	• Four optical transceiver channels accessible via provided SFP pluggable module at the top o fhte Virginai Panel funnel
	• Eight channels in two groups of four channels for wired access via Virginia Panel receiver modules
	  • Four transceivers with AC coupling capacitors on all transmit pairs as required for PCI Express
	  • Four transceivers with AC coupling capacitors on all receive pairs as required by most buses other than PCI Express
	  • Each group includes a receive clock and a transmit clock
	  • Multi-Gigabit Transceivers accessed on the right-side Virginia Panel VTAC connector module
	• Provides four LVDS I/O pairs with one clock pair (input or output)
	• Provides signals required to connect to 611-181-80 Debug Board on the left-side Virgina Panel
		$ 65230

PART #	DESCRIPTION	LIST PRICE
618-142-80	**HSSUB-6065 4-CHANNEL OPTICAL IO EXPANSION INSTRUMENT** The HSub-6065 Optical IO Expansion Instrument accepts wired serial (MGT) I/O channels from an HSSub Serial Instrument and connects them to SFP (Small Form Factor Pluggable) connectors. These connectors accept standard optical or copper transceiver/cable assembly that is typically routed to the unit under test or an intermediate connector. All of the Optical IO Expansion Instrument connectors are accessible from the front panel of the instrument. • Connectors for four channels (transmit and receive pairs) from a HSSub serial instrument such as the Serial Core Instrument • Four SFP sockets that can accommodate optical, passive copper, or active copper transiever modules	**$ 2900**
618-142-70	**4-CHANNEL OPTICAL IO EXPANSION INSTRUMENT AND CABLE ASSEMBLY** This Optical IO Expansion Instrument provides: • One 618-142-80 4-Channel IO Expansion Instrument for mounting behind Direct Connect Panel in 611-038-05 Foundation • Cable assembly that connects instrument to Serial Core Instrument and to the Direct Connect Panel Note: • Instrument does not use a PXI chassis slot	**$ 5790**
618-142-95	**HSSUB-6065 2 PORT OPTICAL ETHERNET IO EXPANSION INSTRUMENT WITH G20 FUNNEL**	**$ 8590**
620-911-00	**SERIAL CORE INSTRUMENT TO 4-CHANNEL OPTICAL IO EXPANSION INSTRUMENT CABLE**	**$ 2900**
612-122-80	**HSSUB-6020 LVTTL IO EXPANSION INSTRUMENT** The HSSub-6020 LVTTL IO Expansion Instrument consists of the following: • 1-slot PXI Express instrument • Physical I/O and low-level protocol controlled by reprogrammable FPGA • 96 bidirectional LVTTL channels (configurable as 44 LVDS pairs) • Works in conjunction with an HSSub-5010 LVDS Core Instrument or HSSub-505x Serial Core Instrument Not to be used for new sales opportunities.	**$ 8680**

PART #	DESCRIPTION	LIST PRICE
612-122-90	**HSSUB-6020 LVTTL IO EXPANSION INSTRUMENT WITH FUNNEL** This instrument is a one-slot, fully integrated and tested assembly that includes: • One 612-122-80 HSSub-6020 LVTTL IO Expansion Instrument • Virginia Panel G20 Funnel The HSSub-6020 LVTTL IO Expansion Instrument consists of the following: • 1-slot PXI Express instrument • Physical I/O and low-level protocol controlled by reprogrammable FPGA • 96 bidirectional LVTTL channels (configurable as 44 LVDS pairs) • Works in conjunction with an HSSub-5010 LVDS Core Instrument or HSSub-505x Serial Core Instrument Not to be used for new sales opportunities	**$ 12020**
630-666-90	**EDIGITAL-6020A EDIGITAL LVTTL INSTRUMENT AND FUNNEL** This instrument is a one-slot, fully integrated and tested assembly that includes: • 1-slot PXI Express Gen 1 x4 instrument • Controlled by HSSub TriFlex software • Compatible with HSSub-6020 LVTTL IO Expansion Instrument • Signal interface and low-level protocol controlled by Test Defined FPGA • Xilinx XC5VLX155T Virtex 5 Test Defined FPGA with 0.5 GB DDR2 memory • 68 bidirectional LVTTL channels (configurable as 34 LVDS pairs) • All LVTTL channels are TTL tolerant • Conventional (non real-time) control from Windows PC • Real-time control may be provided by: o HSSub-501X LVDS Core Instrument o HSSub-505X Serial Core Instrument o HSSub-5020 RT Processor Module • Funnel (non-removable) with Virginia Panel QuadraPaddle receiver module supporting full ITAs and i2 MX ITA connectors o Compatible with Virginia Panel i2 cable connections o Compatible with Virginia Panel G20 ITA approach	**$ 12140**

PART #	DESCRIPTION	LIST PRICE
662-077-80	**HSSUB-6025 GEN 2 LVTTL IO EXPANSION INSTRUMENT** This instrument is a one-slot, fully integrated and tested assembly that includes: • 1-slot PXI Express instrument • Physical I/O and low-level protocol controlled by re-programmable FPGA • 96 bidirectional LVTTL channels (configurable as 44 LVDS pairs)	**$ 8430**
662-077-81	**HSSUB-6026 LVTTL2-XT IO EXPANSION INSTRUMENT** This instrument is a one-slot, fully integrated and tested assembly that includes: • 1-slot PXI Express instrument • Physical I/O and low-level protocol controlled by reprogrammable FPGA • Extended temperature of operation from -25C to 70C • 96 bidirectional LVTTL channels (configurable as 48 LVDS pairs)	**$ 10240**
614-383-80	**HSSUB-6040 HYBRID IO EXPANSION INSTRUMENT** The HSSub-6040 Hybrid IO Expansion Instrument provides a combination or parallel and serial I/O and consists of the following: • Physical I/O and low-level protocol controlled by reprogrammable FPGA • 8 Multi-Gigabit Transceivers for high-speed serial I/O at up to 2.5 Gbps • One 18-pair LVDS port with data rates up to 400 Mbps • Works in conjunction with an HSSub-5010 LVDS Core Instrument or HSSub-5050 Serial Core Instrument Not to be used for new sales opportunities.	**$ 17330**
614-383-90	**HSSUB-6040 HYBRID IO EXPANSION INSTRUMENT WITH FUNNEL ASSEMBLY** The HSSub-6040 Hybrid IO Expansion Instrument with funnel provides a combination or parallel and serial I/O and consists of the following: • Physical I/O and low-level protocol controlled by reprogrammable FPGA • 8 Multi-Gigabit Transceivers for high-speed serial I/O at up to 2.5 Gbps • One 18-pair LVDS port with data rates up to 400 Mbps • Works in conjunction with an HSSub-5010 LVDS Core Instrument or HSSub-5050 Serial Core Instrument • Funnel (non-removable) with Virginia Panel VTAC receiver module supporting full ITAs and i2 MX ITA Not to be used for new sales opportunities.	**$ 26900**

PART #	DESCRIPTION	LIST PRICE
616-787-80	**HSSUB-6060 8-CHANNEL OPTICAL IO EXPANSION INSTRUMENT** The HSub-6060 Optical IO Expansion Instrument accepts wired serial I/O channels from an HSSub Serial Core Instrument and connects them to QSFP (Quad Small Form Factor Pluggable) connectors. These connectors accept optical or copper cables that are typically routed to the unit under test or an intermediate connector. All of the Optical IO Expansion Instrument connectors are accessible from the front panel of the instrument. • Connectors for eight channels (transmit and receive pairs) from a HSSub serial instrument such as the Serial Core Instrument • Two QSFP sockets that can accommodate optical, passive copper, or active copper cables	**$ 2900**
623-485-80	**HSSUB-6090 1-SLOT ETHERNET IO EXPANSION INSTRUMENT** • Eight 10BASE-T/100BASE-T/1000BASE-T wired Ethernet ports • Two wired ports for optional connection to an Optical IO Expansion Instrument to produce 1000BASE-SX Optical Gigabit Ethernet • Maximum concurrently operating ports: o Two Optical and six wired ports o Eight wired and no Optical ports • Controllable by network stack on any HSSub Real-time Processor or HSSub Windows PC	**$ 8680**
623-485-90	**HSSUB-6090 1-SLOT ETHERNET IO EXPANSION INSTRUMENT WITH FUNNEL ASSEMBLY** • Eight 10BASE-T/100BASE-T/1000BASE-T wired Ethernet ports • Controllable by network stack on any HSSub Real-time Processor or HSSub Windows PC • Virginia Panel G20 funnel with QuadraPaddle receiver connector	**$ 14290**
635-352-80	**HSSUB-6091 10G ETHERNET IO EXPANSION INSTRUMENT** • 1-slot PXI Express Gen 3 x8 instrument • Up to four concurrent Ethernet ports accessed by four SFP+ transceivers • Each port may be configured by transceiver selection for: • 10 GbE Optical 10GBASE-SR, 10GBASE-SW • 1 GbE Optical 1000BASE-SX\ • Instrument is provisioned with four SFP+ transceivers • Controlled by standard Windows network stack on HSSub PC	**$ 10590**

PART #	DESCRIPTION	LIST PRICE
635-352-90	**HSSUB-6091 10G ETHERNET IO EXPANSION INSTRUMENT WITH FUNNEL** HSSub-6091 10G Ethernet instrument with Funnel assembly for Virginia Panel G20 receiver with one 16-position Mini-fiber receiver modules supporting full ITAs and i2 MX ITA connectors	**$ 15500**
635-352-91	**HSSUB-6091 10G ETHERNET IO EXPANSION INSTRUMENT WITH VTAC FUNNEL** HSSub-6091 10G Ethernet instrument with Funnel assembly for Virginia Panel G20 receiver with VTAC high frequency cabled receiver module supporting full ITAs and i2 MX ITA connectors	**$ 14210**
634-540-80	**HSSUB-6100 12G SERIAL IO EXPANSION INSTRUMENT** This Flexible IO Expansion Instrument provides: • 1-slot PXI Express Gen 3 x8 instrument • Instrument is configured at runtime by means of a Teradyne or user-generated HSSub App • Low-level protocol is implemented in HSSub App-accessible Xilinx Virtex 7 Test Defined FPGA • 2 GB of DDR3 memory directly accessible by Test Defined FPGA • Four Xilinx GTX transceivers service four SFP+ transceiver cages • Four Xilinx GTX transceivers service one 4-port QSFP+ t ransceiver cage • Instrument is provisioned with four SFP+ optical transceivers capable of supporting multiple protocols at rates of 1 - 10 Gbps	**$ 15890**
634-540-81	**SSUB-6100 12G SERIAL IO EXPANSION INSTRUMENT, SFPS NOT INCLUDED** This Flexible IO Expansion Instrument provides: • 1-slot PXI Express Gen 3 x8 instrument • Instrument is configured at runtime by means of a Teradyne or user-generated HSSub App • Low-level protocol is implemented in HSSub App-accessible Xilinx Virtex 7 Test Defined FPGA • 2 GB of DDR3 memory directly accessible by Test Defined FPGA • Four Xilinx GTX transceivers service four SFP+ transceiver cages • Four Xilinx GTX transceivers service one 4-port QSFP+ t ransceiver cage	**$ 14790**

PART #	DESCRIPTION	LIST PRICE
634-540-90	**HSSUB-6100 12G SERIAL IO EXPANSION INSTRUMENT WITH FUNNEL** HSSub-6100 12G Serial instrument with Funnel assembly for Virginia Panel G20 receiver with one 16-position Mini-fiber receiver modules supporting full ITAs and i2 MX ITA connectors	**$ 24300**
634-540-91	**HSSUB-6100 12G SERIAL IO EXPANSION INSTRUMENT WITH VTAC FUNNEL** HSSub-6100 12G Serial instrument with Funnel assembly for Virginia Panel G20 receiver with VTAC high frequency cabled receiver module supporting full ITAs and i2 MX ITA connectors	**$ 22290**
633-833-80	**HSSUB-6120 4-NODE AS5643 MIL-FIREWIRE INSTRUMENT** This HSSUB-6120 Instrument provides: • 1-slot PXI Express Gen 2 x4 instrument • Up to four concurrent IEEE 1394b FireWire nodes each with 3 ports • Independent transformer coupling and isolation relay on each port • Each port may be configured to support 100 Mbps, 200 Mbps, 400 Mbps and 800 Mbps data transfer rates. • Two trigger inputs • Supplied with SAE AS5643 HSSub App for Mil-FireWire mode • Also supports standard OHCI v1.1 compliance mode using Windows FireWire stack on HSSub PC	**$ 22780**
633-833-90	**HSSUB-6120 4-NODE AS5643 MIL-FIREWIRE INSTRUMENT WITH FUNNEL** HSSub-6120 AS5643 Mil-FireWire instrument with Funnel assembly for Virginia Panel G20 receiver with one VTAC receiver modules supporting full ITAs and i2 MX ITA connectors	**$ 28120**

PART #	DESCRIPTION	LIST PRICE
664-840-80	**HSSUB-6140 8G HYBRID IO EXPANSION INSTRUMENT** This instrument is a one-slot, fully integrated and tested assembly that includes: • 1-slot PXI Express Gen 3 x8 instrument • Low-level protocol is implemented in HSSub App-accessible Xilinx Virtex 7 Test Defined FPGA • 2 GB of DDR3 memory directly accessible • Physical I/O and low-level protocol controlled by reprogrammable FPGA • 8 Xilinx GTX transceivers (capable of supporting multiple protocols at rates of 1 - 8 Gbps) • 104 bidirectional LVTTL channels (up to 200 Mb/s) • 26 LVDS pairs (up to 800 Mb/s)	**$ 19640**
664-840-90	**HSSUB-6140 8G HYBRID IO EXPANSION INSTRUMENT WITH G29 FUNNEL ASSEMBLY** HSSub-6140 8G Hybrid instrument with funnel assembly for Virginia Panel G20 receiver with VTAC receiver modules which bring out MGT IO and LVDS IO with compatibility to pinmap for 614-383-90 Hybrid IO Expansion Instrument with Funnel Assembly. Support full ITAs and i2 MX ITA connectors.	**$ 26900**
634-541-80	**HSSUB-6310 STREAMING STORAGE MODULE** This Flexible IO Expansion Instrument provides: • 1-slot PXI Express Gen 3 x8 instrument • Provides 2 TB of high speed Flash-based memory • Write operations to 2.1 GB/s • Read operations to 3.5 GB/s • Data can be streamed peer to peer from HSSub instruments using HSSub TriFlex Streaming Services	**$ 25730**
357-604-18	**TIMING MODULE FUNNEL WITH I2 MX ICA CONNECTOR**	**$ 2730**

PART #	DESCRIPTION	LIST PRICE

632-682-90	**HSSUB-8030 PERIPHERAL BUS INSTRUMENT WITH FUNNEL ASSEMBLY**
	
	• 1-slot PXI Express Gen 3 x8 instrument
	• Includes integrated Virginia Panel G20 funnel module supporting full ITAs and i2 MX ITA connectors
	• Provides a collection of PC-style bus interfaces packaged in an instrument for direct connection to the UUT
	• All buses are supported directly by the Windows operating system on the HSSub PC as if they were integrated within the computer
	• Supported bus types:
	  • RS232 - two ports with all support signals
	  • Ethernet - four ports of 10 BASE-T, 100 BASE-T, 1000 BASE-T
	  • eSATA - Two ports supporting eSATA 3.0
	  • USB - Four ports of USB 2.0/3.0
		$ 11550

636-285-03	**WVT CONNECTOR FOR HSSUB-8030 PBI WITH FUNNEL - G20** VPC ITA connector wired for Wire Verification Test of HSSub-8030 Peripheral Bus Instrument with Funnel	**$ 3510**

622-289-00	**HSSUB-9010 32 PAIR RS485 FLEXIBLE IO EXPANSION INSTRUMENT**
	This Flexible IO Expansion Instrument provides:
	
	• 2-slot Flexible IO Expansion Instrument Fusion Module
	  • Teradyne Zync Control FPGA with ARM CPU and 1 GB memory
	  • Test Defined Virtex 7 FPGA with 2 GB memory
	• Physical Interface Module (PIM) in Fusion Socket 0 providing:
	  • 32 differential RS485 pairs
	  • Each pair programmable as an input or output
	  • Programmable termination
	  • Test Defined FPGA provides low-level control
		$ 20210

PART #	DESCRIPTION	LIST PRICE

622-289-95	**HSSUB-9010 32 CHANNEL RS-485 FIOXI WITH FUNNEL**
	This Flexible IO Expansion Instrument provides:
	
	• 2-slot Flexible IO Expansion Instrument Fusion Module
	  • Teradyne Zync Control FPGA with ARM CPU and 1 GB memory
	  • Test Defined Virtex 7 FPGA with 2 GB memory
	• Physical Interface Module (PIM) in Fusion Socket 0 providing:
	  • 32 differential RS485 pairs
	  • Each pair programmable as an input or output
	  • Programmable termination
	  • Test Defined FPGA provides low-level control
	• Funnel assembly for Virginia Panel G20 receiver with QuadraPaddle modules supporting full ITAs and i2 MX ITA connectors
		$ 22780

622-289-90	**HSSUB-9010 32 PAIR RS485 FLEXIBLE IO EXPANSION INSTRUMENT WITH FUNNEL ASSEMBLY**
	This Flexible IO Expansion Instrument provides:
	
	• 2-slot Flexible IO Expansion Instrument Fusion Module
	  • Teradyne Zync Control FPGA with ARM CPU and 1 GB memory
	  • Test Defined Virtex 7 FPGA with 2 GB memory
	• Physical Interface Module (PIM) in Fusion Socket 0 providing:
	  • 32 differential RS485 pairs
	  • Each pair programmable as an input or output
	  • Programmable termination
	  • Test Defined FPGA provides low-level control
	• Funnel assembly for Virginia Panel G20 receiver with QuadraPaddle connector
		$ 23450

622-290-00	**HSSUB-9020 ETHERNET FLEXIBLE IO EXPANSION INSTRUMENT**
	This Flexible IO Expansion Instrument provides:
	
	• 2-slot Flexible IO Expansion Instrument Fusion Module
	  oTeradyne Zync Control FPGA with ARM CPU and 1 GB memory
	  o Test Defined Virtex 7 FPGA with 2 GB memory
	• Physical Interface Module (PIM) in Fusion Socket 0 providing:
	  o Eight 10/100/1000 Mbps Ethernet ports
	  o Controllable by TCP/IP stack on HSSub Real-time Processor or HSSub Windows PC
		$ 20210

PART #	DESCRIPTION	LIST PRICE
622-290-90	**HSSUB-9020 ETHERNET FLEXIBLE IO EXPANSION INSTRUMENT WITH FUNNEL ASSEMBLY** This Flexible IO Expansion Instrument provides: • 2-slot Flexible IO Expansion Instrument Fusion Module oTeradyne Zync Control FPGA with ARM CPU and 1 GB memory o Test Defined Virtex 7 FPGA with 2 GB memory • Physical Interface Module (PIM) in Fusion Socket 0 providing: o Eight 10/100/1000 Mbps Ethernet ports o Controllable by TCP/IP stack on HSSub Real-time Processor or HSSub Windows PC • Funnel assembly for Virginia Panel G20 receiver o QuadraPaddle connector for eight wired Ethernet ports o Connector available for cable to an Optical IO Expansion Instrument for two Optical Ethernet ports	**$ 25810**
622-295-00	**HSSUB-9030 RS485/HOTLINK/ECL FLEXIBLE IO EXPANSION INSTRUMENT** This Flexible IO Expansion Instrument provides: • 2-slot Flexible IO Expansion Instrument Fusion Module oTeradyne Zync Control FPGA with ARM CPU and 1 GB memory o Test Defined Virtex 7 FPGA with 2 GB memory • Physical Interface Module (PIM) in Fusion Socket 0 providing: o 32 differential RS485 pairs o Each pair programmable as an input or output o Programmable termination o Test Defined FPGA provides low-level control • Physical Interface Module (PIM) in Fusion Socket 1 providing: o HotLink: • Four full duplex interfaces • 200-1500 Mbps operation o ECL: • 12 differential ECL inputs • 12 differential ECL outputs • Up to 60 Mbps operation • 50 ohms to -2V termination, selectable	**$ 25990**

PART #	DESCRIPTION	LIST PRICE
622-295-95	**HSSUB-9030 RS485/HOTLINK/ECL FLEXIBLE IO EXPANSION INSTRUMENT WITH FUNNEL ASSEMBLY** This Flexible IO Expansion Instrument provides: • 2-slot Flexible IO Expansion Instrument Fusion Module oTeradyne Zync Control FPGA with ARM CPU and 1 GB memory o Test Defined Virtex 7 FPGA with 2 GB memory • Physical Interface Module (PIM) in Fusion Socket 0 providing: o 32 differential RS485 pairs o Each pair programmable as an input or output o Programmable termination o Test Defined FPGA provides low-level control • Physical Interface Module (PIM) in Fusion Socket 1 providing: o HotLink: • Four full duplex interfaces • 200-1500 Mbps operation o ECL: • 12 differential ECL inputs • 12 differential ECL outputs • Up to 60 Mbps operation • 50 ohms to -2V termination, selectable • Funnel assembly for Virginia Panel G20 receiver with QuadraPaddle modules supporting full ITAs and i2 MX ITA connectors	**$ 32260**

PART #	DESCRIPTION	LIST PRICE
624-111-00	**HSSUB-9050 ETHERNET/RS232/IRIG-B FLEXIBLE IO EXPANSION INSTRUMENT** This Flexible IO Expansion Instrument provides: • 2-slot Flexible IO Expansion Instrument Fusion Module o Teradyne Control FPGA with 1 GB memory o Test Defined Virtex 7 FPGA with 2 GB memory • Physical Interface Module (PIM) in Fusion Socket 0 providing: o Eight 10BASE-T/100BASE-T/1000BASE-T wired Ethernet ports o Two additional ports for connection to an Optical IO Expansion Instrument to produce 1000BASE-SX Optical Gigabit Ethernet o Controllable by TCP/IP stack on HSSub Real-time Processor or HSSub Windows PC o Maximum concurrently operating ports: • Two Optical and Four wired ports • Eight wired and no Optical ports • Physical Interface Module (PIM) in Fusion Socket 1 providing o Maximum RS232 ports: • 8 ports with full handshaking capability • 32 ports with no handshake capability (TX/RX only) • UARTs implemented in Test Defined FPGA • Supported by Teradyne RS232 App providing control via PC or RT Processor o IRIG-B: • One input (analog and digital) • One output (analog and digital)	**$ 25990**

PART #	DESCRIPTION	LIST PRICE
624-111-90	**HSSUB-9050 ETHERNET/RS232/IRIG-B FLEXIBLE IO EXPANSION INSTRUMENT WITH FUNNEL** This Flexible IO Expansion Instrument provides: • 2-slot Flexible IO Expansion Instrument Fusion Module o Teradyne Control FPGA with 1 GB memory o Test Defined Virtex 7 FPGA with 2 GB memory.... • Physical Interface Module (PIM) in Fusion Socket 0 providing: o Eight 10BASE-T/100BASE-T/1000BASE-T wired Ethernet ports accessed at QuadraPaddle receiver connector o Two additional ports for connection to an Optical IO Expansion Instrument to produce 1000BASE-SX Optical Gigabit Ethernet are accessed via a connector on the top of the Virginia Panel G20 funnel o Controllable by TCP/IP stack on HSSub Real-time Processor or HSSub Windows PC o Maximum concurrently operating Ethernet ports:.. • Six wired and two optical ports.. • Eight wired and no optical ports.. • Physical Interface Module (PIM) in Fusion Socket 1 providing o RS232 ports: • Up to 6 ports with full handshaking capability.. • Up to 36 ports with no handshake capability (TX/RX only) • UARTs implemented in Test Defined FPGA.. • Supported by Teradyne RS232 HSSub App providing control via PC or RT Processor o IRIG-B: • One input (analog and digital) • One output (analog and digital) • Funnel assembly for Virginia Panel G20 receiver with one QuadraPaddle receiver connectors for each of the two Physical Interface Modules	**$ 34110**

PART #	DESCRIPTION	LIST PRICE
624-111-95	**HSSUB-9050 ETHERNET/RS232/IRIG-B FLEXIBLE IO EXPANSION INSTRUMENT WITH FUNNEL** This Flexible IO Expansion Instrument provides: • 2-slot Flexible IO Expansion Instrument Fusion Module o Teradyne Control FPGA with 1 GB memory o Test Defined Virtex 7 FPGA with 2 GB memory. • Physical Interface Module (PIM) in Fusion Socket 0 providing: o Eight 10BASE-T/100BASE-T/1000BASE-T wired Ethernet ports accessed at QuadraPaddle receiver connector o Two optical 1000BASE-SX ports accessible via provided SFP pluggable modules at the top of the Virginia Panel G20 funnel o Controllable by TCP/IP stack on HSSub Real-time Processor or HSSub Windows PC o Maximum concurrently operating Ethernet ports: § Six wired and two optical ports.. § Eight wired and no optical ports.. • Physical Interface Module (PIM) in Fusion Socket 1 providing o RS232 ports: § Up to 6 ports with full handshaking capability § Up to 36 ports with no handshake capability (TX/RX only) § UARTs implemented in Test Defined FPGA § Supported by Teradyne RS232 HSSub App providing control via PC or RT Processor o IRIG-B: § One input (analog and digital) § One output (analog and digital) • Funnel assembly for Virginia Panel G20 receiver with one QuadraPaddle receiver modules supporting full ITAs and i2 MX ITA connectors for each of the two Physical Interface Modules	**$ 39710**

PART #	DESCRIPTION	LIST PRICE
622-469-00	**HSSUB-9060 RS232/IRIG-B FLEXIBLE IO EXPANSION INSTRUMENT** This Flexible IO Expansion Instrument provides: • 2-slot Flexible IO Expansion Instrument Fusion Module o Teradyne Control FPGA with 1 GB memory o Test Defined Virtex 7 FPGA with 2 GB memory • Physical Interface Module (PIM) in Fusion Socket 1 providing o Maximum RS232 ports: • 8 ports with full handshaking capability • 32 ports with no handshake capability (TX/RX only) • UARTs implemented in Test Defined FPGA • Supported by Teradyne RS232 App providing control via PC or RT Processor o IRIG-B: • One input (analog and digital) • One output (analog and digital) • Funnel assembly for Virginia Panel G20 receiver with one QuadraPaddle receiver connector	**$ 20210**
622-469-90	**HSSUB-9060 RS232/IRIG-B FLEXIBLE IO EXPANSION INSTRUMENT WITH FUNNEL ASSEMBLY** This Flexible IO Expansion Instrument provides: • 2-slot Flexible IO Expansion Instrument Fusion Module o Teradyne Control FPGA with 1 GB memory o Test Defined Virtex 7 FPGA with 2 GB memory • Physical Interface Module (PIM) in Fusion Socket 1 providing o Maximum RS232 ports: • 8 ports with full handshaking capability • 2 ports with no handshake capability (TX/RX only) • UARTs implemented in Test Defined FPGA • Supported by Teradyne RS232 App providing control via PC or RT Processor o IRIG-B: • One input (analog and digital) • One output (analog and digital)	**$ 23020**

PART #	DESCRIPTION	LIST PRICE
622-472-00	**HSSUB-9070 HOTLINK/ECL FLEXIBLE IO EXPANSION INSTRUMENT** This Flexible IO Expansion Instrument provides: • 2-slot Flexible IO Expansion Instrument Fusion Module oTeradyne Zync Control FPGA with ARM CPU and 1 GB memory o Test Defined Virtex 7 FPGA with 2 GB memory • Physical Interface Module (PIM) in Fusion Socket 0 providing: o HotLink: • Four full duplex interfaces • 200-1500 Mbps operation o ECL: • 12 differential ECL inputs • 12 differential ECL outputs • Up to 60 Mbps operation • 50 ohms to -2V termination, selectable	**$ 20210**
622-472-90	**HSSUB-9070 HOTLINK/ECL FLEXIBLE IO EXPANSION INSTRUMENT WITH FUNNEL ASSEMBLY** This Flexible IO Expansion Instrument provides: • 2-slot Flexible IO Expansion Instrument Fusion Module oTeradyne Zync Control FPGA with ARM CPU and 1 GB memory o Test Defined Virtex 7 FPGA with 2 GB memory • Physical Interface Module (PIM) in Fusion Socket 0 providing: o HotLink: • Four full duplex interfaces • 200-1500 Mbps operation o ECL: • 12 differential ECL inputs • 12 differential ECL outputs • Up to 60 Mbps operation • 50 ohms to -2V termination, selectable • Funnel assembly for Virginia Panel G20 receiver with QuadraPaddle connector	**$ 23020**

PART #	DESCRIPTION	LIST PRICE
629-604-00	**HSSUB-9080 RS485/RS232/IRIG-B FLEXIBLE IO EXPANSION INSTRUMENT** This Flexible IO Expansion Instrument provides: • 2-slot Flexible IO Expansion Instrument Fusion Module o Teradyne Zync Control FPGA with ARM CPU and 1 GB memory o Test Defined Virtex 7 FPGA with 2 GB memory • Physical Interface Module (PIM) in Fusion Socket 0 providing: o 32 differential RS485 pairs o Each pair programmable as an input or output o Programmable termination o Test Defined FPGA provides low-level control • Physical Interface Module (PIM) in Fusion Socket 1 providing: o Maximum standard RS232 ports: • 115 kbps max. data rate • 3 ports with full handshaking capability • 18 ports with no handshake capability (TX/RX only) • UARTs implemented in Test Defined FPGA • Supported by Teradyne RS232 App providing control via PC or RT Processor o Maximum fast RS232 or RS423 ports: • 1 Mbps max. data rate • 3 ports with full handshaking RS232 capability • 18 ports with no handshake capability (TX/RX only) • UARTs implemented in Test Defined FPGA • Supported by Teradyne RS232 App providing control via PC or RT Processor o IRIG-B: • One input (analog and digital) • One output (analog and digital) • 100 PPS RS-422 input • 100 PPS RS-422 output	**$ 25990**

PART #	DESCRIPTION	LIST PRICE
629-604-90	**HSSUB-9080 RS485/RS232/IRIG-B FLEXIBLE IO EXPANSION INSTRUMENT WITH FUNNEL** This Flexible IO Expansion Instrument provides: • 2-slot Flexible IO Expansion Instrument Fusion Module o Teradyne Zync Control FPGA with ARM CPU and 1 GB memory o Test Defined Virtex 7 FPGA with 2 GB memory • Physical Interface Module (PIM) in Fusion Socket 0 providing: o 32 differential RS485 pairs o Each pair programmable as an input or output o Programmable termination o Test Defined FPGA provides low-level control • Physical Interface Module (PIM) in Fusion Socket 1 providing: o Maximum standard RS232 ports: • 115 kbps max. data rate • 3 ports with full handshaking capability • 18 ports with no handshake capability (TX/RX only) • UARTs implemented in Test Defined FPGA • Supported by Teradyne RS232 App providing control via PC or RT Processor o Maximum fast RS232 or RS423 ports: • 1 Mbps max. data rate • 3 ports with full handshaking RS232 capability • 18 ports with no handshake capability (TX/RX only) • UARTs implemented in Test Defined FPGA • Supported by Teradyne RS232 App providing control via PC or RT Processor o IRIG-B: • One input (analog and digital) • One output (analog and digital) • 100 PPS RS-422 input • 100 PPS RS-422 output • Funnel assembly for Virginia Panel G20 receiver with one QuadraPaddle receiver modules supporting full ITAs and i2 MX ITA connectors for each of the two Physical Interface Modules	**$ 32260**

PART #	DESCRIPTION	LIST PRICE
638-681-00	**HSSUB-9100 64 PAIR RS485 FLEXIBLE IO EXPANSION INSTRUMENT** This Flexible IO Expansion Instrument provides: • 2-slot Flexible IO Expansion Instrument Fusion Module o Teradyne Zync Control FPGA with ARM CPU and 1 GB memory o Test Defined Virtex 7 FPGA with 2 GB memory • Physical Interface Module (PIM) in Fusion Socket 0 providing: o 32 differential RS485 pairs o Each pair programmable as an input or output o Programmable termination o Test Defined FPGA provides low-level control • Physical Interface Module (PIM) in Fusion Socket 0 providing: o 32 differential RS485 pairs o Each pair programmable as an input or output o Programmable termination o Test Defined FPGA provides low-level control	**$ 25990**
638-681-90	**HSSUB-9100 64 PAIR RS485 FLEXIBLE IO EXPANSION INSTRUMENT WITH FUNNEL** This Flexible IO Expansion Instrument provides: • 2-slot Flexible IO Expansion Instrument Fusion Module o Teradyne Zync Control FPGA with ARM CPU and 1 GB memory o Test Defined Virtex 7 FPGA with 2 GB memory • Physical Interface Module (PIM) in Fusion Socket 0 providing: o 32 differential RS485 pairs o Each pair programmable as an input or output o Programmable termination o Test Defined FPGA provides low-level control • Physical Interface Module (PIM) in Fusion Socket 0 providing: o 32 differential RS485 pairs o Each pair programmable as an input or output o Programmable termination o Test Defined FPGA provides low-level contro • Funnel assembly for Virginia Panel G20 receiver with one QuadraPaddle receiver modules supporting full ITAs and i2 MX ITA connectors for each of the two Physical Interface Modulesl	**$ 32260**

PART #	DESCRIPTION	LIST PRICE
656-290-00	**HSSUB-9110 RS232/IRIG-B/HOTLINK/ECL FLEXIBLE IO EXPANSION INSTRUMENT** This Flexible IO Expansion Instrument provides: • 2-slot Flexible IO Expansion Instrument Fusion Module o Teradyne Zync Control FPGA with ARM CPU and 1 GB memory o Test Defined Virtex 7 FPGA with 2 GB memory • Physical Interface Module (PIM) in Fusion Socket 0 providing: o Maximum standard RS232 ports: • 115 kbps max. data rate • 3 ports with full handshaking capability • 18 ports with no handshake capability (TX/RX only) • UARTs implemented in Test Defined FPGA • Supported by Teradyne RS232 App providing control via PC or RT Processor o Maximum fast RS232 or RS423 ports: • 1 Mbps max. data rate • 3 ports with full handshaking RS232 capability • 18 ports with no handshake capability (TX/RX only) • UARTs implemented in Test Defined FPGA • Supported by Teradyne RS232 App providing control via PC or RT Processor o IRIG-B: • One input (analog and digital) • One output (analog and digital) • 100 PPS RS-422 input • 100 PPS RS-422 output • Physical Interface Module (PIM) in Fusion Socket 1 providing: o HotLink ports: • Four full duplex interfaces • 200 - 1500 Mbps operation o ECL ports: • 12 differential inputs • 12 differential outputs • Up to 60 Mbps operation • 50 ohms to -2V termination, selectable	**$ 25990**

PART #	DESCRIPTION	LIST PRICE
656-290-90	**HSSUB-9110 RS232/IRIG-B/HOTLINK/ECL FLEXIBLE IO EXPANSION INSTRUMENT WITH FUNNEL** This Flexible IO Expansion Instrument provides: • 2-slot Flexible IO Expansion Instrument Fusion Module o Teradyne Zync Control FPGA with ARM CPU and 1 GB memory o Test Defined Virtex 7 FPGA with 2 GB memory • Physical Interface Module (PIM) in Fusion Socket 0 providing: o Maximum standard RS232 ports: • 115 kbps max. data rate • 3 ports with full handshaking capability • 18 ports with no handshake capability (TX/RX only) • UARTs implemented in Test Defined FPGA • Supported by Teradyne RS232 App providing control via PC or RT Processor o Maximum fast RS232 or RS423 ports: • 1 Mbps max. data rate • 3 ports with full handshaking RS232 capability • 18 ports with no handshake capability (TX/RX only) • UARTs implemented in Test Defined FPGA • Supported by Teradyne RS232 App providing control via PC or RT Processor o IRIG-B: • One input (analog and digital) • One output (analog and digital) • 100 PPS RS-422 input • 100 PPS RS-422 output • Physical Interface Module (PIM) in Fusion Socket 1 providing: o HotLink ports: • Four full duplex interfaces • 200 - 1500 Mbps operation o ECL ports: • 12 differential inputs • 12 differential outputs • Up to 60 Mbps operation • 50 ohms to -2V termination, selectable • Funnel assembly for Virginia Panel G20 receiver with one QuadraPaddle receiver modules supporting full ITAs and i2 MX ITA connectors for each of the two Physical Interface Modulesl	**$ 32260**

PART #	DESCRIPTION	LIST PRICE
670-148-00	**HSSUB-9120 ETHERNET/RS485 FLEXIBLE IO EXPANSION INSTRUMENT** This Flexible IO Expansion Instrument provides: • 2-slot Flexible IO Expansion Instrument Fusion Module o Teradyne Zync Control FPGA and 1 GB memory o Test Defined Virtex 7 FPGA with 2 GB memory provides low level control • Physical Interface Module (PIM) in Fusion Socket 0 providing: o Eight 10/100/1000 Mbps Ethernet ports o Controllable by HSSub Windows PC • Physical Interface Module (PIM) in Fusion Socket 1 providing: o 32 differential RS485 pairs o Each pair programmable as an input or output o Programmable termination o Test Defined FPGA provides low-level control	**$ 25990**
670-148-95	**HSSUB-9120 ETHERNET/RS485 FLEXIBLE IO EXPANSION INSTRUMENT WITH FUNNEL ASSEMBLY** This Flexible IO Expansion Instrument provides: • 2-slot Flexible IO Expansion Instrument Fusion Module o Teradyne Zync Control FPGA and 1 GB memory o Test Defined Virtex 7 FPGA with 2 GB memory provides low level control • Physical Interface Module (PIM) in Fusion Socket 0 providing: o Eight 10/100/1000 Mbps Ethernet ports o Controllable by HSSub Windows PC • Physical Interface Module (PIM) in Fusion Socket 1 providing: o 32 differential RS485 pairs o Each pair programmable as an input or output o Programmable termination o Test Defined FPGA provides low-level control • Funnel assembly for Virginia Panel G20 receiver with one QuadraPaddle receiver modules supporting full ITAs and i2 MX ITA connectors for each of the two Physical Interface Modules	**$ 32260**
675-980-80	**HSSUB-9200 RS170/RS343 VIDEO INSTRUMENT** This Flexible IO Expansion Instrument provides: • 2-slot Flexible IO Expansion Instrument Fusion Module o Teradyne Zync Control FPGA and 1 GB memory o Test Defined Virtex 7 FPGA with 2 GB memory provides low level control • Physical Interface Module (PIM) in Fusion Socket 0 providing RS170 analog video capture • Physical Interface Module (PIM) in Fusion Socket 1 providing RS343 analog video capture	**$ 21600**

PART #	DESCRIPTION	LIST PRICE
666-175-90	**HSSUB-9500 SYNC/TEST FLEXIBLE IO EXPANSION INSTRUMENT WITH FUNNEL ASSEMBLY** This Flexible IO Expansion Instrument provides: • 2-slot Flexible IO Expansion Instrument Fusion Module o Teradyne Zync Control FPGA and 1 GB memory o Test Defined Virtex 7 FPGA with 2 GB memory provides low level control • Physical Interface Module (PIM) in Fusion Socket 0 providing: o (2) 40 MHz clock outputs o (5) Discrete PECL inputs o (5) Discrete PECL outputs o (16) Opto-coupled inputs o (14) Opto-coupled outputs o (13) TTL inputs o (2) TTL outputs o (2) Buffered DAC outputs o ADC measurement of (5) select signals	**$ 30460**
710-059-00	**SFP OPTICAL ETHERNET TRANCEIVER**	**$ 160**
710-059-01	**SFP OPTICAL FIBRE CHANNEL TRANCEIVER**	**$ 160**
652-063-00	**SFP TRANSCEIVER, 4.25 GB/S**	**$ 160**
710-059-03	**SFP OPTICAL FIBRE CHANNEL TRANCEIVER**	**$ 276**
619-414-01	**PLUG, LOOPBACK SFP+,** Minimum order quantity of 5	**$ 82**
357-603-62	**WVT CONNECTOR FOR HSSUB SERIAL CORE WITH FUNNEL** VPC ITA connector wired for Wire Verification Test of HSSub-5050 Serial Core Instrument (613-892-95) with Funnel with i2 MX ICA connectors. Two modules are required per HSSub-5050 instrument.	**$ 4280**
622-455-03	**WVT MATERIAL FOR SERIAL CORE INSTRUMENT W/ 8I/O**	**Consult Factory**
622-456-03	**WVT MATERIAL FOR LVDS CORE INSTRUMENT**	**$ 940**
622-457-03	**WVT MATERIAL FOR SERIAL CORE INSTRUMENT W/ 16I/O**	**Consult Factory**
622-459-03	**WVT MATERAIL FOR HSSUB-6065 4 PORT OPTICAL IO EXPANSION INSTRUMENT**	**$ 1600**
622-462-03	**WVT MATERIAL FORHSSUB-9050 ETHERNET/RS232/IRIG-B FIOXI WITH FUNNEL**	**$ 1190**

PART #	DESCRIPTION	LIST PRICE
622-462-13	**WVT MODULE FOR HSSUB RS232/IRIG-B FIOXI WITH FUNNEL** VPC ITA connector wired for Wire Verification Test of HSSub-9050 FIOXI Instrument (624-111-95) with Funnel with i2 MX ICA connectors. One module is required per HSSub-9050 instrument.	**$ 2380**
622-463-13	**WVT MODULE FOR HSSUB RS485 FIOXI WITH FUNNEL** VPC ITA connector wired for Wire Verification Test of HSSub-9030 FIOXI Instrument with Funnel (622-295-95) or HSSub-9100 with Funnel (638-681-90) with i2 MX ICA connectors. One module is required per HSSub-9030 instrument. Two modules are required per HSSub-9100 instrument.	**$ 2380**
622-464-03	**WVT MATERIAL FOR HOTLINK/ECL FIOXI PIM WITH FUNNEL**	**$ 1190**
622-464-13	**WVT MODULE FOR HSSUB HOTLINK FIOXI WITH FUNNEL** VPC ITA connector wired for Wire Verification Test of HSSub-9030 FIOXI Instrument (611-039-95) with Funnel with i2 MX ICA connectors. One module is required per HSSub-9030 instrument.	**$ 2380**
622-466-03	**WVT MATERIAL ETHERNET FIOXI PHYSICAL INTERFACE MODULE (PIM)**	**$ 1310**
622-466-13	**WVT MODULE FOR HSSUB ETHERNET FIOXI WITH FUNNEL** VPC ITA connector wired for Wire Verification Test of HSSub-9050 FIOXI Instrument (624-111-95) with Funnel with i2 MX ICA connectors. One module is required per HSSub-9050 instrument.	**$ 2110**
628-302-03	**WVT CONNECTOR FOR HSSUB-6090 WITH FUNNEL** VPC ITA connector wired for Wire Verification Test of HSSub-6090 Ethernet Instrument with Funnel	**$ 1140**
628-302-13	**WVT MATERIAL FOR HSSUB-6090 1-SLOT 8 PORT ETHERNET IO EXPANSION INSTRUMENT** This item contains the self evaluation fixture wiring, and integration of wire verification selftest.	**$ 2110**
636-285-13	**WVT CONNECTOR FOR HSSUB-8030 PBI WITH FUNNEL** VPC ITA connector wired for Wire Verification Test of HSSub-8030 Peripheral Bus Instrument (632-682-90) with Funnel with i2 MX ICA connectors.	**$ 3860**
637-642-03	**WVT MATERIAL FOR HSSUB-6120 4-NODE AS5643 MIL-FIREWIRE INSTRUMENT**	**$ 1600**

PART #	DESCRIPTION	LIST PRICE
637-642-13	**WVT CONNECTOR FOR HSSUB-6120 MIL-FIREWIRE WITH FUNNEL** VPC ITA connector wired for Wire Verification Test of HSSub-6120 Mil-FireWire Instrument (633-833-90) with Funnel with i2 MX ICA connectors.	**$ 4100**
622-467-03	**WVT CONNECTOR FOR HSSUB-6040 WITH FUNNEL** VPC ITA connector wired for Wire Verification Test of HSSub-6040 Instrument with Funnel (614-383-90) and HSSub-6140 instrument with Funnel (664-840-90) with i2 MX VTAC ICA connectors for copper IO.	**$ 4370**
640-041-13	**WVT CONNECTOR FOR HSSUB-6020A EDIGITAL WITH FUNNEL** VPC ITA connector wired for Wire Verification Test of HSSub-6020A eDigital Instrument (630-666-90) with Funnel with i2 MX ICA connectors.	**$ 2110**
650-957-13	**WVT CONNECTOR FOR HSSUB TIMING MODULE WITH FUNNEL** VPC ITA connector wired for Wire Verification Test of HSSub Timing Module (630-681-01) with Funnel with i2 MX ICA connectors. .	**$ 1970**
652-825-13	**WVT CONNECTOR FOR HSSUB-6091 10G ETHERNET WITH FUNNEL** VPC ITA connector with fiber optic loopbacks for Wire Verification Test of HSSub-6091 10G Ethernet Instrument (635-352-90) with Funnel with i2 MX ICA connectors.	**$ 2670**
652-826-03	**CABLE, WVT G20 ITA 12G SERIAL SFP IOXI FUNNEL** VPC ITA connector wired for Wire Verification Test of HSSub-6100 12G Serial Instrument with Funnel (634-540-90) with i2 MX ICA connectors for optical IO.	**$ 2950**
652-826-13	**WVT CONNECTOR FOR HSSUB-6100 12G SERIAL WITH FUNNEL** VPC ITA connector wired for Wire Verification Test of HSSub-6100 12G Serial Instrument with Funnel (634-540-90) with i2 MX ICA connectors for optical IO.	**$ 3860**
658-456-13	**WVT MODULE FOR HSSUB-5010 WITH FUNNEL** VPC ITA connector wired for Wire Verification Test of HSSub-5010 LVDS Core Instrument (611-039-95) with Funnel with i2 MX ICA connectors. Two modules are required per HSSub-5010 instrument.	**$ 3280**
660-275-03	**CABLE, WVT G20 ITA 10G ETHERNET IOXI VTAC FUNNEL** VPC ITA connector wired for Wire Verification Test of HSSub-609110G Ethernet Instrument with Funnel (635-352-91) with i2 MX VTAC ICA connectors for copper IO.	**$ 1520**

PART #	DESCRIPTION	LIST PRICE
660-275-13	**CABLE, WVT I2 CON ITA 10G ETHERNET IOXI VTAC FUNNEL** VPC ITA connector wired for Wire Verification Test of HSSub-609110G Ethernet Instrument with Funnel (635-352-91) with i2 MX VTAC ICA connectors for copper IO.	**$ 2120**
660-276-03	**CABLE, WVT G20 ITA 12G SERIAL IOXI VTAC FUNNEL** VPC ITA connector wired for Wire Verification Test of HSSub-6100 12G Serial Instrument with Funnel (634-540-91) with i2 MX VTAC ICA connectors for copper IO.	**$ 2310**
660-276-13	**CABLE, WVT I2 CON ITA 12G SERIAL IOXI VTAC FUNNEL** VPC ITA connector wired for Wire Verification Test of HSSub-6100 12G Serial Instrument with Funnel (634-540-91) with i2 MX VTAC ICA connectors for copper IO.	**$ 2930**
660-825-03	**CABLE, WVT G20 ITA 10G ETHERNET SFP IOXI FUNNEL** VPC ITA connector wired for Wire Verification Test of HSSub-6091 10G Ethernet Instrument with Funnel (635-352-90) with i2 MX ICA connectors for optical IO.	**$ 1750**
660-825-13	**CABLE, WVT I2 CON ITA 10G ETHERNET SFP IOXI FUNNEL** VPC ITA connector wired for Wire Verification Test of HSSub-6091 10G Ethernet Instrument with Funnel (635-352-90) with i2 MX ICA connectors for optical IO.	**$ 2670**
666-456-00	**WVT MODULE FOR HSSUB SYNC/TEST FIOXI WITH FUNNEL ASSEMBLY** VPC ITA connector wired for Wire Verification Test of HSSub-9500 FIOXI Instrument (666-175-90) with Funnel with i2 MX ICA connectors. Two modules are required per HSSub-9500 instrument.	**$ 2060**
658-809-00	**HSSUB-9100 DTI INTERFACE UNIT AND SUPPORTING CABLES**	**$ 102470**
659-571-00	**HSSUB-9100 DTI SELFTEST LOOPBACK KIT FOR 658-809-00**	**$ 10520**
628-181-00	**HSSUB TRAINING ADAPTER** • Teradyne designed hardware to assist in training activities for TPS development and Application (App) development • Contained in a test adapter (ITA) box that uses the standard HSSub Virginia Panel G20 interface • Requires one HSSub LVTTL IO Expansion Instrument and funnel	**$ 15720**
639-989-00	**HSSUB-AK REUSABLE TRANSIT CASE** The reusable HSS Transit case is designed to house the HSSub during shipment and storage.	**$ 6300**
639-990-00	**CASE, TRANSIT PLUG WRAP**	**$ 1430**
650-219-01	**HSSUB-6020 LVTTL CIB** This Cable interface board (CIB) plugs into the HSSub-6020 LVTTL Instrument and routes signals to standard 34 pin, 100 mil spacing header connector used for low speed signals like Boundary Scan.	**$ 2240**

PART #	DESCRIPTION	LIST PRICE
650-595-30	**PM ITA LOOPBACK ASSEMBLY KIT** Contains (2) 654-660-13, (2) 654-660-14, 622-467-13	**$ 17000**
660-499-00	**1U 16-PORT FEED-THRU PANEL W/8 DUPLEX LC'S FOR TESTER**	**$ 310**
661-121-00	**COVER ASSEMBLY, 6U TALL, 5.25" DEPTH**	**$ 2580**
662-595-80	**LVTTL2 LOOPBACK ADAPTER HLA**	**$ 780**
662-595-81	**LVTTL2 LED TRAINING BOARD HLA**	**$ 780**
664-472-80	**LVTTL2 TO 34 POS RIBBON HEADER HLA**	**$ 750**
666-996-00	**CABLE, JTAG BOUNDARY SCAN QUAD POD**	**$ 1670**
654-660-21	**LVTTL IO INSTRUMENT PM CABLE**	**$ 8400**
628-302-00	**G20 FUNNEL FOR HSSUB-6090 1-SLOT ETHERNET FLEXIBLE IO EXPANSION INSTRUMENT** • Virginia Panel G20 funnel with QuadraPaddle ICA connector for eight wired ports • For use with 623-485-80 HSSub-6090 1-slot Ethernet IO Expansion Instrument	**$ 5620**
654-660-22	**HYBRID IO INSTRUMENT PM CABLE**	**$ 14590**
635-153-00	**FIOXI ETHERNET TO OPTICAL IO QSFP TELECOM CABLE**	**$ 590**
657-597-00	**HSSUB-9080 ADAPTER CABLE FOR GEN2 TS**	**$ 7490**
658-690-00	**PC MONITOR, KEYBOARD, MOUSE KIT**	**$ 1010**
663-942-00	**CABLE KIT, FIOXI RS485 TO SCSI CIB**	**$ 2600**
629-625-00	**2-CHANNEL OPTICAL IO EXPANSION INSTRUMENT AND CABLE FOR ETHERNET** This Optical IO Expansion Instrument provides: • One 618-142-80 4-Channel IO Expansion Instrument for mounting behind Direct Connect Panel in 611-038-05 Foundation • Cable assembly that connects instrument to Ethernet Instrument and to the Direct Connect Panel Note: • Instrument does not use a PXI chassis slot	**$ 5790**
658-499-99	**FC-2 LAYER COMPATABILITY APP SOFTWARE**	**$ 2660**

PART #	DESCRIPTION	LIST PRICE

676-099-99	**ARINC 708 STIMULUS ONLY APP**
	• Configures the RS485 Flexible IO Expansion Instrument to create a user-defined 1600-bit ARINC 708 stimulus stream
	  • User-created file specifies the contents of one or more ARINC 708 data frames
	  • User data is repeated continuously until terminated
	• Includes Windows TPS API on HSSub PC
	• Includes executable App code that can be invoked from any HSSub TPS on the HSSub PC
	• Includes hardware design for ARINC 708 buffer and transformer circuit that can be located in the main TPS ID
		$ 5000

663-837-99	**2.5G SFPDP STREAMING DATA HSSUB APP** Configures the HSSub-6100 12G Serial IO Expansion Instrumentand the HSSub-6310 Streaming Storage instrument to support capture and playback Serial Front Panel Data Port streaming data compliant to ANSI/VITA 17.1-2015 • Real-time peer-to-peer data streaming across PXIe backplane with sustained write speed of 2.1 GB/s and read speed of 3.5 GB/s • Supports 4 lanes of 2.5 Gb/s per 12G instrument with up to 0.5TB storage per lane or 26 minutes of record time • Simultaneous, parallel access to multiple Storage instruments • 3.5 GB/s stored data offload capability via 10G Ethernet IO Expansion Instrument • Full featured C/C# Application Programming Interface supporting store and playback operation modes, time stamping, error checking, signal state and other metadata • GUI application for Windows for test setup, start/stop data recording and playback, data file access, secure file erase and diagnostic utility functions	**$ 7720**

PART #	DESCRIPTION	LIST PRICE
667-637-99	**10G SFPDP STREAMING DATA HSSUB APP** Configures the HSSub-6100 12G Serial IO Expansion Instrument and the HSSub-6310 Streaming Storage Instrument to support capture and playback Serial Front Panel Data Port streaming data compliant to ANSI/VITA 17.3-2018 • Real-time peer-to-peer data streaming across PXIe backplane with sustained write speed of 2.1 GB/s and read speed of 3.5 GB/s • Supports 2 lanes of 10G per 12G instrument with up to 1TB storage per lane for 13 Minutes of record time • Simultaneous, parallel access to multiple Storage instruments • 3.5 GB/s stored data offload capability via 10G Ethernet IO Expansion Instrument • Full featured C/C# Application Programming Interface supporting store and playback operation modes, time stamping, error checking, signal state and other metadata • GUI application for Windows for test setup, start/stop data recording and playback, data file access, secure file erase and diagnostic utility functions	**$ 10000**
666-674-99	**PCI HSSUB APP V1.0** Configures the eDigital-6020A Instrument to support 33MHz PCI Initiator or Target bus behavior • Provide PCI Bus management functions including Reset, all clocks, bus ownership arbitration, IDSEL select lines, Configuration Space reads and writes, pull-up resistors, and interrupt and error handling • Maps a single dual-port memory of 1024 or fewer 32-bit locations into PCI space and drives out a single PCI interrupt • As Initiator reads and writes from local memory to UUT internal dual 4KB RAM memory • As Target allows external PCI Initiator to reads and writes from local 4KB RAM memory • C/C# Application Programming Interface supporting PCI Initialization and enumeration, operation modes, management functions and read/write to memory	**$ 7720**

PART #	DESCRIPTION	LIST PRICE
666-676-99	**I2C HSSUB APP V1.0** Configures the eDigital-6020A Instrument to support generic master or slave i2C bus behavior • 8 independent bus ports • Up to a 32 message sequence • 2 tristate IOs per bus: SCL and SDA • Bus speeds (8-bit oriented bidirectional) o Standard(Sm): 100kb/s o Fast-Mode(Fm): 400kb/s o Fast-Mode Plus(Fm+): 1Mb/s o High-Speed Mode(Hs-mode): 3.4Mb/s • Bus speeds (8-bit oriented unidirectional) o Ultra Fast-Mode(UFm): 5Mb/s • Master Mode o 1K message FIFO for I2C transmission o 1KB FIFO of receive/capture data o Source Message Types: • Source and expect Ack • Source and expect No Ack • Receive with Capture • Receive without Capture • Receive Ignore • Slave Mode o Configurable for 7 or 10 bit addressing with user assigned address o Configurable Device ID o Reserved addresses support o The slave behaves as a memory mapped device with control and status registers and a block of memory •Scratchpad register •Slave busy status register •A 1KB memory block • C/C# Application Programming Interface supporting bus Initialization, settings and operation modes	**$ 7720**
667-178-99	**BI420 COMPATIBILITY HSSUB APP** Configures the HSSub-6120 Mil-FireWire Instrument for compatibility to Bi420 functionality and TPS programming interface.	**Consult Factory**

PART #	DESCRIPTION	LIST PRICE
668-454-99	**GENERIC HOTLINK HSSUB APP** Configures the HSSub-9070 Flexible IO Expansion Instrument to support HOTLink TX/Rx behavior that can transmit and receive HOTLink bytes on 1 to 4 Interfaces per FIOXI PIM. C/C# Application Programming Interface supporting interface initialization, settings and operation modes Hardware Supported: • HSSub-9070, standalone • HSSub-9030, runs concurrently with RS485 UART App • HSSub-9110, runs concurrently with RS232 UART App Interface Speed (All interfaces need to be the same speed): • Minimum interfaces speed of 195 MBaud or 156 MB/s • 1 Interface at a Max speed of 1400 Mbaud or 1120 Mb/s • 2 Interfaces at a Max speed of 700 MBaud or 560 Mb/s • 4 Interfaces at a Max speed of 350 MBaud or 280 Mb/s	**$ 2580**

PART #	DESCRIPTION	LIST PRICE
670-147-99	**RS422/ECL SYNCHRONOUS PRBS HSSUB APP** Configures the HSSub-9030 or HSSub-9100 or HSSub-9110 Flexible IO Expansion instrument for RS422 or ECL synchronous PRBS source and receive capability • Pseudorandom Patterns: PRBS-9, PRBS-15 • Full-Duplex Data Bit Rates, Synchronous SDR (single data rate) timing mode: o Low Range (RS422): 50 to 25,000,000 b/s data with 50 to 25,000,000 Hz clock o Low Range (ECL): 50 to 30,000,000 b/s data with 50 to 30,000,000 Hz clock o High Range (RS422 and ECL): 50 to 50,000,000 b/s data with 50 to 50,000,000 Hz clock • Programmable Direction Clock In/Clock Out • Measures Clock In, Clock Out Frequency • Reports Bit Error Rate • Full featured C/C# Application Programming Interface with documentation supporting initialization, settings and operation modes • HSSub-9030 RS485/ECL FIOX supported IO configurations: o 4-channel, full-duplex, Synchronous, RS-422 functionality with PRBS Generator-Detector capability (Tx data, Rx data, Clock in, Independent clock out) Or o 8-channel, full-duplex, Synchronous, RS-422 functionality with PRBS Generator-Detector capability (Tx data, Rx data, Clock in, Dependent clock out) Or o 4-channel, full-duplex, Synchronous, ECL functionality with PRBS Generator-Detector capability (Tx data, Rx data, Clock in, Independent clock out) Or o 6-channel, full-duplex, Synchronous, ECL functionality with PRBS Generator-Detector capability (Tx data, Rx data, Clock in, Dependent clock out) o All Channels support Low Range Timing Modes • Quantity of 8 RS422 • Quantity of 6 ECL o A subset of 1 RS422 channel supports High Range Timing Mode o A subset of 1 ECL channel supports High Range Timing Mode • HSSub-9100 RS485 FIOXI supported IO configurations: o 8-channel, full-duplex, Synchronous, RS-422 functionality with PRBS Generator-Detector capability (Tx data, Rx data, Clock in, Independent clock out) Or o 16-channel, full-duplex, Synchronous, RS-422 functionality with PRBS Generator-Detector capability (Tx data, Rx data, Clock in, Dependent clock out) o Quantity of 16 RS422 channels support Low Range Timing Modes o A subset of 2 RS422 channels support High Range Timing Mode • HSSub-9110 RS232/ECL FIOXI supported IO configurations:	**$ 4860**

PART #	DESCRIPTION	LIST PRICE
	o 4-channel, full-duplex, Synchronous, ECL functionality with PRBS Generator-Detector capability (Tx data, Rx data, Clock in, Independent clock out) Or o 6-channel, full-duplex, Synchronous, ECL functionality with PRBS Generator-Detector capability (Tx data, Rx data, Clock in, Dependent clock out) o Quantity of 6 ECL channels support Low Range Timing Modes o A subset of 1 ECL channel supports High Range Timing Mode	
670-298-99	**SMPTE 292 HSSUB APP** Configures the HSSub-5050 Serial Core Instrument for SMPTE 292 Video Capture and Generation. Configures eight channels of a Serial Core Instrument to support SMPTE-292 Video I/O. Supports I/O with one of eight SMPTE-292 steams at a time Includes reference hardware design for SMPTE-292 Line Buffer circuit. Full featured C/C# Application Programming Interface with documentation supporting initialization, setup, and operation modes.	**$ 5500**
675-983-99	**DIGITAL VIDEO HSSUB APP** Configures the HSSub-6140 8G Hybrid IO Expansion Instrument for LVDS Digital Video signal capture and output capability. Full featured C/C# Application Programming Interface with documentation supporting initialization, setup, and operation modes	**$ 8330**
675-984-99	**ANALOG VIDEO HSSUB APP** Configures the HSSub-9200 Instrument for RS170 and RS343 Analog Video Capture. Full featured C/C# Application Programming Interface with documentation supporting initialization, setup, and operation modes	**$ 8330**

PART #	DESCRIPTION	LIST PRICE

Section E: DIGITAL HARDWARE OPTIONS

600-528-00	**TERADYNE HIGH PERFORMANCE 5.7 KW C SIZED VXI CHASSIS KIT** The High-performance 5.7 KW C Sized VXI Chassis will accommodate 11 M9-Series cards plus an M-918 CRB, 12 Di-Series cards, 12 Ai-76X cards, or any mix of these cards. Teradyne recommends this chassis for use with Teradyne Digital, and Analog Instruments. NOTES: This chassis has a 3' power cable with a 30 Amp NEMA L6-30P plug (30 A locking plug) and a 7' 601-706-03 30 A Locking to 20 A Locking Plug Adapter/Extender If a bladed connector is required at the end of the extender, purchase the following item: 601-717-00 30 A Locking to 20 A Bladed Plug Adapter/Extender	**$ 25360**
617-910-00	**MEDIUM POWER 2.6 KW C SIZED VXI CHASSIS**	**$ 18430**
627-943-00	**MEDIUM POWER 1.7 KW 6 SLOT C-SIZED HORIZONTAL EXPANSION CHASSIS** This 6 slot VXI chassis is capable of powering 4 Di-Series Channel cards, or 3 Ai-760-Series Analog Test Instruments	**$ 19380**
627-772-50	**TERADYNE HIGH POWER FRONT MAINTAINABLE 10U VXI 4.0 COMPLIANT CHASSIS** The high power 3.8 KW C Sized VXI Chassis provides cooling and power for demanding applications. Teradyne recommends this chassis for high performance instrumentation where front side VXI chassis maintenance is required. This chassis is fully compliant with the VXI 4.0 specification..	**Consult Factory**
627-773-50	**TERADYNE MEDIUM POWER FRONT MAINTAINABLE 8U VXI 4.0 COMPLIANT CHASSIS** The medium power 1.7 KW C Sized VXI Chassis provides cooling and power for typical applications. Teradyne recommends this chassis for standard instrumentation where front side VXI chassis maintenance is required. This chassis is fully compliant with the VXI 4.0 specification.	**Consult Factory**

PART #	DESCRIPTION	LIST PRICE
610-982-00	**HIGH PERFORMANCE 4.0 KW C SIZED VXI COMPLIANT CHASSIS** This chassis is a direct replacement for the M-940-02 chassis, which can accommodate up to 528 M920 channels (11 M-927s). Note: • For applications that do not require a Form, Fit, and Function equivalent to the M-940-02 chassis, Teradyne recommends using the 600-528-00 5.7 KW Chassis	**Consult Factory**
611-103-00	**4.0 KW CHASSIS UPGRADE KIT** This power supply upgrade kit contains the 405-389-01, and 405-391-01 power supplies, plus a label for the VXI Chassis, which changes the assembly PN (Part Number) of the VXI chassis from 854-991-11 (chassis with old design supplies) to 610-984-00 (chassis with new design supplies).	**Consult Factory**
405-389-01	**SPARE UPPER POWER SUPPLY FOR 4.0 KW CHASSIS** This power supply is the upper power supply used in the 610-982-00 and 610-983-00 chassis. This supply is also a direct replacement for the 405-389-00 upper power supply used in the 854-991-11 chassis. **Note:** If upgrading an old design VXI chassis , 611-103-00 Upgrade Kit should be ordered instead of individual supplies.	**Consult Factory**
405-391-01	**SPARE LOWER POWER SUPPLY FOR 4.0 KW CHASSIS** This power supply is the lower power supply used in the 610-982-00 and 610-983-00 chassis. This supply is also a direct replacement for the 405-391-00 upper power supply used in the 854-991-11 chassis. **Note:** If upgrading an old design VXI chassis , 611-103-00 Upgrade Kit should be ordered instead of individual supplies.	**Consult Factory**
969-175-00	**FAN TRAY ASSEMBLY**	**Consult Factory**
969-184-00	**CONTROL BOARD**	**Consult Factory**
DI-002-00	**DI-SERIES GUIDED PROBE AND CABLE KIT (PANEL MOUNT)** Requires Diagnostic Software Package (P/N PS-133-00) Not recommended for new designs	**$ 1400**
DI-002-01	**DI-SERIES GUIDED PROBE AND CABLE KIT (FLUSH MOUNT)** Requires Diagnostic Software Package (P/N PS-133-00) Not recommended for new designs	**$ 1400**
DI-002-03	**DI-SERIES GUIDED PROBE AND EXTENDED LENGTH CABLE KIT** Requires Diagnostic Software Package (P/N PS-133-00) Not recommended for new designs	**$ 1450**

PART #	DESCRIPTION	LIST PRICE
DI-002-10	**DI-SERIES GUIDED PROBE AND CABLE KIT (PANEL MOUNT)** Requires Diagnostic Software Package (P/N PS-133-00)	**$ 1310**
DI-002-11	**DI-SERIES GUIDED PROBE AND CABLE KIT (FLUSH MOUNT)** Requires Diagnostic Software Package (P/N PS-133-00)	**$ 1310**
DI-002-13	**DI-SERIES GUIDED PROBE AND EXTENDED LENGTH CABLE KIT** Requires Diagnostic Software Package (P/N PS-133-00)	**$ 1340**
DI-002-14	**DI-SERIES GUIDED PROBE AND CABLE KIT** Requires Diagnostic Software Package (P/N PS-133-00)	**$ 1470**
DI-002-16	**DI-SERIES GUIDED PROBE AND CABLE KIT WITH 48" RIBBON CABLE LENGTH** Requires Diagnostic Software Package (P/N PS-133-00)	**$ 1470**
DI-002-17	**DI-SERIES GUIDED PROBE AND EXTENDED LENGTH CABLE KIT** Requires Diagnostic Software Package (P/N PS-133-00)	**$ 2280**
604-152-50	**DI-SERIES PROBE BUFFER CARD** Not Recommended for new designs	**$ 810**
604-152-51	**DI-SERIES PROBE BUFFER CARD**	**$ 810**
621-429-50	**DI-SERIES PROBE BUFFER CARD**	**$ 790**
M-930-00	**DIAGNOSTIC PROBE AND INTERFACE BOARD (PANEL MOUNT)** **NOTES:** • Requires Diagnostic Software Package (P/N PS-033-00). • If the flush mount model is required, use (P/N M-930-02) instead.	**$ 1730**
M-930-02	**DIAGNOSTIC PROBE AND INTERFACE BOARD (FLUSH MOUNT)** **NOTES:** • Requires Diagnostic Software Package (P/N PS-033-00). • If the panel mount model is required, use (P/N M-930-00) instead.	**$ 1730**
M-930-03	**TETS DIAGNOSTIC PROBE AND INTERFACE BOARD (FLUSH MOUNT)** **NOTES:** • Requires Diagnostic Software Package (P/N PS-033-00). • If the panel mount model is required, use (P/N M-930-00) instead.	**$ 1730**
417-555-00	**SPARE DIGITAL PROBE** Digital Probe for use with: • M-930-0x M9 probe and interface board • DI-002-0x DI probe and interface board Note : This is the same as the Field Replaceable part number 853-068-00/853-068-0C	**$ 830**

PART #	DESCRIPTION	LIST PRICE
853-068-00	**PROBEMASTER PROBE**	**Consult Factory**
417-555-03	**SPARE TETS PROBE BOARD (CT-934)**	**$ 1070**
859-930-02	**PROBE INTERFACE CARD**	**$ 920**
859-930-00	**PROBE INTERFACE CARD**	**$ 920**
M-950-01	**M9-SERIES CENTRAL RESOURCE BRD FUNNEL ADAPTER** Virginia Panel Fixture Receiver Adapters for Analog VXI Instrumentation. Funnel adapter for Teradyne M-918 Central Resource Board. Fixture receiver adapters are pre-fabricated wiring harness assemblies that connect instrumentation I/O to the test system receiver. Configure one adapter per VXI instrument.	**$ 5600**
M-950-02	**M9-SERIES 64 CHANNEL FUNNEL ADAPTER** Virginia Panel Fixture Receiver Adapters for Analog VXI Instrumentation. Funnel adapter for the Teradyne M-917 64 Channel Channel card. Fixture receiver adapters are pre-fabricated wiring harness assemblies that connect instrumentation I/O to the test system receiver. Configure one adapter per VXI instrument.	**$ 10400**
M-950-03	**M9-SERIES 48 CHANNEL FUNNEL ADAPTER** Virginia Panel Fixture Receiver Adapters for Analog VXI Instrumentation. Funnel adapter for the Teradyne M-927, M-925 and M-921 48 Channel Channel Cards. Fixture receiver adapters are pre-fabricated wiring harness assemblies that connect instrumentation I/O to the test system receiver. Configure one adapter per VXI instrument.	**$ 5510**
626-419-00	**DI-SERIES 48 CHANNEL MINI COAX FUNNEL ASSEMBLY** This funnel assembly contains the Cable Interface Boards (CIBS) and cabling to present signals at the same location as the 48 channel M9-Series channel card. This funnel assembly should be used when M9-Series compatibility is a requirement.	**$ 6220**
626-421-00	**DI-SERIES UTILITY INSTRUMENT MINI COAX FUNNEL ASSEMBLY** This funnel assembly contains the Cable Interface Boards (CIBS) and cabling to present signals at the same location as the M9-Series Central Resource Board (CRB). This funnel assembly should be used when M9-Series compatibility is a requirement.t.	**$ 4680**

PART #	DESCRIPTION	LIST PRICE
854-994-78	**WIRE VERIFICATION TEST (WVT) BLOCK FOR USE WITH DI-SERIES UTILITY INSTRUMENT** Teradyne standard WVT test block used by checkers. This test block is compatible with the 626-421-00 mini coax funnel assembly. This part is also included in the S9-U00-FM Di-Series Utility Instrument system integration kit.	**Consult Factory**
854-994-80	**WIRE VERIFICATION TEST (WVT) BLOCK FOR USE WITH 48-CHANNEL DIGITAL TEST INSTRUMENTS** Teradyne standard WVT test block used by checkers. This test block is compatible with the 626-419-00 mini coax funnel assembly. This part is also included in the 626-414-00 48 channel Di-Series channel card kit and the S9-D03-FM 48 channel Di-Series system integration kit.	**Consult Factory**
289-020-00	**DI-SERIES UTILITY MODULE TO M9 CABLE CIB**	**$ 1890**
600-124-50	**DI-SERIES UTILITY MODULE TO M9 CABLE CIB**	**$ 1660**
609-272-00	**DI-SERIES TO M917 RIBBON CABLE 64-CHANNEL CIB**	**$ 7980**
600-689-50	**DI-SERIES TO M9 CABLE CIB**	**$ 830**
600-689-51	**DI-SERIES TO RIBBON CABLE CIB WITH MODULE SIGNALS** • One CIB required for each 32-channel Di-Series Module • Ribbon cable connectors are compatible with M-925 and M-927 channel cables • Compatible with all Di-Series channel cards • Includes additional connector providing module control signals and Calibration Verification signals.	**$ 830**
611-652-50	**DI-SERIES CALIBRATION VERIFICATION CIB FOR CHANNEL MODULE**	**$ 1180**
611-702-50	**DI-SERIES CALIBRATION VERIFICATION CIB FOR UTILITY MODULE**	**$ 1180**
613-261-50	**DI-SERIES UTILITY INSTRUMENT ENHANCED CIB** • Compatible with Di-050-30 (Generation 1) and Di-050-31 (Generation 2) Utility Modules	**$ 1730**
613-458-50	**DI-SERIES UTILITY MODULE TO M9-SERIES CIB (CABLE INTERFACE BOARD)**	**$ 1890**
619-565-50	**DI 48 CHANNEL CARD TO CABLES LEFT**	**$ 1120**
619-566-50	**DI 48 CH TO CABLES RIGHT**	**$ 1120**

PART #	DESCRIPTION	LIST PRICE
289-019-0B	**DI-SERIES PROBE INTERFACE CIB**	**$ 1050**
640-038-00	**INSTRUMENT CALIBRATION OPTION WITH CALIBRATION DATA** For new instrument sales only for select ZT DI-Series and AI-76x Series Instruments. This option provides calibration data in addition to the calibration certificicate and certificate of conformance supplied with all instruments. Requires the purchase of a ZT-Series, DI-Series or AI-760 Series instrument Note: For the DI-Series, ZT52xx Series and ZT44xx Series instruments this is a Z540 compliant calibration. For all others this is a factory calibration with post calibration data only.	**$ 1100**
854-994-58	**M9 PROBE CABLE**	**$ 390**
610-584-51	**UPGRADE OF DI-050-22 TO DI-050-12** Upgrade of a Di-050-22 Di-Series 50 MHz 64-Channel Channel Card to the capabilities of a Di-050-12 50 MHz 64-Channel Channel Card. The upgrade increases the available maximum voltage capability from +/- 15V and a 20V swing to +/- 30V and a 30V swing. The Di-050-22 must be returned to Teradyne for upgrading to Di-050-12.	**$ 18040**
854-993-92	**AI-710 RIBBON CABLE 60 INCH**	**$ 390**

PART #	DESCRIPTION	LIST PRICE

Section F: SOFTWARE OPTIONS

PS-042-00 — **TPS CONVERTER STUDIO TRANSLATION SOFTWARE LICENSE** — **$ 56530**

Site License for TPS Converter Studio includes 3 weeks of applications time (P/Ns PS-042-00 & 777-464-42 x 3).

Translator for L-Series (Program Guide 1.0 VX/3.2 or greater and AX2.02 or greater) :
- Pre-processor to read L-Series text files
- Post-processor to ANSI C language
- CSHELL L-Series Applications Programming Interface
- Site license for both translator and CShell (1 mile radius)

Documentation:
- User Documentation
- L-Series Language Module Function Reference
- Translation Tips

Software Support Agreement for one year including:
- Software and documentation updates
- Access to Teradyne Support Center
- Customer Bulletins

PS-033-00 — **M9-SERIES DIAGNOSTIC SOFTWARE LICENSE** — **$ 14180**

The M9-Series Diagnostic Software includes Guided Probe Diagnostic and Fault Dictionary Diagnostic software, LSRTAP Importer, SVF reader, and BSID software packages.

NOTES:
- All software is shipped on CD ROM media. All SPECTRUM 9000-Series Test Systems and Programming Packages come with the M9-Series Diagnostic Software and the M9-Series VXIplug&play driver.

PART #	DESCRIPTION	LIST PRICE
Section H : OTHER OPTIONS		
671-241-00	**CABLE, FIREWIRE D38999 QUADRAX TO PCB QUADRAX, J18B**	**$ 6410**
671-241-01	**CABLE, FIREWIRE D38999 QUADRAX TO PCB QUADRAX, J18A**	**$ 6410**
671-241-03	**FIREWIRE D38999 QUADRAX SHORTING PLUG FOR J18A**	**$ 7230**
671-241-04	**FIREWIRE D38999 QUADRAX SHORTING PLUG FOR J18B**	**$ 7230**
671-383-00	**HSSUB-6120 FIREWIRE QUADRAX CIB FOR MEK CABLES, J18A AND J18B**	**$ 6670**
289-025-00	**1553 COUPLING ADAPTER**	**$ 760**
601-548-00	**MIL-STD CUSTOM PACKAGING** Mil-Std custom packaging is available upon request at an additional charge. This charge depends on type of packaging requested. Customers requiring custom packaging should provide their sales engineer with the packaging specifications so that the cost for these requirements may be determined. Packing is priced based on standard 3rd party service pricing policy with a $500 minimum.	**Consult Factory**
613-044-50	**1773 INTERFACE BOARD**	**Consult Factory**
613-275-00	**1773 INTERFACE BOARD MOUNTING BRACKET**	**Consult Factory**
613-566-00	**DI & UTILITY CAL & ADVANCED CAPABILITY CABLE** There is a miniumum order quantity of 10 pieces for this cable	**$ 6320**
613-984-00	**3 X AI710 CALIBRATION CABLE ASSEMBLY**	**$ 470**
615-330-00	**50 OHM 64COND TO 2-34COND CABLE**	**$ 860**
616-597-00	**50OHM 34CON 32"LONG CABLE**	**$ 470**
616-598-00	**CBL ASSY 50OHM 34CON 24"LONG**	**$ 1950**
616-599-00	**DI PROBE RIBBON CBL, 67 IN**	**$ 480**
619-902-48	**SMB TO MINI-COAX DSO CABLE (4 FT)**	**Consult Factory**
651-285-00	**SWITCH MATRIX INTERCONNECT CABLING AND MACPANEL RECEIVER KIT** Includes; • 8 of L-COM FBR01007007020-002m LC Cables Tester to Switch • 1 of Samtec QSFPO-40G-3.0-01-03 QSFP+ to 4 LC 64 of Mac Panel OC161162073275 LC XBEAM, Receiver Cables • 2 of Mac Panel 564441 Receiver Block, Fiber Optic,32 Position	**$ 50260**

PART #	DESCRIPTION	LIST PRICE
651-286-00	**SWITCH MATRIX FVT ITA KIT** Includes; • 2 of Mac Panel 564442/ OC 165 165 073 012 Loopback ITA Blocks	**$ 21520**
651-313-00	**AI-762-20 NGATS LRIP SYSTEM UPGRADE KIT** The Ai-762-20 NGATS LRIP Station Upgrade Kit includes cables to integrate the DMM and MFA of the Ai-762-20 into the LRIP Switching Subsystemand an MFA ATTENUATOR CIB (P/N 628-525-00) for the Ai-762-20.	**Consult Factory**
664-940-00	**NGATS SPARES KIT** The NGATS Spares Kit includes : (1) Ai-710-00 (1) Ai-762-20 (1) Bi-411-00 (1) DI-050-31 (1) Di-050-63	**Consult Factory**
664-940-01	**NGATS SPARES KIT PACKAGE** The NGATS Spares Kit Package includes : (10) Ai-762-20 (7) Bi-411-00 (10) DI-050-31 (5) Di-050-63	**Consult Factory**
662-203-00	**CABLE, LVDS TO D38999 HERCULES**	**$ 9130**
662-203-03	**CABLE, LVDS D38999 HERCULES J1 SHORTING PLUG**	**$ 4970**
662-203-04	**CABLE, LVDS D38999 HERCULES J2 SHORTING PLUG**	**$ 5120**
662-374-00	**CABLE, LVTTL TO D38999 HERCULES**	**$ 6520**
662-374-03	**CABLE, LVTTL #1 D38999 HERCULES SHORTING PLUG**	**$ 5720**
662-374-04	**CABLE, LVTTL #2 D38999 HERCULES SHORTING PLUG**	**$ 2900**
859-991-00	**CIB BTI COSSI**	**Consult Factory**
977-288-06	**SSMB TO SMB CABLE (4 FT)**	**Consult Factory**
977-288-07	**SSMB TO SMB CABLE (5 FT)**	**Consult Factory**
987-602-01	**BT-025 BOARD COVER**	**$ 85**

PART #	DESCRIPTION	LIST PRICE
602-613-00	**CSI CABLE TIE-DOWN KIT FOR VXI INSTRUMENTS** Strain relief bracket for use with Teradyne's Ai-Series, Bi-Series, and Di-Series test instrumentation. Kit contains the following items: (1) Strain relief bracket (4) attachment screws (24) plastic tie wraps	**Consult Factory**
CU-500-00	**SHIPPING & FREIGHT CHARGES**	**Consult Factory**
NRE-000-10	**DESIGN ENGINEERING LABOR FOR INSTRUMENTATION** Price is per hour	**$ 310**

NRE-000-15	**TRAVEL EXPENSES FOR FACTORY BASED PERSONNEL**
	NOTES:
	• The travel time will be charged at the current hourly rate.
	• If air travel is required additional air fare and per diem charges will apply. For travel in the US and Canada, per diem charges will be $1000.00/each for the first and last day of travel.
	  • $1000.00 if travel to/from occur within one day.
	  • $2000.00 if two days involve travel
	  • This includes first and last day of expenses and air fare with 7 days notice.
	  • International travel will be charged at actual rates
	• A Flat Rate of $225.00/day will be charged for per diem for the days spent after first and before the last day of travel.
		Consult Factory

PART #	DESCRIPTION	LIST PRICE

Section I: SERVICE AGREEMENTS

777-407-00

ADVANCED REPLACEMENT AGREEMENT (ARA) - INSTRUMENTATION AND SUB-SYSTEMS

Consult Factory

The Advanced Replacement Agreement is a fixed price agreement available in the first year of ownership and beyond. This agreement provides customers with advanced repair and replacement services for Teradyne parts for a fixed annual rate.

Annual Coverage [per system] Includes:

- SDS (Same Day Ship Shipment)
- BPS (Basic Parts Service - 5 Day TAT)
- MPS (Mature Parts Service 20 Day TAT)
- EWAP (Exact Swap Service 60 Day TAT)

COVERAGE PERIOD: DD-MMM-YYYY through DD-MMM-YYYY FOR S/N: TBD

* Ship services will be best available, same day if possible.
** For further definition of deliverables, please refer to the ATD Service & Support Supplement Doc.

NOTES:

1) Advanced part shipments for Teradyne manufactured equipment should be used only if a replacement part is not available on-site.

2) Failures caused by environmental conditions, misuse of the product, or programming errors are not covered under the ARA or PRA.

3) For SDS orders, he customer must return the defective part within five days of receipt of the replacement part.

4) Throughout the term of the ARA or PRA, Teradyne will perform account management to monitor part replenishment orders. As a partnership, Teradyne will work with the customer to develop a corrective action plan that brings these activities to their expected levels. However, if the customer does not fulfill their part of the corrective action plan and parts and labor usage continues at a high rate, Teradyne reserves the right to terminate this agreement.

PART #	DESCRIPTION	LIST PRICE
777-PRA-LO	**PARTS REPAIR AGREEMENT (PRA) - FUNCTIONAL TEST INSTRUMENTATION AND SUB-SYSTEMS** The Parts Repair Agreement (PRA) is a fixed price agreement. It is an annual agreement that includes the return and repair service (R&R) whereby the customer returns a defective part to a Teradyne Stocking Center and a form, fit and function replacement part is shipped to the customer within 20 business days of Teradyne's receipt of the defective part. ****Annual Coverage [per system] Includes:** • *MPS (Mature Parts Service 20 Day TAT) • ESWP (Exact Swap Parts Service 60 Day TAT) COVERAGE PERIOD: DD-MMM-YYYY through DD-MMM-YYYY FOR S/N: TBD * Ship services will be best available, same day if possible. ** For further definition of deliverables, please refer to the ATD Service & Support Supplement Doc. **NOTES:** 1) Advanced part shipments for Teradyne manufactured equipment should be used only if a replacement part is not available on-site. 2) Failures caused by environmental conditions, misuse of the product, or programming errors are not covered under the ARA or PRA. 3) If it does become necessary to expedite a part, the repair portion is covered under the agreement and the advanced replacement service charge is invoiced separately. 4) Throughout the term of the ARA or PRA, Teradyne will perform account management to monitor part replenishment orders. As a partnership, Teradyne will work with the customer to develop a corrective action plan that brings these activities to their expected levels. However, if the customer does not fulfill their part of the corrective action plan and parts and labor usage continues at a high rate, Teradyne reserves the right to terminate this agreement. 5) This PRA does not cover any non-standard (custom) instruments that are part of the system. A separate custom quotation is required for those items. 6) For parts beyond formal support period, commerically reasonable efforts will be used to attempt repair. If the part is determined to be Beyond Economic Repair it will be returned to the customer unrepaired 7) Parts that are out of support are not covered under this agreement. They will be returned to the customer unrepaired.	**$ Variable**

PART #	DESCRIPTION	LIST PRICE
777-391-44	**COMPREHENSIVE SUPPORT AGREEMENT (CSA) - FUNCTIONAL TEST INSTRUMENTATION AND SUB-SYSTEMS** The Comprehensive Support Agreement is a variable contract with a value based upon historical and estimated annual usage. This agreement provides discounts and preference associated with contract customer status yet provides price flexibility based on a given customers usage. Invoices are issued quarterly and include a 7% discount on replaceable parts and labor. Labor billing is based on prevailing hourly rates. At any point during the life of the contract, usage exceeding the contract value will require an amended PO to cover the additional costs. If at the end of the contract period there are remaining funds available, then these funds may be used to purchase additional support items, or to extend the term of the contract. Flexible benefits include: • 7% Discount on replaceable parts • Quarterly billing • Applies to emergency on-site and calibration services • All Parts Services available for that part, including *SDS (Same Day Ship Service) *Ship services will be best available, same day if possible. ***Software Support sold separately COVERAGE PERIOD: DD-MMM-YYYY through DD-MMM-YYYY FOR S/N: TBD	**Consult Factory**

PART #	DESCRIPTION	LIST PRICE
777-ESR-LO	**EXACT SWAP AND REPLACEMENT AGREEMENT (ESRA) FUNCTIONAL TEST INSTRUMENTATION AND SUB-SYSTEMS** The parts Exact Swap and Replacement Agreement (ESRA) is a fixed price agreement . For Teradyne manufactured instruments the agreement includes return and repair service (MPS), whereby the customer returns a defective part to a Teradyne Stocking Center and a form, fit and function replacement part is shipped to the customer within 20 business days of Teradyne's receipt of the defective part. If it does become necessary to expedite a part, the repair portion is covered under the agreement and the advanced replacement service charge is invoiced separately. For Teradyne pricelist OEM Hardware the agreement includes exact swap replacement (ESWP), whereby the customer receives back the same instrument sent in for repair. **Coverage [per system] Includes:** • MPS (Mature Parts Service)* • ESWP (Exact Swap) COVERAGE PERIOD: DD-MMM-YYYY through DD-MMM-YYYY FOR S/N: TBD *For Teradyne pricelist instruments only. **NOTES:** • Ship services will be best available.	**$ 3.5 % of List Price**

PART #	DESCRIPTION	LIST PRICE
777-831-22	**CUSTOM SOFTWARE SUPPORT AGREEMENT (SSA) - FUNCTIONAL TEST INSTRUMENTATION AND SUB-SYSTEMS** The Software Support Agreement (SSA) is a comprehensive support plan to help you optimize your test and inspection programs through a combination of rapid telephone support, 24 / 7 web support, and periodic software releases. The Custom Software Agreement is an a-la-carte service intended for customers who have requirements outside of our standard Software Support Agreement. ****Annual Coverage (per system) Includes:** • Response time <2 hours (telephone) • Phone support/1-800-TERADYNE or local regional support office (Europe and Asia) available during normal business hours. • *eKnowledge access • Software Releases • Free Software License Key Transfers • Remote Diagnostics (if available) * With the purchase of an SSA you will be eligible for an eKnowledge account. eKnowledge is Teradyne's 24/7 support website. For more information about eKnowledge, or to obtain an account, visit our support website at: http://www.teradyne.com/atd/support/eknowledge.html ** For further definition of deliverables, please refer to the ATD Service & Support Supplement Doc. COVERAGE PERIOD: DD-MMM-YYYY through DD-MMM-YYYY FOR S/N: TBD **NOTES:** • Must renew before expiration date to avoid reinstatement fee.	**Consult Factory**

PART #	DESCRIPTION	LIST PRICE

Section J : SERVICES & SUPPORT OFFERINGS

777-305-19	**FIELD SERVICE LABOR - INSTRUMENTS** Hourly price for on-site labor. **NOTES:** • Quote based on estimated costs, customer will be invoiced based on actual charges. • Any Replacement parts will require additional funding. • Please reference the System Serial number to be serviced on any purchase order	**$ 310**

777-310-19	**FIELD SERVICE TRAVEL - INSTRUMENTS**
	NOTES:
	• The travel time will be charged at the current hourly rate.
	• If air travel is required additional air fare and per diem charges will apply. For travel in the US and Canada, per diem charges will be $1000.00/each for the first and last day of travel.
	  • $1000.00 if travel to/from occur within one day.
	  • $2000.00 if two days involve travel
	  • This includes first and last day of expenses and air fare with 7 days notice.
	  • International travel will be charged at actual rates
	• A Flat Rate of $225.00/day will be charged for per diem for the days spent after first and before the last day of travel.
		Consult Factory

777-320-19	**APPLICATIONS LABOR - INSTRUMENTS** Hourly price for on-site labor.	**$ 295**
777-463-44	**APPLICATIONS ASSISTANCE ONE DAY (AA/1) - FUNCTIONAL TEST INSTRUMENTATION** One-day Applications Assistance offers on-site applications assistance in one-day increments for system operation, program creation, and debugging. This offering gives our customers the ability to have Teradyne Engineers assist with all stages of the test process including evaluation of a new or existing test process and operation, consultation on test techniques, and application of new test equipment or methods. **NOTES:** • Travel charges not included.	**$ 2340**

PART #	DESCRIPTION	LIST PRICE
777-325-19	**APPLICATIONS ASSISTANCE FIVE DAYS (AA/5) - FUNCTIONAL TEST INSTRUMENTATION** Five day Applications Assistance offers on-site applications assistance in five-day increments. This offering gives our customers the ability to have Teradyne Engineers assist with all stages of the test process including evaluation of a new or existing test process and operation, consultation on test techniques, and application of new test equipment or methods. Customers can request service on a one-time basis, contract for long-term assistance with multiple on-site visits, or define a specific project for completion by Teradyne. **NOTES:** • Travel charges for one trip per week is included.	**$ 12140**

777-315-19	**APPLICATIONS TRAVEL - INSTRUMENTS**
	NOTES:
	• The travel time will be charged at the current hourly rate.
	• A Flat Rate of $225.00/day will be charged for per diem for travel requiring an overnight stay
	• If air travel is required additional air fare and per diem charges will apply. For travel in the US and Canada, per diem charges will be $1000.00/each for the first and last day of travel.
	  • $1000.00 if travel to/from occur within one day.
	  • $2000.00 if two days involve travel
	  • This includes first and last day of per deim expenses and assumes air fare with 7 days notice.
	• International travel will be charged at actual rates
		Consult Factory

777-345-80	**APPLICATIONS LABOR - HIGH SPEED SUBSYSTEM - HOURLY** Hourly price for on-site labor.	**$ 295**
777-463-80	**APPLICATIONS ASSISTANCE ONE DAY (AA/1) - HIGH SPEED SUBSYSTEM** One-day Applications Assistance offers on-site applications assistance in one-day increments for system operation, program creation, and debugging. This offering gives our customers the ability to have Teradyne Engineers assist with all stages of the test process including evaluation of a new or existing test process and operation, consultation on test techniques, and application of new test equipment or methods. **NOTES:** • Travel charges not included.	**$ 2340**

PART #	DESCRIPTION	LIST PRICE
777-464-80	**APPLICATIONS ASSISTANCE FIVE DAYS (AA/5) - HIGH SPEED SUBSYSTEM** Five day Applications Assistance offers on-site applications assistance in five-day increments. This offering gives our customers the ability to have Teradyne Engineers assist with all stages of the test process including evaluation of a new or existing test process and operation, consultation on test techniques, and application of new test equipment or methods. Customers can request service on a one-time basis, contract for long-term assistance with multiple on-site visits, or define a specific project for completion by Teradyne. • Pricing includes travel&per diem charges within the US., For Overseas classes travel will be billed at actual rates	**$ 12140**

PART #	DESCRIPTION	LIST PRICE
777-482-20	**PRODUCT AND SOFTWARE SUPPORT AGREEMENT (PSSA/2) - HSSUB** This is a one-year all-inclusive Product & Software Support Agreement (PSSA) that combines hardware and software support intended for customers who wish to maintain Teradyne's test equipment themselves, and use our technical support services as needed. It combines a Hotline & Software Support Agreement (HSSA) with 24 x 7 telephone and web-based support, fast parts replacement and repair services, as well as next day response for on-site support. See details below. ****Annual Coverage [per system] Includes:** • Phone Support/1 877 TERADYNE or local regional support office (Europe and Asia) available during normal business hours • On-site Field Service Support • Emergency Visits / Remedial Repair • Advanced Part Repair Services as available • Software Releases • *eKnowledge access * With the purchase of a PSSA customers will be eligible for an eKnowledge account. eKnowledge is Teradyne's 24/7 support website. For more information about eKnowledge, or to obtain an account, visit our support website at: http://www.teradyne.com/atd/support/eknowledge.html . ** For further definition of deliverables, please refer to the ATD Service & Support Supplement Doc. COVERAGE PERIOD: DD-MMM-YYYY through DD-MMM-YYYY FOR S/N: TBD **Notes :** • Annual Instrument Calibration is not included • For parts beyond formal support period, commercially reasonable efforts will be used to attempt repair. If the part is determined to be Beyond Economic Repair it will be returned to the customer unrepaired • Parts that are out of support are not covered under this agreement.	**$ Five % of List**

PART #	DESCRIPTION	LIST PRICE

Section K: TRAINING

777-160-31 **TRAINING IN HOUSE - AI-710 SERIES WORKSHOP** **$ 2080**

Course Description:
In this workshop you will learn the architecture of the Ai7-Series product, capability and the basic skills needed to begin using the subsystem in analog functional test development. The workshop uses the C-API functions that are provided with the instrument driver to program the instrument.

Course Content (Emphasis on the following subject areas)
Ai-7 Series product architecture and software, including:
- Overview
- Operation and verification
- Trigger subsystem
- Sourcing stimulus
  - DC Voltage
  - Pulse Current
  - Arbitrary Waveforms
- Measurements
  - DC Voltage
  - DC Current
  - Frequency and Time interval
  - Limit Detect
  - Digitizing
- Interrupts and Interrupt handling

Course Duration:
3 days

Prerequisite(s):
C/C++ Programming

NOTES:
- Price is per student
- Courses conducted at Teradyne facilities

PART #	DESCRIPTION	LIST PRICE
777-175-31	**TRAINING IN HOUSE - HSSUB TPS TRAINING** **Course Description:** The HSSub TPS Training provides the student with introductory information necessary for developing, debugging and executing a subTPS on the HSSub. The course emphasis is concepts and architecture of the High Speed Subsystem. These concepts are then applied by creating programs written in C++. The course will use the High Speed Subsystem with HSSub-5010, HSSub-eDigital 6020A or FIOXI instrument with an RS232 or RS422/RS485 PIM for lab purposes. The concepts learned apply to other Core and/or IO Expansion instruments. **Course Content (Emphasis on the following subject areas)** High Speed Subsystem Test Architecture, program development and integration: • Introduction to HSSub Architecture • Hardware Overview • Software Overview • HSSub Basic Programming • HSSub App and Driver Usage **Course Duration:** 3 days **Prerequisite(s):** General Programming Concepts C/C++ Programming Digital Applications Familiar with Visual Studio C/C++ **NOTES:** • Price is per student • Courses conducted at Teradyne facilities	**$ 2080**

PART #	DESCRIPTION	LIST PRICE
777-176-31	**TRAINING IN HOUSE - HSSUB APP TRAINING** **Course Description:** The High Speed Subsystem Application Development Training provides the student with introductory information necessary for developing custom High Speed Subsystem Applications (HSSub Apps). The course will cover a high-level overview of the architecture of the HSSub instrument, identifying differences between Core and IO Expansion instruments and describing Test Defined FPGA (TDF) features. The included FPGA development tools will be explained and demonstrated. The Application Interface overview will cover the basic components of an HSSub App, the development process and demonstration of an HSSub App with the LED Training Kit. The Application Interface section will also cover high level concepts including data transfer and hardware interrupts. The concepts here will be applied by using and modifying the LED Training Kit Application Interface code written in C. **Course Content (Emphasis on the following subject areas)** Advanced HSSub TPS development focused on HSSub App development • Architecture Overview • HSSub TDF Introduction • HSSub TDF Advanced Topics • HSSub App Interface Introduction • HSSub App Interface Advanced Topics **Course Duration:** 3 days **Prerequisite(s):** Must have already taken the HSSub TPS Training Advanced programming concepts C/C++ Programming Digital Applications Familiar with Visual Studio C/C++ Familiar with a Hardware Description Language (VHDL or Verilog) if future FPGA support or development activities are planned **NOTES:** • Price is per student • Courses conducted at Teradyne facilities	**$ 2080**

PART #	DESCRIPTION	LIST PRICE
777-177-31	**TRAINING IN HOUSE - HSSUB MAINTENANCE TRAINING** **Course Description:** HSSub Hardware Management, Maintenance and Troubleshooting provides the student with the information necessary to setup, configure and manage the HSSub Test System. The different components of the HSSub Test System are examined and troubleshooting techniques are taught to identify and isolate failures. Procedures are outlined for maintaining the operation of the test system. **Course Content (Emphasis on the following subject areas)** High Speed Subsystem Test Architecture, program development and integration • Identify hardware components of HSSub Test System • Identify and isolate failures with the HSSub • Run self-test procedures • Properly maintain HSSub Test System **Course Duration:** 1 day **Prerequisite(s):** Hardware experience maintaining and troubleshooting complex electronic equipment. **NOTES:** • Price is per student • Courses conducted at Teradyne facilities • Minimum class size 3 students	**$ 1040**

PART #	DESCRIPTION	LIST PRICE

777-160-33	**TRAINING IN HOUSE - AI-76X SERIES WORKSHOP**
	Course Description:
	This course introduces the Ai-76x Series of analog test instrument. Emphasis is placed on typical source and measure applications using the DMM, the DSO, and MFA modules, implemented using the Analog Test Editor (a graphical user interface) and also using the C-API (Application Programming Interface). The MFA (Multi-function Analog) module includes Timer/Counter, Waveform Generator (standard and arbitrary) and Digitizer. The course is instructor-led with associated hands-on lab exercises.
	
	Course Content (Emphasis on the following subject areas)
	Ai-76x Series architecture and software programming, including:
	• General Introduction
	  • Hardware Architecture
	  • Software Architecture
	  • IVI Drivers
	  • Ai-760 Help Reference and Examples
	  • IVI configuration using MAX
	• C-API Programming
	  • Digital Multimeter (DMM)
	  • Digital Sampling Oscilloscope (DSO)
	  • Multifunction Analog (MFA)
	  • MFA Standard/Predefined Waveform Generation
	  • MFA Arbitrary Waveform Generation
	  • MFA Timer/Counter
	  • MFA Digitizer
	• The graphical user interface (Analog Test Editor)
	
	Course Duration:
	5 days
	
	Prerequisite(s):
	C/C++ Programming
	
	NOTES:
	• Price is per student
	• Courses conducted at Teradyne facilities
		$ 3500

PART #	DESCRIPTION	LIST PRICE
777-170-31	**TRAINING IN HOUSE - BI-4 WORKSHOP** **Course Description:** This course introduces the Bi-4 Series family of bus test instruments. Emphasis is placed on programming the Bi-4 Series to transmit and receive data and perform bus testing, including error injection and detection, caching, and fetching status and data. The two protocols focused on in this training are RS232 and 1553. **Course Content (Emphasis on the following subject areas):** BTI Programming and Integration, including: • Hardware Architecture overview • Software API Overview • Transmitting data (RS232 protocol) • Receiving data (RS232 protocol) • Bus testing • 1553 Protocol **Course Duration:** 3 days **Prerequisite(s):** General programming concepts C/C++ C Programming **NOTES:** • Price is per student • Courses conducted at Teradyne facilities	**$ 2080**

PART #	DESCRIPTION	LIST PRICE
777-180-31	**TRAINING IN HOUSE - DI-SERIES PROGRAMMING CLASS**	**$ 3500**

Course Description:
The Di-Series Consolidated Programming training provides the student with the information necessary for developing, debugging and executing a digital test program using iStudio Digital Test Editor and exporting the debugged program to ANSI C. In addition, the information necessary for developing, debugging and executing a digital test program using IVI-C application program interface (API) functions is also covered.

The course emphasis is on teaching fundamental digital testing concepts such as static and dynamic patterns, pattern sets, op-codes, formats, timing, phases and windows. These concepts are then applied by creating a PASS/FAIL test program that will test the functionality of a training board. The course then advances to using the IVI-C API functions to develop the same program with the additional information on retrieving and presenting failure information.

The course will use a Di-Series DTI for lab purposes. The concepts learned apply to other Di-Series Digital Test Instruments.

Course Content (Emphasis on the following subject areas)
iStudio Digital Test Editor
- Developing a digital test program
- Fundamental concepts of Digital Testing
- Constructing an iStudio project
- Exporting the debugged program to ANSI C
- Executing a digital test program to functionally test a UUT
- IVI-C application program interface (API) functions
- Developing a digital test program
- Debugging a digital test program using C/C++

Course Duration:
- 5 days

Prerequisite(s):
- General programming concepts
- Digital applications
- C/C++ Programming

Notes:
- Price is per student
- Courses conducted at Teradyne facilitie

PART #	DESCRIPTION	LIST PRICE
777-180-41	**TRAINING IN HOUSE - DI-SERIES DIAGNOSTICS PROGRAMMING CLASS** **Course Description:** The CSi Diagnostics with Di-Series training provides the student with the a procedure for converting, using the LSRTAP to CShell Converter, a LASARTM developed digital test with diagnostics and post processed to IEEE 1445 standard (LSRTAP) to run on the Di-Series DTI. The course covers the software tools used in converting, executing and debugging the LASAR generated Go/Nogo test, verifying the diagnostic data and integration into TestStudio. The course will use a Di-Series DTI for lab purposes. The concepts learned apply to other Di-Series Digital Test Instruments. **Course Content (Emphasis on the following subject areas):** CSi Diagnostics software tools and architecture, including: • Introduction to CShell • Introduction to Digital Runtime • LSRTAP to CShell Converter • Fault Dictionary Diagnostics • Guided Probe Diagnostics • TestStudio Integration **Class Duration:** 3 days **Prerequisite(s):** • Must have taken the Di-Series Consolidated Programming course • Familiar with Di-Series DTI and test development tools • Familiar with Visual Studio C/C++ • Familiar with TestStudio • Familiar with LASAR **Notes:** • Price is per student • Courses conducted at Teradyne facilities	**$ 2080**

PART #	DESCRIPTION	LIST PRICE
777-160-32	**ON SITE TRAINING - AI-71X WORKSHOP CLASS - MAXIMUM 6 STUDENTS**	**$ 10390**

Course Description:
In this workshop you will learn the architecture of the Ai7-Series product, capability and the basic skills needed to begin using the subsystem in analog functional test development. The workshop uses the C-API functions that are provided with the instrument driver to program the instrument.

Course Content (Emphasis on the following subject areas)
Ai-7 Series product architecture and software, including:
- Overview
- Operation and verification
- Trigger subsystem
- Sourcing stimulus
  - DC Voltage
  - Pulse Current
  - Arbitrary Waveforms
- Measurements
  - DC Voltage
  - DC Current
  - Frequency and Time interval
  - Limit Detect
  - Digitizing
- Interrupts and Interrupt handling

Course Duration:
3 days

Prerequisite(s):
C/C++ Programming

Notes:
- Six Students maximum
- Pricing includes travel&per diem charges for instructor and documentation for each student for classes within the US., For Overseas classes travel will be billed at actual rates
- Training is conducted using the most current level of software and the standard training material.
- Training fixture and lab excercises have certain system configuration requirements. Consult the training manager for special requirements.

PART #	DESCRIPTION	LIST PRICE
777-160-34	**ON SITE TRAINING - AI-76X WORKSHOP CLASS - MAXIMUM 6 STUDENTS**	**$ 17400**

Course Description:
This course introduces the Ai-76x Series of analog test instrument. Emphasis is placed on typical source and measure applications using the DMM, the DSO, and MFA modules, implemented using the Analog Test Editor (a graphical user interface) and also using the C-API (Application Programming Interface). The MFA (Multi-function Analog) module includes Timer/Counter, Waveform Generator (standard and arbitrary) and Digitizer. The course is instructor-led with associated hands-on lab exercises..

Course Content (Emphasis on the following subject areas)
Ai-76x Series architecture and software programming, including:
- General Introduction
  - Hardware Architecture
  - Software Architecture
  - IVI Drivers
  - Ai-760 Help Reference and Examples
  - IVI configuration using MAX
- C-API Programming
  - Digital Multimeter (DMM)
  - Digital Sampling Oscilloscope (DSO)
  - Multifunction Analog (MFA)
    - MFA Standard/Predefined Waveform Generation
    - MFA Arbitrary Waveform Generation
    - MFA Timer/Counter
    - MFA Digitizer
- The graphical user interface (Analog Test Editor)

Course Duration:
5 days

Prerequisite(s):
C/C++ Programming

Notes:
- Six Students maximum
- Pricing includes travel&per diem charges for instructor and documentation for each student for classes within the US., For Overseas classes travel will be billed at actual rates
- Training is conducted using the most current level of software and the standard training material.
- Training fixture and lab excercises have certain system configuration requirements. Consult the training manager for special requirements.

PART #	DESCRIPTION	LIST PRICE
777-175-32	**ON SITE TRAINING - HSSUB TPS TRAINING - MAXIMUM 6 STUDENTS**	**$ 10390**

Course Description:
The HSSub TPS Training provides the student with introductory information necessary for developing, debugging and executing a subTPS on the HSSub. The course emphasis is concepts and architecture of the High Speed Subsystem. These concepts are then applied by creating programs written in C++. The course will use the High Speed Subsystem with HSSub-5010, HSSub-eDigital 6020A or FIOXI instrument with an RS232 or RS422/RS485 PIM for lab purposes. The concepts learned apply to other Core and/or IO Expansion instruments.

Course Content (Emphasis on the following subject areas)
High Speed Subsystem Test Architecture, program development and integration:
• Architecture Overview
• Hardware Overview
• Software Overview
• HSSub Basic Programming
• HSSub App and Driver Usage

Course Duration:
3 days

Prerequisite(s):
C/C++ Programming
Digital Applications
Familiarity with Visual Studio C/C++

Notes:
- Six Students maximum
- Pricing includes travel&per diem charges for instructor and documentation for each student for classes within the US., For Overseas classes travel will be billed at actual rates
- Training is conducted using the most current level of software and the standard training material.
- Training fixture and lab excercises have certain system configuration requirements. Consult the training manager for special requirements.

PART #	DESCRIPTION	LIST PRICE
777-176-32	**ON SITE TRAINING - HSSUB APP TRAINING - MAXIMUM 6 STUDENTS**	**$ 10390**

Course Description:
The High Speed Subsystem Application Development Training provides the student with introductory information necessary for developing custom High Speed Subsystem Applications (HSSub Apps).

The course will cover a high-level overview of the architecture of the HSSub instrument, identifying differences between Core and IO Expansion instruments and describing Test Defined FPGA (TDF) features. The included FPGA development tools will be explained and demonstrated.

The Application Interface overview will cover the basic components of an HSSub App, the development process and demonstration of an HSSub App with the LED Training Kit. The Application Interface section will also cover high level concepts including data transfer and hardware interrupts. The concepts here will be applied by using and modifying the LED Training Kit Application Interface code written in C.

Course Content (Emphasis on the following subject areas)
Advanced HSSub TPS development focused on HSSub App development:
- Architecture Overview
- HSSub TDF Introduction
- HSSub TDF Advanced Topics
- HSSub App Interface Introduction
- HSSub App Interface Advanced Topics

Course Duration:
3 days

Prerequisite(s):
- Must have already taken the HSSub TPS Training
- C/C++ Programming
- Digital Applications
- Advanced programming concepts
- Familiari with Visual Studio C/C++
- Familiari with a Hardware Description Language (VHDL or Verilog) if future FPGA support or development activities are planned

Notes:
- Six Students maximum
- Pricing includes travel&per diem charges for instructor and documentation for each student for classes within the US., For Overseas classes travel will be billed at actual rates
- Training is conducted using the most current level of software and the standard training material.
- Training fixture and lab excercises have certain system

PART #	DESCRIPTION	LIST PRICE
	configuration requirements. Consult the training manager for special requirements.	
777-177-32	**ON SITE TRAINING - HSSUB MAINTENANCE TRAINING - MAXIMUM 6 STUDENTS** **Course Description:** HSSub Hardware Management, Maintenance and Troubleshooting provides the student with the information necessary to setup, configure and manage the HSSub Test System. The different components of the HSSub Test System are examined and troubleshooting techniques are taught to identify and isolate failures. Procedures are outlined for maintaining the operation of the test system.. **Course Content (Emphasis on the following subject areas)** High Speed Subsystem hardware maintenance and troubleshooting: • Identify hardware components of HSSub Test System • Identify and isolate failures with the HSSub • Run self-test procedures • Properly maintain HSSub Test System **Course Duration:** 1 day **Prerequisite(s):** • Hardware experience maintaining and troubleshooting complex electronic equipment. **Notes:** • Six Students maximum • Customer provides HSSub system and selftest adaptor. • Pricing includes travel&per diem charges for instructor and documentation for each student for classes within the US., For Overseas classes travel will be billed at actual rates • Training is conducted using the most current level of software and the standard training material. • Training fixture and lab excercises have certain system configuration requirements. Consult the training manager for special requirements.	**$ 4920**

PART #	DESCRIPTION	LIST PRICE
777-178-32	**ON SITE TRAINING - HSSUB-AK TPS TRAINING - MAXIMUM 6 STUDENTS** **Course Description:** The course emphasis is on TPS techniques and developing HSSub-AK used in the CASS Family of Testers **Course Content (Emphasis on the following subject areas)** Basic understanding of an HSS • System Layout • Instrumentation Content with Specifications • Documentation • Software Overview (Tri-Flex software, HSSub Apps, Tools, System Manager Client, eDigital, Boundary Scan Runtime,, Debug methods and tools TPS Development process and description of the FEP SubTPS development • Review Test Development Kit • Creating a SubTPS • Debug Methods and Tools • Review Ethernet API • Review RS API - RS-232/422/485 • Review IRIG-B API • Review FC-RDMA API • Review FC-AV API • Review SMPTE 292 API • Review eDigital API • Review Boundary Scan API **Course Duration:** 5 days **Prerequisite(s):** C/C++ Programming Digital Applications Advanced programming concepts Familiarity with Visual Studio C/C++ **Notes:** • Six Students maximum • Pricing includes travel&per diem charges for instructor and documentation for each student for classes within the US., For Overseas classes travel will be billed at actual rates • Training is conducted using the most current level of software and the standard training material. • Training fixture and lab excercises have certain system configuration requirements. Consult the training manager for special requirements including MS Visual Studio license installed and access to CASS station and HSSub-AK system	**$ 17400**

PART #	DESCRIPTION	LIST PRICE

PART #	DESCRIPTION	LIST PRICE
777-179-32	**ON SITE TRAINING - HSSUB-AK APP TRAINING - MAXIMUM 6 STUDENTS**	**$ 17400**

Course Description:
The course emphasis is on HSS APP Devlopment techniques and developing HSSub-AK used in the CASS Family of Testers

Course Content (Emphasis on the following subject areas)

Basic understanding of an HSS
- System Layout
- Instrumentation Content with Specifications
- Documentation
- Software Overview (Tri-Flex software, HSSub Apps, Tools, System Manager Client, eDigital, Boundary Scan Runtime)

HSSub App development
- How to use Test Development Kit
- Creating HSSub Apps
- Debug methods and tools

FPGA development -
- Converting existing VHDL code to run on eDigital FPGA
- How to use FPGA Developer's assistant
- Mandatory vs Recommended Code
- Review Current Examples

Real-time Development -
- Introduction to RTScript

Course Duration:
5 days
Prerequisite(s):
C/C++ Programming
Digital Applications
Advanced programming concepts
Familiarity with Visual Studio C/C++
Familiarity with a Hardware Description Language (VHDL or Verilog)

Notes:
- Six Students maximum
- Pricing includes travel&per diem charges for instructor and documentation for each student for classes within the US., For Overseas classes travel will be billed at actual rates
- Training is conducted using the most current level of software and the standard training material.
- Training fixture and lab excercises have certain system configuration requirements. Consult the training manager for special requirements including MS Visual Studio and Xilinx ISE installed and access to CASS station and HSSub-AK system

PART #	DESCRIPTION	LIST PRICE
777-160-35	**ON SITE TRAINING - AI-71X WORKSHOP CLASS - ADDITIONAL STUDENT** This is the incremental cost of adding a student to an AI-71x class configured for 6 students. **NOTES:** • Additional students to a maximum of 8. Above 8 students it requires an additional instructor	**$ 1810**
777-160-36	**ON SITE TRAINING - AI-76X WORKSHOP CLASS - ADDITIONAL STUDENT** This is the incremental cost of adding a student to an Ai-76x class configured for 6 students. **NOTES:** • Additional students to a maximum of 8. Above 8 students it requires an additional instructor	**$ 3010**

PART #	DESCRIPTION	LIST PRICE
777-170-32	**ON SITE TRAINING - BI4 WORKSHOP - MAXIMUM 6 STUDENTS** **Course Description:** This course introduces the Bi-4 Series family of bus test instruments. Emphasis is placed on programming the Bi4 Series to transmit and receive data and perform bus testing, including error injection and detection, caching, and fetching status and data. The two protocols focused on in this training are RS232 and 1553. **Course Content (Emphasis on the following subject areas:)** BTI Programming and Integration, including: • Hardware Architecture overview • Software API Overview • Transmitting data (RS232 protocol) • Receiving data (RS232 protocol) • Bus testing • 1553 Protocol **Course Duration:** 5 days **Prerequisite(s):** C/C++ Programming **Notes:** • Six Students maximum • Pricing includes travel&per diem charges for instructor and documentation for each student for classes within the US., For Overseas classes travel will be billed at actual rates • Training is conducted using the most current level of software and the standard training material. • Training fixture and lab excercises have certain system configuration requirements. Consult the training manager for special requirements.	**$ 17400**
777-170-35	**ON SITE TRAINING - BI4 WORKSHOP - ADDITIONAL STUDENT** This is the incremental cost of adding a student to a class configured for 6 students. **NOTES:** • Additional students to a maximum of 8. Above 8 students it requires an additional instructor	**$ 3010**

PART #	DESCRIPTION	LIST PRICE
777-103-44	**ON SITE TRAINING - M9 PROGRAMMING INTRODUCTION TRAINING-MAXIMUM 6 STUDENTS**	**$ 10390**

Course Description:
The M9-Series Programming Introduction Course provides the student with the information necessary for developing, debugging and executing a digital test program using this VXI based functional test instrument. The course emphasis is on teaching fundamental digital testing concepts such as static and dynamic patterns, bursts, op-codes, formats, timing, phases and windows. These concepts are then applied by creating a PASS/FAIL test program that will test the functionality of a training board. Using the Soft Front Panel the student will be able to quickly and easily develop both static and dynamic functional tests. The course will use the M910 DTI for lab purposes. The concepts learned apply to other M9-Series Digital Test Instruments.

Course Content (Emphasis on the following subject areas):
M9-Series architecture and programming, including:
- Basic Digital Testing Concepts
- Hardware Overview
- Software Overview
- Creating a digital test program
- API Functions

Course Duration:
3 days

Prerequisite(s):
General programming concepts
C/C++ PC Programming

Notes:
- Six Students maximum
- Pricing includes travel&per diem charges for instructor and documentation for each student for classes within the US., For Overseas classes travel will be billed at actual rates
- Training is conducted using the most current level of software and the standard training material.
- Training fixture and lab excercises have certain system configuration requirements. Consult the training manager for special requirements.

PART #	DESCRIPTION	LIST PRICE
777-104-44	**ON SITE TRAINING - M9 INTRODUCTION TRAINING-ADDITIONAL STUDENT** This is the incremental cost of adding a student to a class configured for 6 students. **NOTES:** • Additional students to a maximum of 8. Above 8 students it requires an additional instructor	**$ 1810**
777-102-44	**ON SITE TRAINING - M9 ADVANCED PROGRAMMING TRAINING-MAXIMUM 6 STUDENTS** **Course Description:** The M9-Series Advanced Programming with API Functions course provides detailed API function instruction. API, or Application Programmatic Interface, functions are low-level functions that can be used to program every aspect of the Digital Test Instrument (DTI). This course is normally reserved for System Integrators or users that intend to program the DTI using low-level function calls. The students will learn about the API functions through the development of a static and dynamic program. Instruction is provided in C but the concepts learned can easily be applied to other programming environments. **Course Content (Emphasis on the following subject areas):** M9-Series architecture and programming, including: • Review of Testing Concepts • Static Testing with API • Dynamic Testing with API **Class Duration:** 2 days **Prerequisite(s):** General programming concepts C/C++ PC Programming Must have already taken the M9-Series Programming Introduction course **Notes:** • Six Students maximum • Pricing includes travel&per diem charges for instructor and documentation for each student for classes within the US., For Overseas classes travel will be billed at actual rates • Training is conducted using the most current level of software and the standard training material. • Training fixture and lab excercises have certain system configuration requirements. Consult the training manager for special requirements.	**$ 6830**

PART #	DESCRIPTION	LIST PRICE
777-105-44	**ON SITE TRAINING - M9 ADVANCED TRAINING-ADDITIONAL STUDENT** This is the incremental cost of adding a student to a class configured for 6 students. **NOTES:** • Additional students to a maximum of 8. Above 8 students it requires an additional instructor	**$ 1240**
777-108-44	**ON SITE TRAINING - M9 DIAGNOSTICS - MAXIMUM 6 STUDENTS** **Course Description:** The M9-Series Diagnostics Course provides the student with the information necessary for developing diagnostic information on the M9-Series DTI. The student will use this diagnostic data to diagnose faults on a training board. Fault Dictionary and Guided Probe tools and concepts will be covered through lecture and hands-on lab experience. **Course Content (Emphasis on the following subject areas)**: M9-Series Diagnostics software and tools, including: • Fault Dictionary Diagnostics • Guided Probe Diagnostics • Diagnostics using a DLL (optional) • Boundary Scan (optional) **Course duration:** 2 days **Prerequisite(s)** General programming concepts C/C++ PC Programming Must have already taken the M9-Series Programming Introduction course **Notes:** • Six Students maximum • Pricing includes travel&per diem charges for instructor and documentation for each student for classes within the US., For Overseas classes travel will be billed at actual rates • Training is conducted using the most current level of software and the standard training material. software and the standard training material. • Training fixture and lab excercises have certain system configuration requirements. Consult the training manager for special requirements.	**$ 6830**

PART #	DESCRIPTION	LIST PRICE
777-108-45	**ON SITE TRAINING - M9 DIAGNOSTICS - ADDITIONAL STUDENT** This is the incremental cost of adding a student to a class configured for 6 students. **NOTES:** • Additional students to a maximum of 8. Above 8 students it requires an additional instructor	**$ 1240**

PART #	DESCRIPTION	LIST PRICE
777-180-32	**ON SITE TRAINING - DI-SERIES PROGRAMMING CLASS (MAXIMUM 6 STUDENTS)**	**$ 17400**

Course Description:
The Di-Series Consolidated Programming training provides the student with the information necessary for developing, debugging and executing a digital test program using iStudio Digital Test Editor and exporting the debugged program to ANSI C. In addition, the information necessary for developing, debugging and executing a digital test program using IVI-C application program interface (API) functions is also covered.

The course emphasis is on teaching fundamental digital testing concepts such as static and dynamic patterns, pattern sets, op-codes, formats, timing, phases and windows. These concepts are then applied by creating a PASS/FAIL test program that will test the functionality of a training board. The course then advances to using the IVI-C API functions to develop the same program with the additional information on retrieving and presenting failure information.

The course will use a Di-Series DTI for lab purposes. The concepts learned apply to other Di-Series Digital Test Instruments.
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Course Content (Emphasis on the following subject areas)
iStudio Digital Test Editor
- Developing a digital test program
- Fundamental concepts of Digital Testing
- Constructing an iStudio project
- Exporting the debugged program to ANSI C
- Executing a digital test program to functionally test a UUT
- IVI-C application program interface (API) functions
- Developing a digital test program
- Debugging a digital test program using Visual C++

Course Duration:
- 5 days

Prerequisite(s):
- General programming concepts
- Digital applications
- C/C++ Programming

Notes:
- Six Students maximum
- Pricing includes travel&per diem charges for instructor and documentation for each student for classes within the US., For Overseas classes travel will be billed at actual rates
- Training is conducted using the most current level of software and the standard training material.

PART #	DESCRIPTION	LIST PRICE
	• Training fixture and lab excercises have certain system configuration requirements. Consult the training manager for special requirements.	
777-180-35	**ON SITE TRAINING - DI-SERIES PROGRAMMING CLASS - ADDITIONAL STUDENT** This is the incremental cost of adding a student to a class configured for 6 students. **NOTES:** • Additional students to a maximum of 8. Above 8 students it requires an additional instructor	**$ 3010**

PART #	DESCRIPTION	LIST PRICE
777-180-42	**ON SITE TRAINING - DI-SERIES DIAGNOSTICS PROGRAMMING CLASS (MAXIMUM 6 STUDENTS)**	**$ 10390**

Course Description:
The CSi Diagnostics with Di-Series training provides the student with the a procedure for converting, using the LSRTAP to CShell Converter, a LASARTM developed digital test with diagnostics and post processed to IEEE 1445 standard (LSRTAP) to run on the Di-Series DTI.
The course covers the software tools used in converting, executing and debugging the LASAR generated Go/Nogo test, verifying the diagnostic data and integration into TestStudio.
The course will use a Di-Series DTI for lab purposes. The concepts learned apply to other Di-Series Digital Test Instruments.

Course Content (Emphasis on the following subject areas):
CSi Diagnostics software tools and architecture, including:
- Introduction to CShell
- Introduction to Digital Runtime
- LSRTAP to CShell Converter
- Fault Dictionary Diagnostics
- Guided Probe Diagnostics
- TestStudio Integration

Class Duration:
3 days

Prerequisite(s):
Must have taken the Di-Series Consolidated Programming course
Familiar with Di-Series DTI and test development tools
Familiar with Visual Studio C/C++
Familiar with TestStudio
Familiar with LASAR

Notes:
- Six Students maximum
- Pricing includes travel&per diem charges for instructor and documentation for each student for classes within the US., For Overseas classes travel will be billed at actual rates
- Training is conducted using the most current level of software and the standard training material.
- Training fixture and lab excercises have certain system configuration requirements. Consult the training manager for special requirements.

PART #	DESCRIPTION	LIST PRICE
777-180-45	**ON SITE TRAINING - DI_SERIES DIAGNOSTICS - ADDITIONAL STUDENT** This is the incremental cost of adding a student to a class configured for 6 students. **NOTES:** • Additional students to a maximum of 8. Above 8 students it requires an additional instructor	**$ 1240**
777-525-19	**ON SITE TRAINING - APPLICATION CLASS** **Application Training:** This training provides the student with the basic information for developing, debugging and executing a digital and analog test program using this VXI based functional test instrument. The course will review fundamental digital testing concepts such as static and dynamic patterns, bursts, op-codes, formats, timing, phases and windows. Will also introduce the student how to integrate analog test using TestStudioTM This course provides the student with a software and hardware overview plus the basic knowledge to: • Develop and implement a UUT test plan in TestStudioTM • Integrate and debug analog functional test (s) of the test plan • Integrate and debug digital functional test of the test plan • Implement programmatic test sequence control • Integration using TestStudio and Labwindow CVI **Course duration:** Variable **Prerequisite(s):** • Familiarity with LabWindow/CVI, Worked on ATE for at least 3 years • Pricing includes travel&per diem charges for instructor and documentation for each student for classes within the US., For Overseas classes travel will be billed at actual rates	**Consult Factory**

PART #	DESCRIPTION	LIST PRICE
Section L : CASS SUBSYSTEM AND OPTIONS		
360-331-27	**CONN, RECEPTACLE, MOUNT, WALL**	**$ 1100**
361-778-05	**INSULATOR, PLATE,** Minimum order quantity of 5	**$ 192**
361-778-16	**FAN, CENTRIFUGAL**	**$ 540**
521-329-02	**FILTER, PWR RFI LINE 10A 120VAC 60HZ,** Minimum order quantity of 5	**$ 86**
523-063-15	**SWITCH, ROCKER, 1P 15A/250VAC,** Minimum order quantity of 5	**$ 96**
616-487-00	**BI 1553 TO RACK INTERCONNECT CABLE** reference 4027AS0730-01	**$ 7370**
616-488-00	**BI 429/1773 TO RACK INTERCONNECT CABLE** reference 4027AS0732-01	**$ 7370**
617-870-03	**CABLE, DUPLEX LC TO HSDN 62.5U VERT, OPTICAL FIBER**	**$ 8670**
617-871-03	**CABLE, DUPLEX LC TO HSVN 62.5U VERT, OPTICAL FIBER**	**$ 9060**
617-876-01	**CABLE, HSDN SHORTING PLUG 100U AK, OPTICAL FIBER**	**$ 4100**
617-876-51	**CABLE, HSDN SHORTING PLUG 100U WITHIN PORT AK, OPTICAL FIBER**	**$ 4670**
617-877-01	**CABLE, HSVN SHORTING PLUG 100U AK, OPTICAL FIBER**	**$ 5130**
617-877-51	**CABLE, HSVN SHORTING PLUG 100U WITHIN PORT AK, OPTICAL FIBER**	**$ 5130**
618-676-01	**CABLE, ADAPTER ENET TEST,** Minimum order quantity of 5	**$ 138**
619-180-02	**CABLE, AK AC POWER IN, W/ CONN**	**$ 340**
619-290-02	**CABLE, AK CHASSIS & CASE GROUND, W/ CONN,** Minimum order quantity of 10	**$ 67**
619-992-02	**CABLE, ETHERNET TEST ADAPTER EXTENSION AK, TELECOM, WITH CONN,** Minimum order quantity of 10	**$ 28**
626-265-01	**CABLE, DUPLEX LC TO ETHERNET, OPTICAL FIBER**	**$ 8130**
627-683-01	**CABLE, ETHERNET SHORTING PLUG 100U, OPTICAL FIBER**	**$ 5040**
639-848-00	**COMPUTER, HSSUB 1U RACKMOUNT, WIN7, X8 GEN2 MXI-E, TESTER**	**$ 12680**

Not to be used for new sales opportunities.

PART #	DESCRIPTION	LIST PRICE
640-494-01	**CABLE, J5A TO 10 MHZ REF OUT, W/ CONN,** Minimum order quantity of 10	**$ 47**
640-494-02	**CABLE, J5B TO 10 MHZ REF IN, W/ CONN,** Minimum order quantity of 10	**$ 47**
640-495-00	**CABLE, USB 2.0 J3 TO PC, W/ CONN,** Minimum order quantity of 10	**$ 69**
640-496-01	**CABLE, ETHERNET J4 TO PC, W/ CONN** Minimum order quantity of 5	**$ 117**
640-496-02	**CABLE, ETHERNET J7 TO PC, W/ CONN,** Minimum order quantity of 5	**$ 117**
651-670-00	**ELEC-MECH, ASSY, HSS POWER MONITOR, FOR FUNCTIONAL TEST**	**$ 2340**
651-697-00	**CABLE, CP22 TO A2J5A, 10MHZ REF, COAX, W OR W/OUT CONN,** Minimum order quantity of 10	**$ 47**
651-697-01	**CABLE, CP22 TO A2J5A, 10MHZ REF, COAX, W OR W/OUT CONN,** Minimum order quantity of 10	**$ 47**
651-968-01	**LED, COLORED INDICATOR GREEN,** Minimum order quantity of 5	**$ 69**
651-968-02	**LED, COLORED INDICATOR RED,** Minimum order quantity of 5	**$ 69**
859-914-00	**CENTRAL RESOURCE BOARD (CRB)** This part has limited availabilty.	**$ 22540**
987-641-01	**1553/J3 CABLE** reference 4027AS0731-01	**$ 815**
M-911-00	**50MHZ CHANNEL CARD ASSY** This part has limited availabilty. The M9 Series instruments have passed their last time buy period and are not recommended for new designs. Since quantities are limited, confirmation of M9 availability will only occur upon order acceptance	**$ 157410**
616-236-00	**CASS VXI DTU CHASSIS J2 STATUS CABLE**	**Consult Factory**
859-826-00	**VIRGINIA PANEL INTERCONNECT BOARD**	**Consult Factory**

PART #	DESCRIPTION	LIST PRICE

Section M : RTCASS/COSSI OPTIONS

987-060-00	**RTCASS VXI CHASSIS ASSEMBLY**	**Consult Factory**
987-177-00	**RTCASS VXI CHASSIS LOW POWER OPT A**	**Consult Factory**
987-177-01	**RTCASS VXI CHASSIS LP OPTION B**	**Consult Factory**
607-264-01	**BI4-SERIES MULTIPLE BUS INTERFACE ADAPTER** Cable interface adapter (CIB) for two (2) channel Bi-410 and Bi-411 Bus Test Instruments. This adapter enables fixed cable connections between the Bi-4 Series modules and multiple interface test connectors used for multiple standard serial busses. This CIB eliminates the need for wiring to a switch assembly in order to test the following busses: • ARINC 429 • ARINC 573 • TIA/EIA - 232 • TIA/EIA - 422 • TIA/EIA - 485 • MIL-STD-1553 • MIL-STD-1773 Note: Customers ordering this item for use in US Navy CASS and CASS compatible test systems must order Teradyne Part Number M-996-55	**$ 3860**
M-996-55	**BTI 4 CHANNEL CIB KIT FOR CASS/CASS COMPATIBLE SYSTEMS** Cable interface adapter (CIB) for four (4) channel Bi-410 and Bi-411 Bus Test Instruments. This adapter enables fixed cable connections between the Bi-4 Series modules and multiple interface test connectors used for multiple standard serial busses. This CIB eliminates the need for wiring to a switch assembly in order to test the following busses: • ARINC 429 • ARINC 573 • TIA/EIA - 232 • TIA/EIA - 422 • TIA/EIA - 485 • MIL-STD-1553 • MIL-STD-1773 Note: This item is only for customers making purchases for supply to the US Navy for the CASS and CASS compatible test systems. Other customers must order Teradyne Part Number 607-264-00 listed in Price Catalog Section B: Bus Test Instruments	**$ 5880**
854-998-86	**BI-410 CABLE ASSEMBLY**	**Consult Factory**

PART #	DESCRIPTION	LIST PRICE
M-992-65	**CASS AI7 J4 INTFC KIT** · (1) 854-993-93 RACK 4 DISTRIBUTION TUBE · (1) 859-976-00 J4 ADAPTER ASSEMBLY · (6) 854-993-92 RIBBON CABL	**Consult Factory**
854-993-93	**RACK 4 DISTRIBUTION TUBE**	**Consult Factory**
859-976-00	**CIB ATI COSSI**	**Consult Factory**
854-999-67	**3XAI710 CALIBRATION CBL, COSSI**	**Consult Factory**
987-086-00	**J4 CABLE ASSEMBLY FOR COSSI**	**Consult Factory**
987-087-00	**J6 CABLE ASSEMBLY FOR COSSI**	**Consult Factory**
987-088-00	**J7 CABLE ASSEMBLY FOR COSSI**	**Consult Factory**
859-977-00	**AI-710-00 CABLE TO ICA ADAPTER BOARD** Cable Interface Board (CIB) for connecting Ai-710-00 interface cables to CASS compatible ICAs that use the Virginia Panel 80 Series mass interconnect system.	**Consult Factory**
289-013-00	**RTCASS TO M9 CRB CIB**	**Consult Factory**
854-982-70	**3XA170 CAL CABLE,RTCASS**	**Consult Factory**
854-982-71	**AI710 30" RIBBON CBL,RTCASS #1 1W16**	**Consult Factory**
854-983-82	**AI710 30" RIBBON CBL,RTCASS #2 1W17**	**Consult Factory**
854-983-83	**AI710 30" RIBBON CBL,RTCASS #3 1W18**	**Consult Factory**
854-983-84	**AI710 30" RIBBON CBL,RTCASS #4 1W19**	**Consult Factory**
854-983-85	**AI710 30" RIBBON CBL,RTCASS #5 1W20**	**Consult Factory**
854-983-86	**AI710 30" RIBBON CBL,RTCASS #6 1W21**	**Consult Factory**
854-983-87	**HPC PROBE CABLE, RTCASS**	**Consult Factory**

PART #	DESCRIPTION	LIST PRICE
987-087-01	**J6 RTCASS CABLE**	**Consult Factory**
987-236-00	**RTCASS GPI J12 CABLE ASSY**	**Consult Factory**
987-237-00	**RTCASS GPI J13 CABLE ASSY**	**Consult Factory**
987-238-00	**RTCASS GPI J14 CABLE ASSY**	**Consult Factory**
987-239-00	**RTCASS GPI J15 CABLE ASSY**	**Consult Factory**
987-240-00	**RTCASS GPI J16 CABLE ASSY**	**Consult Factory**
987-241-00	**RTCASS GPI J17 CABLE ASSY**	**Consult Factory**
987-242-00	**RTCASS GPI J11 CABLE ASSY**	**Consult Factory**
987-243-00	**RTCASS GPI J1 & J3 CABLE ASSY**	**Consult Factory**
987-244-00	**RTCASS GPI J2 CABLE ASSY**	**Consult Factory**
987-245-00	**RTCASS GPI J5 CABLE ASSY**	**Consult Factory**
987-247-00	**RTCASS GPI 2A5 ACPS CABLE ASSY**	**Consult Factory**
987-663-00	**CBL,J1-J3 AUX TO SMP5003**	**Consult Factory**
987-088-01	**J7 RTCASS CABLE**	**Consult Factory**
987-338-00	**CBL, ASSY COMMPNL TO CPU, 802.3**	**Consult Factory**
987-419-00	**RTCASS VXI CHASSIS POWER SUPPLY**	**Consult Factory**
987-420-00	**RTCASS VXI CHASSIS POWER SUPPLY**	**Consult Factory**
987-424-00	**RTCASS VXI CHASSIS FAN ASSEMBLY**	**Consult Factory**
987-425-00	**RTCASS VXI CHASSIS FAN ASSEMBLY**	**Consult Factory**

PART #	DESCRIPTION	LIST PRICE
987-426-00	**RTCASS VXI CHASSIS POWER SUPPLY**	**Consult Factory**
987-427-00	**RTCASS VXI CHASSIS POWER SUPPLY**	**Consult Factory**
987-428-00	**RTCASS DTU METER CAL CBL**	**Consult Factory**
987-444-00	**PULL TAB,TOP DTI CABLE**	**Consult Factory**
987-445-00	**PULL TAB, BOTTOM DTI CABLE**	**Consult Factory**
987-502-00	**CBL, CASS TO M9 CRB CIB POWER**	**Consult Factory**
631-363-00	**DI-SERIES CIB KIT FOR EO AND HP** This kit includes a CIB mounted on a faceplate that can be installed in a VXI chassis to allow easy upgrade with additional DI-Series cards	**$ 1810**
987-641-00	**CABLE ASSY, RTCASS 1553/J3**	**Consult Factory**

Section P: ZT Series Scopes, Digitizers, AFWGs & OPTIONS

PART #	DESCRIPTION	LIST PRICE
ZT4211-01LXI	**ZT4210 OSCILLOSCOPE 1 GS/S, 300 MHZ, 8 BITS, 2 CH, 256 MS LXI FORMAT**	**$ 8830**
ZT4211-01PXI	**ZT4210 OSCILLOSCOPE 1 GS/S, 300 MHZ, 8 BITS, 2 CH, 256 MS PXI FORMAT**	**$ 7670**
ZT4211-01VXI	**ZT4210 OSCILLOSCOPE 1 GS/S, 300 MHZ, 8 BITS, 2 CH, 256 MS VXI FORMAT**	**$ 9000**
ZT4211-ESTSVXI	**ZT4210 OSCILLOSCOPE COUNTER/TIMER/DIGITIZER VXI FORMAT** Product Management approval required	**$ 13260**
ZT4212-01LXI	**ZT4210 OSCILLOSCOPE 1 GS/S, 300 MHZ, 8 BITS, 4 CH, 512 MS LXI FORMAT**	**$ 14530**
ZT4212-01VXI	**ZT4210 OSCILLOSCOPE 1 GS/S, 300 MHZ, 8 BITS, 4 CH, 512 MS VXI FORMAT**	**$ 14690**
ZT4421LXI	**ZT4420 OSCILLOSCOPE 1 GS/S, 300 MHZ, 12 BITS, 2 CH, 256 MS LXI FORMAT**	**$ 9930**
ZT4421PXI	**ZT4420 OSCILLOSCOPE 1 GS/S, 300 MHZ, 12 BITS, 2 CH, 256 MS PXI FORMAT**	**$ 8630**
ZT4421VXI	**ZT4420 OSCILLOSCOPE 1 GS/S, 300 MHZ, 12 BITS, 2 CH, 256 MS VXI FORMAT**	**$ 9930**
ZT4441DFENVPXI	**ZT4440 OSCILLOSCOPE 800 MS/S, 300 MHZ, 14 BITS, 2 CH, 128 MS, DIFFERENTIAL INPUTS, CONFORMAL COATED PXI FORMAT**	**$ 12950**
ZT4441DFPXI	**ZT4440 OSCILLOSCOPE 800 MS/S, 300 MHZ, 14 BITS, 2 CH, 128 MS, DIFFERENTIAL INPUTS PXI FORMAT**	**$ 10920**
ZT4441LXI	**ZT4440 OSCILLOSCOPE 800 MS/S, 300 MHZ, 14 BITS, 2 CH, 256 MS LXI FORMAT**	**$ 10960**
ZT4441PXI	**ZT4440 OSCILLOSCOPE 800 MS/S, 300 MHZ, 14 BITS, 2 CH, 256 MS PXI FORMAT**	**$ 9650**
ZT4441VXI	**ZT4440 OSCILLOSCOPE 800 MS/S, 300 MHZ, 14 BITS, 2 CH, 256 MS VXI FORMAT**	**$ 10960**
ZT4442LXI	**ZT4440 OSCILLOSCOPE 800 MS/S, 300 MHZ, 14 BITS, 4 CH, 512 MS LXI FORMAT**	**$ 18020**
ZT4442VXI	**ZT4440 OSCILLOSCOPE 800 MS/S, 300 MHZ, 14 BITS, 4 CH, 512 MS VXI FORMAT**	**$ 18020**
ZT4611LXI	**ZT4610 OSCILLOSCOPE 4 GS/S, 1 GHZ, 8 BITS, 2 CH, 512 MS LXI FORMAT**	**$ 12300**
ZT4611PXI	**ZT4610 OSCILLOSCOPE 4 GS/S, 1 GHZ, 8 BITS, 2 CH, 512 MS PXI FORMAT**	**$ 11480**

PART #	DESCRIPTION	LIST PRICE
ZT4611VXI	ZT4610 OSCILLOSCOPE 4 GS/S, 1 GHZ, 8 BITS, 2 CH, 512 MS VXI FORMAT	$ 12450
ZT4612ELXI	ZT4610 OSCILLOSCOPE 4 GS/S, 1 GHZ, 8 BITS, 4 CH, 512 MS, EPICS LXI FORMAT	$ 23460
ZT4612LXI	ZT4610 OSCILLOSCOPE 4 GS/S, 1 GHZ, 8 BITS, 4 CH, 128 MS LXI FORMAT	$ 21320
ZT4612VXI	ZT4610 OSCILLOSCOPE 4 GS/S, 1 GHZ, 8 BITS, 4 CH, 512 MS VXI FORMAT	$ 21170
ZT4628LXI	ZT4620 OSCILLOSCOPE 2 GS/S, 500 MHZ, 8 BITS, 2 CH, 512 MS LXI FORMAT	$ 13400
ZT4628PXI	ZT4620 OSCILLOSCOPE 2 GS/S, 500 MHZ, 8 BITS, 2 CH, 512 MS PXI FORMAT	$ 13320
ZT4628PXIE	ZT4620 OSCILLOSCOPE 2 GS/S, 500 MHZ, 8 BITS, 2 CH, 512 MS PXIE FORMAT	$ 13320
ZT4628VXI	ZT4620 OSCILLOSCOPE 2 GS/S, 500 MHZ, 8 BITS, 2 CH, 512 MS VXI FORMAT	$ 13400
ZT4628VXI-JSF	ZT4620 OSCILLOSCOPE 2 GS/S, 500 MHZ, 8 BITS, 2 CH, 512 MS, ADVANCED EXTERNAL TRIGGERING VXI FORMAT	$ 16240
ZT4629LXI	ZT4620 OSCILLOSCOPE 1 GS/S, 500 MHZ, 8 BITS, 4 CH, 1 GS LXI FORMAT	$ 23090
ZT4629VXI	ZT4620 OSCILLOSCOPE 1 GS/S, 500 MHZ, 8 BITS, 4 CH, 1 GS VXI FORMAT	$ 23090
ZT5153VXI	ZT5153 WAVEFORM GENERATOR 200 MS/S, 50 MHZ, 14 BITS, 2 CH, 32 MS, RACAL 3153 REPLACEMENT VXI FORMAT	$ 11850
ZT5211-01LXI	ZT5210 WAVEFORM GENERATOR 200 MS/S, 50 MHZ, 14 BITS, 2 CH, 32 MS LXI FORMAT	$ 7520
ZT5211-01PXI	ZT5210 WAVEFORM GENERATOR 200 MS/S, 50 MHZ, 14 BITS, 2 CH, 32 MS PXI FORMAT	$ 6250
ZT5211-01PXIE	ZT5210 WAVEFORM GENERATOR 200 MS/S, 50 MHZ, 14 BITS, 2 CH, 32 MS PXIE FORMAT	$ 6250
ZT5211-01PXIENV	ZT5210 WAVEFORM GENERATOR 200 MS/S, 50 MHZ, 14 BITS, 2 CH, 32 MS CONFORMAL COATEDPXI FORMAT	$ 7950
ZT5211-01VXI	ZT5210 WAVEFORM GENERATOR 200 MS/S, 50 MHZ, 14 BITS, 2 CH, 32 MS VXI FORMAT	$ 7300
ZT5212-01LXI	ZT5210 WAVEFORM GENERATOR 200 MS/S, 50 MHZ, 14 BITS, 4 CH, 32 MS LXI FORMAT	$ 13450
ZT5212-01VXI	ZT5210 WAVEFORM GENERATOR 200 MS/S, 50 MHZ, 14 BITS, 4 CH, 32 MS VXI FORMAT	$ 13070

PART #	DESCRIPTION	LIST PRICE
ZT6150	**1U RACK MOUNT KIT FOR ONE LXI INSTRUMENT**	**$ 630**
ZT6151	**1U RACK MOUNT KIT FOR TWO LXI INSTRUMENTS**	**$ 960**
ZT824VXI	**ZT824 PRODUCT RUBIDIUM FREQUENCY STANDARD VXI FORMAT** The default configuration is 5 Sine outputs and 3 TTL outputs. Consult Teradyne for alternate configurations	**$ 17890**

PART #	DESCRIPTION	LIST PRICE

Section R: VERTA Optical Subsystems

651-591-00 **VERTA-404 VERTA FOUNDATION** **$ 28820**

Verta Foundation with :

- High speed full cross point switch matrix with one-to-one and one-to-many non-blocking physical layer switching architecture
- Protocol independent
- Supports up 64 x 64 lanes of input and output high speed signals
- Supports speeds from 10Mb/s to 4Gb/s
- Controlled through LXI communications interface (RJ45 10/100 Mb/s Ethernet)
- 4-slot, 19-inch rackmount enclosure

653-097-00 **VERTA-1004 VERTA FOUNDATION** **$ 30870**

Verta Foundation with :

- High speed full cross point switch matrix with one-to-one and one-to-many non-blocking physical layer switching architecture
- Protocol independent
- Supports up 64 x 64 lanes of input and output high speed signals
- Supports speeds from 10Mb/s to 10Gb/s
- Controlled through LXI communications interface (RJ45 10/100 Mb/s Ethernet)
- 4-slot, 19-inch rackmount enclosure

650-992-00 **VERTA-1007 VERTA FOUNDATION** **$ 33960**

Verta Foundation with :

- High speed full cross point switch matrix with one-to-one and one-to-many non-blocking physical layer switching architecture
- Protocol independent
- Supports up 112 x 112 lanes of input and output high speed signals
- Supports speeds from 10Mb/s to 10Gb/s
- Controlled through LXI communications interface (RJ45 10/100 Mb/s Ethernet)
- 7-slot, 19-inch rackmount enclosure

PART #	DESCRIPTION	LIST PRICE
650-993-00	**VERTA-3010 16 PORT SFP/SFP+ TRANSCEIVER SWITCH MODULE** Verta-3010 16 Port SFP/SFP+ Transceiver Switch with • 16 port Small Form-Factor Pluggable (SFP/SFP+) transceiver switch matrix that plugs into the Verta Matrix Switch Foundation chassis • Each port accepts SFP and SFP+ transceivers with signal data rates of 10Mb/s to 10Gb/s.	**$ 6950**
650-994-00	**VERTA-3020 16 PORT OPTICAL POWER SWITCH MODULE** Verta-3020 16 Port Optical Power Switch Module with • 16 port (16 unidirectional input lanes, 16 unidirectional output lanes) switch matrix that plugs into the Verta Matrix Switch Foundation chassis with capability to set optical power level on output lanes and measure optical power on input lanes • Each port contains transceivers that convert 1GBps to 10GBps optical input signals to electrical signals and back to optical output signals • Support 50/125 Multimode Fiber media (850nm wavelength) • Output Optical Power Set Range: -10(dBm) to -2 (dBm) • Input Optical Power Measurement Range: -18(dBm) to +0(dBm) • Each port accepts a duplex LC type optical cable connector or two simplex LC connectors	**$ 43740**
651-592-00	**VERTA-5010 16 CHANNEL OPTICAL POWER MANAGEMENT MODULE** Verta-5010 16 Channel Optical Power Management Module with • 16 channel (8 unidirectional input lanes, 8 unidirectional output lanes) optical power management instrument that plugs into the Verta Matrix Switch Foundation chassis • Continuously measure optical power and attenuate optical power on all lanes • Capability to attenuate optical power level on output channels and measure optical power on input channels • Output Optical Power Attenuation Range: : - 30(dBm) to -5 (dBm) • Input Optical Power Measurement Range: -25(dBm) to +10(dBm) • Each port accepts a duplex LC type optical cable connector or two simplex LC connectors • Support 50/125 Multimode Fiber media (850nm wavelength)	**$ 51450**

PART #	DESCRIPTION	LIST PRICE
659-242-00	**IEC POWER CORD, 2M**	**$ 140**
652-235-02	**TIOS -05 HSSUB INSTRUMENT TO VERTA CABLE KIT**	**$ 4820**
651-285-35	**XBEAM V2 TO LC, 32 POS, 7M OPTICAL FIBER CABLE, J15**	**$ 22830**
651-285-36	**XBEAM V2 TO LC, 32 POS, 7M OPTICAL FIBER CABLE, J16**	**$ 22830**
651-286-01	**TIOS FVT ITA FIXTURE, XBEAM V2 64 POS OPTICAL FIBER**	**$ 28950**
651-285-12	**XBEAM V2 TO LC, 32 POSITION, 7M OPTICAL FIBER CABLE, J13**	**$ 22830**
651-285-13	**XBEAM V2 TO LC, 32 POSITION, 7M OPTICAL FIBER CABLE, J14**	**$ 22830**
652-235-03	**TIOS -05 FVT ITA FIXTURE**	**$ 57900**
658-124-01	**TIOS FIBEROPTIC CLEANING KIT**	**$ 1740**
663-970-00	**CABLE, VERTA-3010 QUAD SFP TO HERCULES**	**$ 4720**
663-970-03	**CABLE, VERTA-3010 SFP D38999 HERCULES SHORTING PLUG**	**$ 4710**
663-971-00	**CABLE, VERTA-3010 EXPANDED BEAM FIBER OPTIC TO HERCULES**	**$ 11420**
663-971-03	**CABLE, VERTA-3010 EXPANDED BEAM FIBER OPTIC D38999 HERCULES SHORTING PLUG**	**$ 9240**
663-972-00	**CABLE, VERTA-5010 EXPANDED BEAM FIBER OPTIC TO HERCULES**	**$ 11530**
663-972-03	**CABLE, VERTA-5010 EXPANDED BEAM FIBER OPTIC D38999 HERCULES SHORTING PLUG**	**$ 9240**
651-967-00	**SFP AND LC CABLES FOR ECASS MEK KIT**	**$ 2250**