FVAM-1000 Series Benchtop Microscopes
Automated multifiber connector inspection and analysis

The FVAM-1000™ series expands on the industry-leading FV product family from VIAVI Solutions with a completely automated inspection solution for multifiber connectors such as MPO. This all-in-one system automatically inspects and analyzes every fiber of an MPO or other multifiber connector with reliability and speed. With FVAM-1000 series benchtop microscopes, manufacturing facilities can ensure optimized quality and performance of MPO trunk cables and assemblies at every stage of production.

Guarantee reliable MPO production quality

Contaminated connectors are the #1 cause of troubleshooting in optical networks. This problem has driven the industry and International Electrotechnical Commission (IEC) to release IEC 61300-3-35, a global standard that establishes acceptance criteria for the quality and cleanliness of the fiber connector end face. With 100% autonomous operation, lab and production technicians have everything they need to inspect and analyze MPO connector end faces to ensure quality.

- Automated focus, panning, and pass/fail analysis, all at the press of a button
- The optional integrated touchscreen display gives users full control to view live images and analysis results, pan across the end face to view each fiber, configure test requirements, and easily navigate results
- Select your desired acceptance criteria including IEC-61300-3-35 or customer-specific requirements

Key Benefits

- Guarantee reliable MPO production quality
- Optimize production workflows at every stage
- Certify MPO end face quality to customer requirements and industry standards
- Streamline inspection methods with fast and reliable functionality

Features

- Fully automated MPO inspection and analysis
- No PC required for analysis
- Generate certification reports and archive test data
- Locate and identify defects and scratches
- Easily switch between connector configurations with FMAG series magnetic adapters
- Intuitive UI either on-board or in FiberChekPRO™
- Integrates with VIAVI PCT system
- Available with or without on-board touch screen video display

Optimize production workflows at every stage

Managing clean MPO connections through the production process requires systematic and proactive methods that many technicians find troublesome, confusing and time-consuming. The FVAM-1000 is designed with high-volume production use in mind so that inspection can be quickly and easily incorporated at any stage. From ensuring proper MPO end face polish quality, to conducting performance tests, or preparing final shipment, technicians at every stage of the MPO production process can customize the FVAM-1000 to best fit their inspection needs.

Stage of Production	FVAM-1000 Functionality	Benefit
Post Polish	• Auto Focus • Auto Pan • Auto Test	Run Automated pass/fail analysis to ensure all fibers were currently polished without any scratches or defects
		Save results if needed
Mid Span Tests	• Auto Focus • Auto Pan • View all fibers at once	Prevent damage to cables during test process
		Improve test yields in first pass with fast and proactive inspection methods
		Protect your reference cables by ensuring they are safe to connect to DUT
		Quickly detect any contamination or problematic MPO end faces BEFORE performing Insertion Loss/Return Loss tests
		Protect the quality of your Test Reference Cords during tests
Final Test	• Auto Focus • Auto Pan • Auto Test • Save Results • Generate Report	Run Automated pass/fail analysis to ensure all fibers pass requirements before packaging and shipment
		Generate certification reports to include with product shipments
		Keep test results and images on file for all MPO cables manufactured in your facility

Automated inspection with fast results!

FVAM-1000 fully automates every step of the multi-fiber inspection and test process, including focus, pan/scroll, and fiber end-face analysis. With the ability to test a 12 fiber MPO connector in under 20 seconds, the FVAM-1000 streamlines and simplifies production efficiency.

Legacy/Manual MPO Inspection Process

Step	Time
Focus Image	0:04
Scroll/Pan each fiber	0:04
Test ONE fiber	0:03
Save	0:02
Total (1 fiber)	0:13
Total (12 fibers)	2:36

x12

Test 144 MPO Connectors:
> 6 Hours

FVAM-1000 MPO Inspection Process

Step	Time
Focus Image	0:02
Scroll/Pan all fibers	0:08
Test **all 12** fibers	0:08
Save	0:02
Total (12 fibers)	0:20

Test 144 MPO Connectors:
~ 45 Minutes

Streamline inspection procedures with time saving capabilities

100% Autonomous MPO inspection and analysis

With built-in features such as a 2.5" color touchscreen, automated scrolling, and end face analysis, the FVAM-1000 gives production crews the ability to easily inspect MPO end faces anywhere in their facility. While compatible with external PCs, the FVAM-1000 can be configured to operate independently.

Review test results on the FVAM-1000

Access test results stored on the device using the built-in color touchscreen and on-board controls. Store over 1,200 fiber images (~100 12-fiber connectors) on-board with the ability to pan across the entire connector end face, view analysis results, toggle overlay views, and view both low and high magnification images.

Test multiple different connector configurations

With many pre-configured analysis profiles and adapters, the FVAM can test a wide variety of multi- and single-fiber configurations - including 1x12, 4x4 (SR4), 1x16, 2x12 configurations for MPO connectors, MT ferrules, or QSFP modules or even single-fiber connectors.
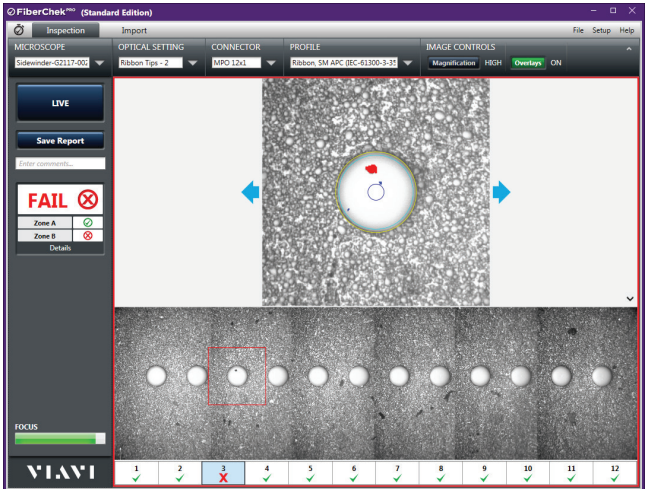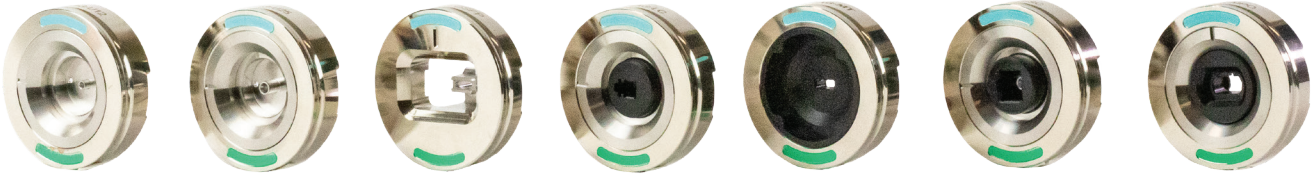
MPO   QSFP module   Single Fiber

Integrates with FiberChekPRO Software

In addition to working as an all-in-one system, the FVAM-1000 can also be used in conjunction with FiberChekPRO PC software; giving users several added features and capabilities including the ablity to view all fibers on the endface at the same time. This capability is ideal in mid-span testing applications for quickly viewing an endface before connecting to other test devices.

Easily switch connector configurations with FMAG series adapters

FVAM-1000 benchtop microscopes feature the FMAG series adapters, an innovative design utilizing a magnetic connection so operators can quickly switch adapter types and ensure precision alignment. Each FMAG series adapter has the ability to inspect both SM (angled polish) and MM (flat polish) connectors. Simply press on the color coded indicator to switch between SM APC (green) and flat polish MM (aqua) end face inspection without any hassle.

Specifications

Parameter		Specification
Dimensions (H x W x D)		107 mm x 113 mm x 219 mm (4.2 in x 4.4 in x 8.6 in)
Weight		FVAM-1000 5.3 lbs
		FVAM-1000-S 5.5 lbs
Display		240 x 320 2.5" LCD touchscreen
Output		USB
Power Source		External power supply
Field-of-View Values (µm)	High Magnification	Horizontal: 356 µm
		Vertical: 475 µm
	Low Magnification	Horizontal: 713 µm
		Vertical: 950 µm
Live Image		640 x 480, 10 fps
Power Supply		12 V wall adapter with interchangeable plug for US, EU, UK, AU
Camera Sensor		2560 x 1920, 1/2.5 in CMOS, 5 megapixel
Auto Index		Pan up to 32 fibers (2 x 16)
Light Source		Blue LED, 100,000+ hr life
Lighting Technique		Coaxial
Certification		CE, EN/IEC 61326
Operating Temperature		0 to +50° C
Storage Temperature		–10 to +70° C
Operating Humidity		95% non-condensing

Ordering Information

Description	Part Number
Kitted Packages	
FVAM-1000 Series Benchtop Microscope with Touch-Screen, FMAG-MPO Adapter	FVAM-1000-S
FVAM-1000 Series Benchtop Microscope, FMAG-MPO adapter	FVAM-1000
Accessories and Related Items	
FMAG Series Adapter, MPO MM/SM, PC/APC	FMAG-MPO
FMAG Series Adapter, MT Ferrule MM/SM, PC/APC	FMAG-MT
FMAG Series Adapter, MPO QSFP, MM/SM, PC/APC	FMAG-QSFP
FMAG Series Adapter, 2.5mm Simplex PC/APC	FMAG-U25
FMAG Series Adapter, 1.25mm Simplex PC/APC	FMAG-U12
FMAG Series Adapter, LC/PC and LC/APC	FMAG-LC
FMAG Series Adapter, SC/PC and SC/APC	FMAG-SC

VIAVI Care Support Plans

Increase your productivity for up to 5 years with optional VIAVI Care Support Plans:

• Maximize your time with on-demand training, priority technical application support and rapid service.

• Maintain your equipment for peak performance at a low, predictable cost.

Plan availability depends on product and region. Not all plans are available for each product or in every region. To find out which VIAVI Care Support Plan options are available for this product in your region, contact your local representative or visit: viavisolutions.com/viavicareplan

Features

*5-year plans only

Plan	Objective	Technical Assistance	Factory Repair	Priority Service	Self-paced Training	5 Year Battery and Bag Coverage	Factory Calibration	Accessory Coverage	Express Loaner
BronzeCare	Technician Efficiency	Premium	✓	✓	✓				
SilverCare	Maintenance & Measurement Accuracy	Premium	✓	✓	✓	✓*	✓		
MaxCare	High Availability	Premium	✓	✓	✓	✓*	✓	✓	✓

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