Third Generation Multiple Application Platform (MAP-300)

The VIAVI Solutions Multiple Application Platform (MAP-300) is an optical test and measurement platform optimized for compact cost-effective development and manufacturing of optical communications technology.

From the original Multiple Application Platform (MAP) system released in 2001 as part of JDSU to the new third generation MAP-300 Series, the MAP system is the heart of the VIAVI optical test solutions for labs and manufacturing. With unmatched scalability, users can be assured that our solutions will meet their current and future needs. MAP-300 provides the foundation to our entire portfolio, enabling scalability and efficiency for manufacturing optical network elements, modules and components.

Customer Focused Innovation

The new MAP-300 builds upon the proven strengths of the MAP System while adding innovation where it matters most for our customers. Backwards compatible support for the installed automation base, combined with several new features, including an HTML-based GUI for multi-user environments, gives our customers the capabilities they need to achieve their goals. We can't wait to see what you will accomplish with the new MAP-300!



Key Features

- Available in rackmount, reverse-rackmount and benchtop mainframe configurations
- HTML-based graphical user interface gives consistent user experience both locally and remotely
- Field-replaceable controller includes an integrated 3.5-inch LCD touchscreen for network and system status
- Support for USB 3.0 port, 15.6-inch external monitor, and ethernet
- Optional GPIB and trigger modules
- SCPI logical interface for automation programming, with remote programming supported via TCP/IP (LXI) over ethernet, GPIB and direct socket
- Multi-user capability
- Backward compatible with MAP2xx series cassettes and remote-control support
- Hot swappable modules
- Supports the MAP-Series asset management tool MAPcc

Applications

- General purpose fiber-optic lab use
- Manufacturing test automation
- DWDM/WSS test
- Connectivity IL/RL
- Polarization scrambling and OSNR

Compliance

- MAP Series cassettes include amplifier and source cassettes classified as either Class 3B or Class 1M Laser products. While operating in a MAP Series mainframe, cassettes meet the requirements of the IEC 60825-1 standard and comply with 21 CFR 1040.10 and 1040.11, except for deviations pursuant to Laser Notice 50, dated June 24, 2007.

MAP-300 Configurations

The MAP-300 mainframe, like its predecessor, is offered in both benchtop and rackmount versions as either three or eight slot mainframe configurations. The eight-slot can also provided in a reverse rack-mount configuration.

Benchtop	Rackmount and Reverse-Rackmount
Because each lab bench is unique, the MAP-300 chassis can be flexibly deployed in the space available. Easily stackable with simple, intuitive flip-up feet for easier positioning. The touch screen display's orientation-sensing ability enables positioning the chassis for use vertically or horizontally.	The chassis can be ordered in front- or rear-module entry rackmount configurations (reverse-rackmount only available for the 8-slot chassis). Rackmount configurations ship in kits containing all necessary mounting hardware. Conversion kits are available for mounting benchtop configurations.

MAP-380 Eight-Slot Mainframes

Each MAP-380 mainframe consists of a 3U chassis that can house up to eight cassettes, plus a field-replaceable controller. The MAP-380 mainframe is available in rackmount, reverse-rackmount, and benchtop configurations.



Figure 1 - MAP-380 rackmount and benchtop mainframes front view

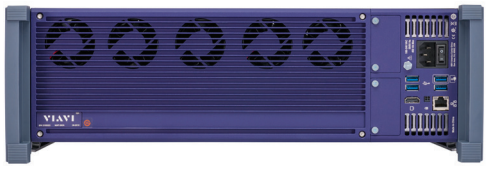


Figure 2 - MAP-380 rackmount and benchtop mainframes, rear view



Figure 3 - MAP-380 reverse rackmount mainframes, front and rear view

MAP-330 Three-Slot Mainframes

Each MAP-330 mainframe consists of a 3U chassis that can house up to three cassettes, plus a field-replaceable controller. The rackmount versions are half 19" rack wide, so two units can be mounted side-by-side. An optional touch screen can be docked on the mainframe of a benchtop three-slot chassis for an easy portable, self-contained system.



Figure 4 - MAP-330 benchtop mainframe, front and rear view



Figure 5 - MAP-330 benchtop mainframe with 15.6-inch touchscreen docked, front view



Figure 6 - MAP-330 3U half 19-inch rackmount mainframe, front view

Simple, Intuitive Graphical Controller

The MAP-300 chassis includes a 3.5-inch touch screen that supports intuitive swipes for easy navigation. This local touchscreen provides access to connection and configuration settings.

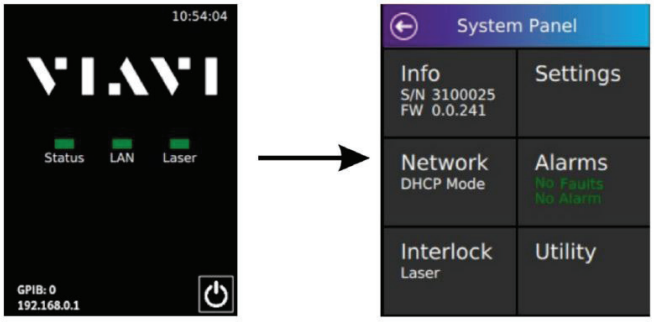


Figure 7 - MAP-300 local touchscreen

Users can access the MAP-300 GUI from a mainframe locally or remotely via Ethernet. The MAP-300 GUI allows multi-user access via a supported web browser by entering the IP address acquired from the controller in the location field of the web browser. The slot configuration of a mainframe is represented by widgets (one per slot) on the MAP-300 dashboard. When a slot is populated, the widget representing that slot identifies the cassette and provides quick access to the main device settings. The user can change the size of the widget to see more detail on specific cassettes. A detailed view of a cassette is available, whilst still having a complete view of all other slots.

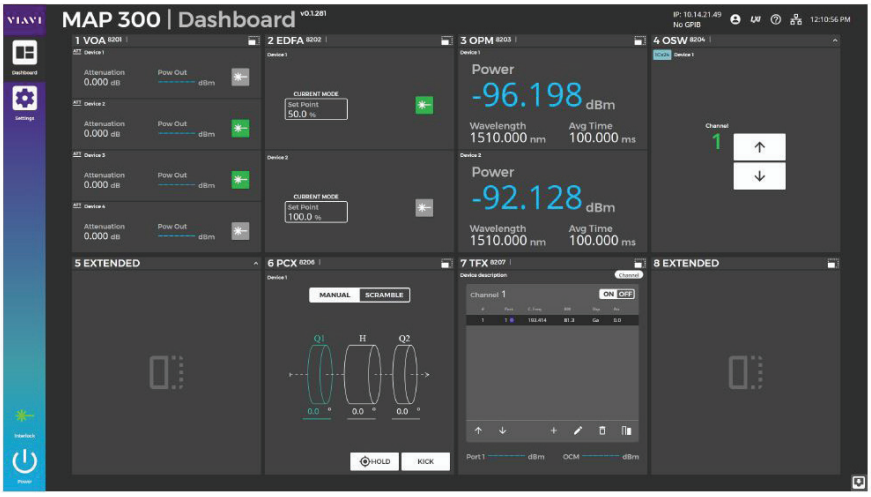
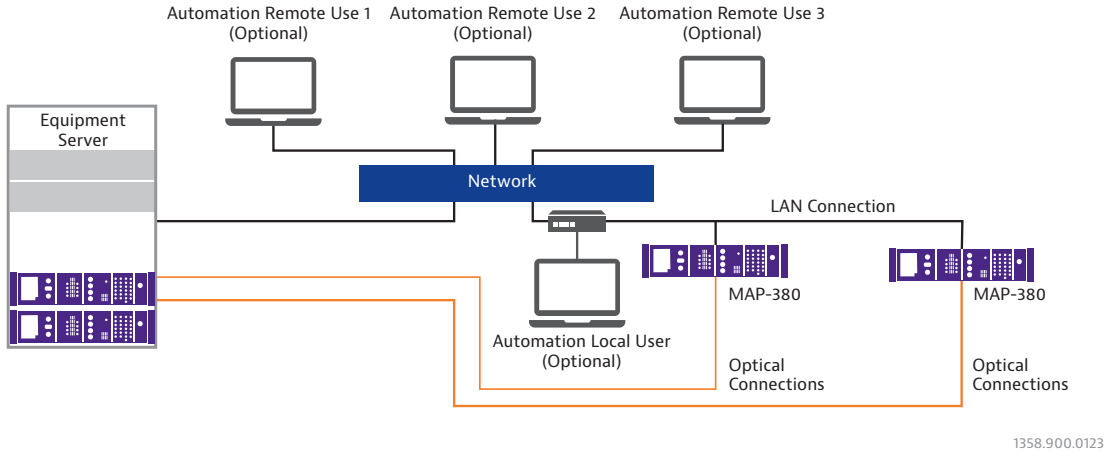


Figure 8 - MAP-380 Dashboard GUI example.

The settings panel gives you access to network and system settings, as well as remote chassis and license settings if available. The MAP-300 can be rebooted or placed in standby mode using through the GUI or local touchscreen.

Control Interfaces

As a full-fledged member of the MAP family, all remote interfaces can interoperate with the three-slot and eight-slot versions. It includes optimized Interchangeable Virtual Instrument (IVI) drivers for ease of use with popular application-development environments, such as LabVIEW, Visual C++, Visual Basic, and LabWindows™, to provide full control of the modules and drop-in instrument programming capabilities. These capabilities let test programmers focus on test-level functions and sequences rather than the details required to communicate with the specific modules in the MAP system. The IVI drivers also include a simulation mode that lets developers capture system configurations so they can perform most of their development offline, freeing hardware for other purposes. These features make test automation development and debugging fast and easy. All MAP series module and platform commands conform to the Standard Commands for Programmable Instruments (SCPI) command language.



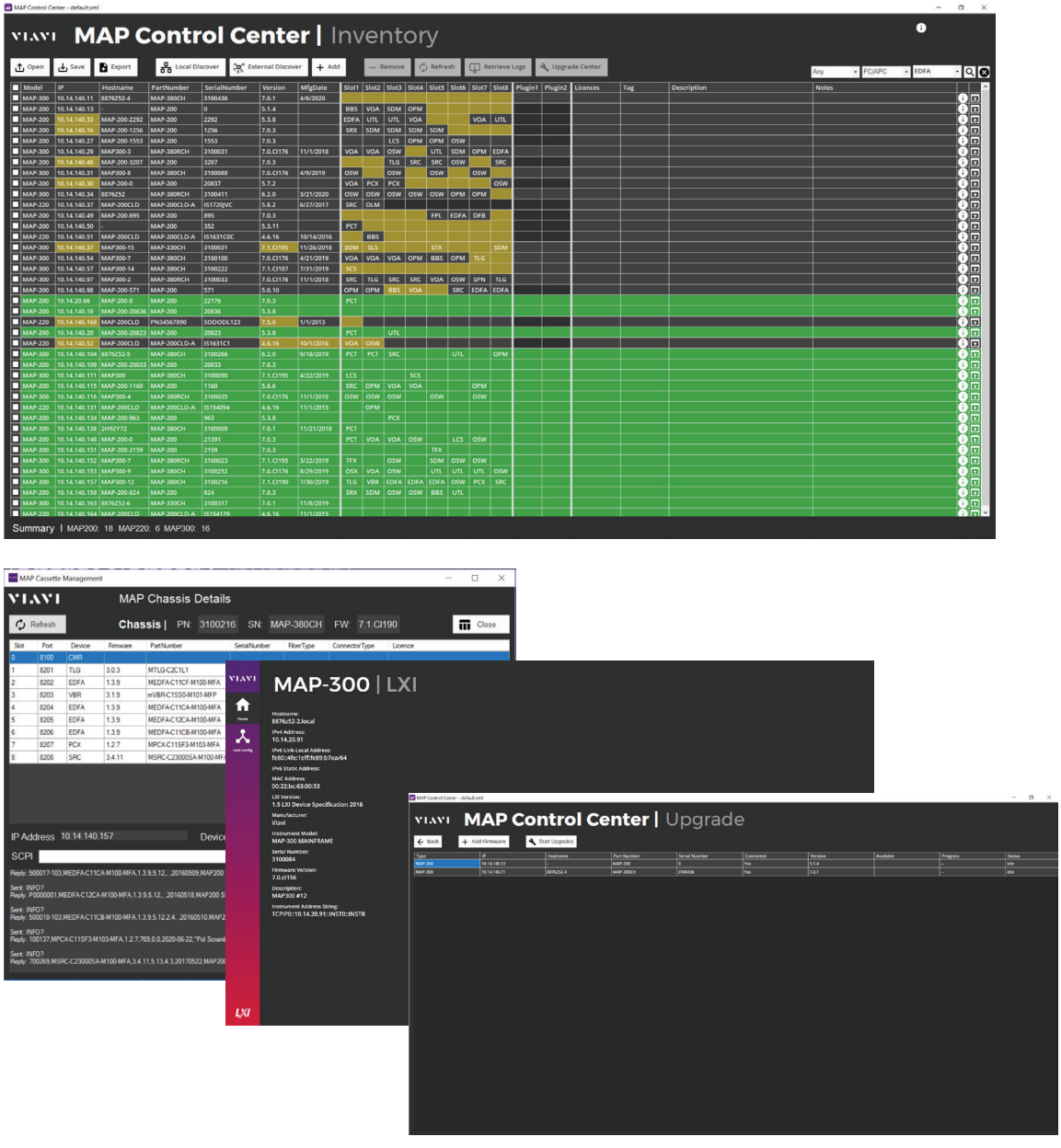
Extensive Input/Output Interfaces

All mainframe configurations include:

- Ethernet port for remote communication.
- 4 USB host ports for installing peripheral devices, including USB drives, a mouse, and a keyboard.
- One USB host port for the optional touchscreen.
- Integrated 3.5-inch LCD touchscreen for network and system status information.
- All mainframes can support up to two field-installable additional accessory modules for control and triggering. Available modules include (1) IEEE-488 (GPIB) and (2) dual trigger LXI-compliant LDVS driver ports.

MAP Control Center (MAPcc)

VIAVI now offers the MAP Control Center (MAPcc), an asset management tool for MAP mainframes and cassettes. The MAPcc simplifies network management via a single screen that lists a full inventory of all your assets, enabling you to explore internal and external mainframes as well as the cassettes present in those mainframes. From the list of available mainframes, you can retrieve IP addresses, firmware versions and serial numbers, and you can search for a specific type of cassette, fiber or connector. The MAPcc lets you upgrade multiple mainframes at the same time using the upgrade center, as well as retrieve log files.



MAP Chassis Selection Guide

VIAVI offers a variation of chassis, the table below summaries their key attributes of each chassis and why it would be ideal for you.

Chassis	Modular Family	Configuration	Size	Modular	Slots	Controller Touchscreen	Super Apps	Optional Touchscreen	Remote Control	Field Replaceable Controller	Optional Plug-in Modules
MAP-330	LightDirect and LightTest	Benchtop and Rackmount	3U, ½ 19" rack	Yes	3	3.5-in touchscreen for network/ system controls	Yes	USB 15.6-in display, 1920X1080 resolution. Docks to benchtop	Ethernet	Yes	GPIB, LXI Trigger
MAP-380		Benchtop, Rackmount and Reverse Rackmount	3U, 19" rack		8	320 X 240 resolution		USB 15.6-in display, 1920X1080 resolution. Does not dock			
MAP-220C	LightDirect Only	Benchtop, Rackmount and Reverse Rackmount	2U, ½ 19" rack	Yes	2	3.5-in touchscreen that replaces the need for a PC	No	No	Ethernet	Yes	GPIB
MAP-202C	mISW-C1 Optical Switch only	Benchtop and Rackmount	2U, ½ 19" rack	No	NA < 75 ports					No	
MAP-204C		Benchtop and Reverse Rackmount	4U, 19" rack		NA < 160 ports						

Specifications

Mainframe Specifications

The table below provides specifications for MAP-300 mainframes. For MAP Series cassettes, refer to the user guide for each cassette.

Parameters	MAP-330	MAP-380
Mainframe Chassis		
Capacity (Single-width cassettes)	3 cassettes	8 cassettes
Rackmount Kit	Optional	
Benchtop Kit	Optional	
Controller (MAP-300CLD-B)		
Operating System	Linux	
Local Touchscreen	3.5-in touchscreen for network/system status controls, 320 x 240 resolution	
Power Supply	100 to 240 V AC, 50/60 Hz, Auto-switching	
Power Consumption	450 VA MAX	450 VA MAX
Field Replaceable	Yes	
Bays for Plug-in Modules	2	
Native Ports/Interfaces		
USB 3.0 Host	1 front	
USB 3.0 (Mouse, Keyboard, etc.)	4 rear	
Ethernet 10/100/1000BASE-T	1 rear	
Monitor port	1 rear	
Optical Plug-in Modules	GPIB, Trigger	
Automation		
Driver Type	IVI compliant	
Standard/Protocol	LXI, VXI-11, SCPI	
Driver Compatibility	LabView™, LabWindows™, Microsoft® Visual C++, Microsoft® Visual Basic®	
Accessibility	Multiuser sharing support	
Web GUI Compatibility	Google Chrome or Microsoft Edge	
Laser Interlock (See the MAP Series Safety and Compliance Reference Guide, 22112369-325, for more information.)		
Local Interlock	Software controlled	
Remote Interlock	2-pin terminal block at rear controller	

Mechanical		
Dimensions of rackmount (W x H x D)	24.61 x 13.26 x 38.63 cm (9.6 x 5.2 x 15.2 in)	48.26 x 13.26 x 38.63 cm (19 x 5.2 x 15.2 in)
Dimensions of benchmount (W x H x D)	26.43 x 15.49 x 44.27 cm (10.4 x 6.1 x 17.5 in)	46.94 x 15.49 x 44.27 cm (18.5 x 6.1 x 17.5 in)
Weight		
Benchtop Mainframe	10 kg (22 lb)	12.6 kg (27.7 lb)
Rackmount Mainframe	7.4 kg (16.3 lb)	10.8 kg (23.8 lb)
Environment		
Operating Temperature	0 to 50°C	
Storage Temperature	-30 to 60°C	
Relative Humidity	5% to 85% non-condensing	

Optional 15.6-inch Touchscreen (MAP-300AKD) Specifications

Parameter	Specification
Dimensions	16-in x 9-in
Resolution	1080p (1920x1080)
Dock to Benchtop Mainframe	
MAP-330	Supported
MAP-380	Not Supported
Power/Interface to Mainframe	
MAP-330	USB cable or docking connector
MAP-380	USB cable
Weight	2.7 kg (5.95 lb)

Ordering Information

For more information on this or other products and their availability, please contact your local VIAVI account manager or VIAVI directly at 1-844-GO-VIAVI (1-844-468-4284) or to reach the VIAVI office nearest you, visit viavisolutions.com/contacts.

MAP-300 Mainframes

Chassis Slot Number	Description	Part Number
Three-Slot Mainframe	MAP-330A 3 Slot 3U 19-in LightTest Basic Mainframe	MAP-330AB-B
	MAP-330A 3 Slot 3U Half 19-in LightTest Benchtop Mainframe	MAP-330A-B
	MAP-330A 3 Slot 3U Half 19-in LightTest Benchtop Mainframe with Touchscreen	MAP-330AD-B
	MAP-330A 3 Slot 3U Half 19-in LightTest Rackmount Mainframe	MAP-330AX-B
Eight-Slot Mainframe	MAP-380A 8 Slot 3U 19-in LightTest Benchtop Mainframe	MAP-380A-B
	MAP-380A 8 Slot 3U 19-in LightTest Rackmount Mainframe	MAP-380AX-B
	MAP-380A 8 Slot 3U 19-in LightTest Reverse Rackmount Mainframe	MAP-380AXR-B

Ordering Information cont.

MAP-300 Accessories and Replacement Parts

Category	Description	Part Number
Plug-in modules	MAP-300A GPIB Plug-in Module	MAP-300AGPIB
	MAP-300A Trigger Module	MAP-300ATRIG
Replacement Equipment	MAP-330 Basic Chassis, No Controller	MAP-330CH
	MAP-380 Basic Chassis, No Controller	MAP-380CH
	MAP-380 Reverse Basic Chassis, No Controller	MAP-380RCH
	MAP-300 Modular Controller	MAP-300CLD-B
	Cassette Extraction Latch Kit – Button	MAP-300ACC010
	Cassette Extraction Latch Kit – Legacy	MAP-300ACC011
Optional Touchscreen	15.6-inch Touchscreen	MAP-300AKD
Kits	MAP-330A 3 slot Half 19-in 15.6-in Touchscreen Conversion Kit	MAP-300AKD-B
	Rackmount Conversion Kit, MAP-380	MAP-300ACC001
	Rackmount Conversion Kit, MAP-330	MAP-300ACC002
	Benchtop Conversion Kit	MAP-300ACC003
	Rackmount Kit. 15.6-in Touchscreen	MAP-300ACC004
Protection/Security	Retention Bar for MAP-380 Rackmount and Reverse Rackmount Mainframes	MAP-300ACC005
	Hard Case, MAP-330	MAP-300ACC006
	Hard Case, MAP-380	MAP-300ACC007
	15.6-in Touchscreen Hardcover	MAP-300ACC008
	15.6-in Touchscreen Screen Protector	MAP-300ACC009

LightDirect and LightTest Modular Families for the MAP System

MAP mainframes are the foundation to our entire portfolio of functional modules, enabling scalability and efficiency for manufacturing optical network elements and modules. The MAP-300 series replaces the highly successful MAP-200. It is compatible with all our current cassettes and legacy cassette (all -C1, -C2 and -B1 modules). The cassette modules fall into two different families, the LightTest turn-key solutions and LightDirect configurable solutions to meet each customer's exact needs.

LightDirect

The LightDirect family includes a wide range of foundational optical test modules that are used in simple bench test applications, or combined in larger, multi-modules customer driven automated test systems. They are easy-to-control, single-functionality modules.



Optical Sources and Amplifiers	Optical Signal Conditioning	Optical Signal Switching and Routing	Optical Power and Spectral Measurements
mTLG-C2 is a distributed feedback (DFB) laser that steps between frequencies of the 50 GHz ITU grid. It is available in either C or L band, and with up to four lasers per module. **mSRC-C2** is a general-purpose light source in key fixed telecom wavelengths: 850, 1300, 1310, 1490, 1550, 1625 nm. These sources typically are used to test system load or continuity, measure insertion loss, or for test station calibration. **mBBS-C1** is a broadband source that provides an amplified spontaneous emission (ASE) output for stable and spectrally flattened C-and L-band sources. **mSRC-C23000SA** is a variant of the mSRC-C2 that behaves as a semiconductor O-band optical amplifier (SOA) with polarization-independent optical amplifier.	**mVOA-C1** is the industry's most compact modular solution. Available with one, two, or four variable optical attenuators (VOA) per module with or without an internal power meter. The mVOA is the industry's leading variable optical attenuator family, enabling single-level control for receiver and amplifier testing for over 20 years. **mUTL-C1** is a passive utility module includes, couplers, splitters, mux/demux, band-pass filters and even blank modules for customer supplied components. **mPCX-C1** is a polarization scrambler that scrambles, controls and provides stabilization for applications such as temporal depolarization and 100G+ coherent interface testing. **mTFX-C1** is a multiport tunable filter that simplifies test signal management for next-generation 100 G+ interface, sub-systems and system test.	**mOSW-C1/mISW** are the industry's gold standard for loss and repeatability. With over 80 variations available, there is a configuration ideally suited to all applications. Switches range from 1x4 to 1x64 with options for internal power monitoring, direction monitoring, and power trim. **mOSX-C1** is a cross connect optical switch that provides high performance and reliability. Available as a 16- or 32-port common connection (CC) cassette, the mOSX supports any-to-any port combinations up to the total number of ports on the cassette. It also supports MxN combinations	**mOPM-C1** optical power meters are available with one, two, or four power heads per module with four unique performance ranges. There are versions available for all applications. Models with 110 dBm dynamic range are complimented by versions that support 26 dBm input power. **mHROSA-A1** is a high-resolution optical spectrum analyzer that combines sub-GHz resolution performance and compact modularity in a single slot cassette.

The LightTest family are application specific, integrated test solutions that leverage the power of the MAP Series Super-Application or PC based software. Built with specialized MAP modules or assemblies of LightDirect modules, LightTest solutions are typically used in bench test applications but can also be combined in larger, multi-modules customer driven automated test systems.

Passive Connector Test Solutions



The VIAVI Solutions passive component/connector test solution (PCT) consists of a powerful family of modules, software, and peripherals for testing IL, RL, physical length, and polarity of optical connectivity products. Leveraging the modularity and connectivity of the VIAVI MAP platforms.

Single Fiber Insertion Loss and Return Loss Test System



The PCT-rm is a MAP-220 based Single mode Insertion Loss (IL) and Return Loss (RL) test meter for single fiber connector applications. Part of the MAP Series PCT solution family, it features fully EF-compliant multimode Insertion Loss test meters with connector adapters that can be configured for all connectivity applications to ensure maximized productivity.

Swept Wavelength System



mSWS-C1 are swept wavelength test solutions for manufacturing and new device development of passive DWDM devices, ROADMs & Circuit Packs. Provides full characterization of wavelength.

Optical Component Environmental Test Systems



At the core of OCETS Plus is a pair of custom-grade programmable switches (1xN configuration). OCETS switches are specified to higher levels of IL repeatability and background RL than analogue-grade switches.



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