



# FX81/FX81T

## 1G/10G PON Optical Power Meters



FX81T



FX81 5WL

Optical power meter for installation, service activation and troubleshooting of B/GPON, XG(S)-PON, EPON and 10G-EPON fiber networks. Pass-through design to measure multiple downstream and upstream signals simultaneously for ONU/ONT verification or non-pass through/terminated OLT 1490/1577nm verification.

### Key Features

- Compatible with both GPON and EPON fiber networks
  - GPON and XG(S)-PON test applications
  - EPON and 10G-EPON test applications
- 3 models available:
  - 2  $\lambda$  non-pass-through/terminated DS: 1490/1577nm (FX81T)
  - 4  $\lambda$  pass-through DS: 1490/1577nm, US: 1310/1270nm
  - 5  $\lambda$  pass-through DS: 1490/1550/1577nm, US: 1310/1270nm
- Concurrent measurements display
- Fixed SC/APC Interface for ONU and OLT test ports
- Programmable thresholds with Pass/Fail indication
- Optional broadband power meter with universal adapters
  - WaveID support when paired with compatible VeEX source
- Non-volatile storage for 1920 OPM
- Flexible data transfer, test result management and report generation options using:
  - LT-Sync PC software (microUSB or optional Bluetooth)
  - Fiberizer™ Mobile OLTS software (microUSB or Bluetooth)
  - Fiberizer™ Desktop Plus or Fiberizer™ Cloud
- High contrast LCD - visible outdoors, programmable backlight for indoor or low light conditions
- Battery: Built-in, rechargeable Li-polymer
- Battery operating time (with backlight):
  - FTTx PON mode: >25 hours

### Key Specifications

- Wavelength-selective level measurements:
  - GPON per ITU-T G.984.2
  - XG(S)-PON per ITU-T G.9807.1
  - EPON & 10G-EPON per IEEE 802.3av
  - RF video (RVO)
- Calibrated wavelengths
  - GPON and EPON: 1310/1490 nm
  - XG(S)-PON and 10G-EPON and 1270/1577 nm
  - RF video (RVO): 1542 to 1560 nm
- xPON Power Measurement range (Pass-through):
  - Burst mode at 1270 and 1310 nm: -35 to +10 dBm
  - CW mode at 1490 and 1577 nm: -40 to +12 dBm
  - RF video (RVO) at 1550 nm: -40 to +25 dBm
  - Pass-through Insertion Loss:  $\leq 1.5$  dB
- Optical Return Loss @ 1550 nm:  $\geq 55$  dB
- Display resolution: 0.1 dB
- Optional Broadband Optical Power Meter (BB-OPM)
  - Calibrated wavelengths (nm): 850/1300/1310/1490/1550/1625/1650
  - CW measurement range (dBm): -50 to +25

## Fiberizer™ Software

Fiberizer is a family of VeEX fiber software applications that streamlines results storage, test reporting, work-flow integration and process compliance.

**Fiberizer Mobile OLTS (FMOLTS)** is an App for Android mobile devices. OPM/PON test data saved in the FX8x series test can be transferred via USB cable or optional Bluetooth connection to a phone/tablet for report generation and subsequent processing.

**Fiberizer Cloud** is an online repository where you can store, analyze and process all your fiber test results. This unique cloud solution provides superior centralized test data management and advanced report generation - since it's a full online web service, technicians can upload, process or access test data from almost any location, at any time.

**Fiberizer Desktop-Plus** is a Windows® PC software application that enables comprehensive test data analysis and report generation. The software supports transfer of test data to Fiberizer Cloud or VeSion R-server for additional test data operations.

## R-Server Workforce/Productivity System

A centralized server application designed for medium-to-large service providers facing the enormous challenge of managing and coordinating hundreds or even thousands of installations per day. The VeSion R-Server collects field test results for billing/record keeping purposes and simplifies inventory management. Used in conjunction with Fiberizer Mobile, this back-office application reduces customer call-backs and associated truck rolls, maximizing workforce efficiency and lowering operational costs.



Optical Specifications<sup>1</sup>

xPON Power Meter	FX81 4WL	FX81 5WL	FX81T
Calibrated wavelengths (nm)	1270/1310/1490/1577	1270/1310/1490/1550/1577	1490/1577
<b>Continuous data measurement range (dBm) - OLT</b>			
- 1490 nm		-40 to +12	-45 to +13
- 1577 nm		-40 to +12	-45 to +13
<b>Burst data measurement range (dBm) - ONT/ONU</b>			
- 1270 nm		-35 to +10	n/a
- 1310 nm		-35 to +10	n/a
<b>RF Video data measurement range (dBm)</b>			
- 1550	n/a	-40 to +25	n/a
<b>Spectral Passband (nm)<sup>2</sup></b>			
- 1270	1260 to 1280	1260 to 1280	n/a
- 1310	1300 to 1320	1300 to 1320	n/a
- 1490	1480 to 1500	1480 to 1500	1480 to 1500
- 1550	n/a	1542 to 1562	n/a
- 1577	1572 to 1582	1572 to 1582	1572 to 1582
Power measurement accuracy, (dB) <sup>3,4,5</sup>	±0.5		
Pass-Through Insertion Loss, (dB) <sup>4</sup>	≤1.5		n/a
Linearity, (dB)	±0.1		
Display Resolution (dB)	0.1		
Results	dBm with Pass/Fail Threshold indicator		
Interface (with dust cap protection)	Fixed SC/APC, >55dB reflectance		

<b>Broadband Optical Power Meter (Optional for FX81T and FX81 4WL)</b>	
Wavelength Range	800 to 1700
Calibrated wavelengths (nm)	850/1300/1310/1490/1550/1625/1650 Optional - CWDM ITU-T 694.2 Grid
Detector type	InGaAs
Measurement range	-50 to +25
Power Accuracy, % (dB)	±5 (±0.22)
Linearity, % (dB)	±2.5 (±0.11)
Readout Resolution (dB)	±0.01
Tone Detection (Hz)	270/330/1000/2000
Wave ID (Auto λ detection)	Compatible with VeEX Light Source
Optical Adapters (interchangeable)	SC, LC, FC, ST, Universal 2.5 or Universal 1.25 ferrule

## General Specifications

Size:	164.39 x 100 x 46.93 mm (H x W x D)	Connectivity:	Data transfer via micro USB or Bluetooth (optional)
Weight:	420 g (0.93 lbs.)	Display:	High contrast LCD (128 x 64 pixels)
Construction:	Polycarbonate chassis, rubber holster, 1 meter drop tested	Operating Temp:	-10 °C to +50 °C
Battery:	Rechargeable Li-Polymer, PON >25 h	Storage Temp:	-20 °C to +70 °C
Power Supply:	Micro USB interface, 5 VDC charger	Humidity:	0% to 95%, non-condensing



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D05-00-175P B05 2022/09