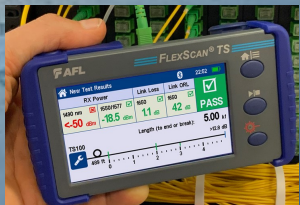




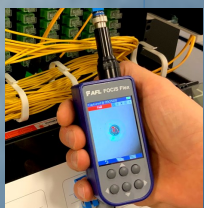
## Test- and Measurement Solutions for FTTH PON Networks



During activation and maintenance work PON Power Meters identify, measure and qualify both downstream and upstream signals in FTTx PON networks with their wavelength mix in mixed operation of GPON/EPON, video and XG/XGS PON as well as 10GE PON.



FTTH PON OTDRs and Troubleshooters are all-in-one solutions designed to make it easy for both novice and experienced technicians to troubleshoot, identify, locate and solve problems in FTTH PON or point-to-point networks. Using industry standard or user-specified pass/fail criteria, events are displayed as color-coded LinkMap icons to document the health of the network. FlexScan automates the test flow, shortens test times and simplifies result interpretation with error correction hints for the technician.



The FOCIS Flex camera makes connector inspection easy, fast and convenient. With a single button press, FOCIS Flex automatically focuses, captures and centers the end face image, applies pass/fail rules, and displays the evaluated connector image. Storage and data transfer are part of the function.

Visual fault location (VFI / VFL) with visible red laser light. Introduced into the fiber, it can detect sharp bends, breaks, bad connectors and splices, and faults hidden in an OTDR's dead zone.



Dirty ports cause a majority of network outages. Prevention by cleaning is so easy! The One-Click® Cleaner is a user-friendly cleaning pen for cleaning LC and SC plugs and sockets in patch panels.







## OTDR & Troubleshooter



- PON optimized OTDR with additional insertion loss and power measurement function as well as VFL
- PON or point-to-point network verification and troubleshooting
- Color-coded icon display of fiber link events and faults
- Verification of PON splitters up to a split ratio of 1:64
- Verification of optical levels in GPON, video and XG/XGS-PON or 10GEPON networks
- Measures insertion loss, ORL, output and input levels

## Power Meter & Loss Testing



- Automatic and instant detection of up to 5 wavelengths - NO setup required!
- Measure PON upstream and downstream signals
- For enabling, testing and troubleshooting BPON, EPON, GPON, 10G-EPON, XG-PON, XGS-PON and video networks
- Pass/fail analysis of PON levels through adjustable limits
- Wave ID loss tests with up to three wavelengths simultaneously

## Fiber- & Fault-Finder



- Live fiber detection avoids failures before live fibers are disconnected
- CW and tones for fiber identification and tracking during activation and installation
- Detection of traffic directions
- Identify fibers with high signal level (OFI-400HP)
- VFL: Eye-safe red light in visible range of 650 nm
- Identification of bad connections, e.g. UPC to APC
- Finding broken splices
- Detect errors in OTDR dead zones

## Inspection Camera & Cleaning



- Inspect and clean APC and UPC, SC and LC connectors and bulkheads as well as E2000 and more
- Cordless and compact handheld inspection video microscope
- One button operation starts auto focus, centering, capture, analyze, save and send
- IEC-61300-3-35 pass/fail analysis
- Complete cleaning kits for Patch Cord Connectors & Patch Panel Adapters
- For effective wet and dry cleaning
- Other inspection adapter test tips and one-click pens on request

		SM OTDR				Troubleshooter		
		FS200-304	FS200-303	FS200-300	FS200-60	TS100-75	TS100-70	TS100-60
Point-to-Point	OTDR & Troubleshooter							
	Core	✓	✓	✓	✓			
	Metro	✓	✓	✓	✓			
FTTx PON	Access	✓	✓	✓	✓	✓	✓	✓
	Dark	✓	✓	✓	✓	✓	✓	✓
	Live	✓	✓	✓	✓	✓	✓	✓
Features	Test to Splitter	✓	✓	✓	✓	✓	✓	✓
	Through Splitter	✓	✓	✓	✓	✓	✓	✓
	Smart OTDR	✓	✓	✓	✓	✓	✓	✓
Kits	Expert OTDR	✓	✓	✓	✓	✓	✓	✓
	LinkMap	✓	✓	✓	✓	✓	✓	✓
	Power Meter	BB	BB	BB	BB	2A	2A	2A
	Light Source	✓	✓	✓	✓	✓	✓	✓
	VFL	✓	✓	✓	✓	✓	✓	✓
	Wavelength (nm)	1310/1550/1650	1310/1550/1625	1310/1550	1650	1625	1650	1650

		XG PON		Power Meter		Light Source		
		FlowScan	OPM4	OPM5-3D	OPM5-4D	OLS2-DUAL	OLS7-3	OLS7-FTTH
Point-to-Point	Power Meter & Loss Testing							
	Core	✓	✓	✓	✓	✓	✓	✓
	Metro	✓	✓	✓	✓	✓	✓	✓
FTTx PON	Access	✓	✓	✓	✓	✓	✓	✓
	Dark	✓	✓	✓	✓	✓	✓	✓
	Up 1270/1310	✓	(BB)	(BB)	(BB)	✓	✓	✓
Features	Dn 1490/1577	✓	BB	BB	BB	✓	✓	✓
	Video 1550	✓	BB	BB	BB	✓	✓	✓
	Power Meter	5A	BB	BB	BB	✓	✓	✓
Kits	Light Source	✓	✓	✓	✓	✓	✓	✓
	WAVE ID	✓	✓	✓	✓	✓	✓	✓
	Wavelength (nm)	1270/1310/1490/1550/1577	850/1300/1310/1400/1490/1550/1625	850/1300/1310/1400/1490/1550/1625	850/1300/1310/1400/1490/1550/1625	1310/1550	1310/1550/1625	1310/1490/1550
	SLP5-6	✓	✓	✓	✓	✓	✓	✓
	SLP5-FTTH	✓	✓	✓	✓	✓	✓	✓
	additional	on request	on request	on request	on request	on request	on request	on request

		OFI				VFI/VFL	
		OFI-BIPMe	OFI-400	OFI-400 C	OFI-400 HP	VFI4 HP	VFI4 LP
Fiber Type	Fiber & Fault Identification						
	MM & SM	✓	✓	✓	✓	✓	✓
	G.657	✓	✓	✓	✓	✓	✓
Tones	Ribbon	✓	✓	✓	✓	✓	✓
	1.1-1.7 mm Mantel	✓	✓	✓	✓	✓	✓
	2.0 & 3.0 mm Mantel	✓	✓	✓	✓	✓	✓
Features	CW	✓	✓	✓	✓	✓	✓
	2Hz	✓	✓	✓	✓	✓	✓
	330Hz	✓	✓	✓	✓	✓	✓
	270Hz/1kHz/2kHz	✓	✓	✓	✓	✓	✓
	Traffic Direction	✓	✓	✓	✓	✓	✓
	Output Power (mW)	✓	✓	✓	✓	5	1
	2.5 / 1.25 mm Socket	✓	✓	✓	✓	✓	✓
	Plunger	✓	✓	✓	✓	✓	✓
	Fiber Identification	✓	✓	✓	✓	✓	✓
	Power Measurement	✓	✓	✓	HP	✓	✓
	Identify bend, breaks	✓	✓	✓	✓	✓	✓

		Camera				Cleaning tools		
		Connector Inspection & Cleaning	FOCUS Flex	One Click	Pen	Mini	Ultra	Fluid
Connector	PC/UPC & APC	✓	✓	✓	✓	✓	✓	✓
	SC	II	✓	✓	✓	✓	✓	✓
	LC	II	✓	✓	✓	✓	✓	✓
Bulkhead	E2000	II	✓	✓	✓	✓	✓	✓
	weitere	II	✓	✓	✓	✓	✓	✓
	PC/UPC & APC	✓	✓	✓	✓	✓	✓	✓
Features	SC	II	✓	✓	✓	✓	✓	✓
	LC	II	✓	✓	✓	✓	✓	✓
	E2000	II	✓	✓	✓	✓	✓	✓
	weitere	II	✓	✓	✓	✓	✓	✓
	1-Button-Start	✓	✓	✓	✓	✓	✓	✓
	Display	✓	✓	✓	✓	✓	✓	✓
	Auto-focus	✓	✓	✓	✓	✓	✓	✓
	IEC 61300-3-35	✓	✓	✓	✓	✓	✓	✓
	Save & Send	II	✓	✓	✓	✓	✓	✓

II: With appropriate adapter tip