FX41xT

Selective PON Power Meter for G-PON and XGS-PON

2023 LIGHTWAVE 3.5 INNOVATION REVIEWS

10G Next-Gen and Legacy PON Optical Power Meter

Provides fast, simple, and precise measurement of G-PON and XGS-PON downstream signals. Miniature filters ensure each wavelength is measured accurately. The tester is well suited for installation, service verification, and troubleshooting of co-existent networks, including IEEE based E-PON and 10G-EPON deployments.

Key Features

- Downstream signal verification for G-PON and XGS-PON networks
- Simultaneous 1490/1577 nm signal level measurements
- Pass/Fail indication per PON Class or User thresholds
- Alkaline or rechargeable NiMH batteries with Auto- off
- Save over 2000 measurements with date and timestamp
- Save/display test results via NoApp™ QR code for mobile device transfer, post-processing, sharing, and upload
- Cloud-based NoApp™ service (included) allows for data augmentation via mobile phone or tablet. Secured and always up to date. No installation or updates required.
- Micro USB interface for 5V DC powering and battery charging
- High contrast backlit, monochrome display - visible outdoors and indoor with varying light conditions
- Splash and dust resistant keypad and chassis design
- Rugged polycarbonate chassis for demanding field conditions
- Fixed SC/APC connector interface with protective dust caps
- Visual Fault Locator (VFL) option
- Broadband Optical Power Meter (OPM) option

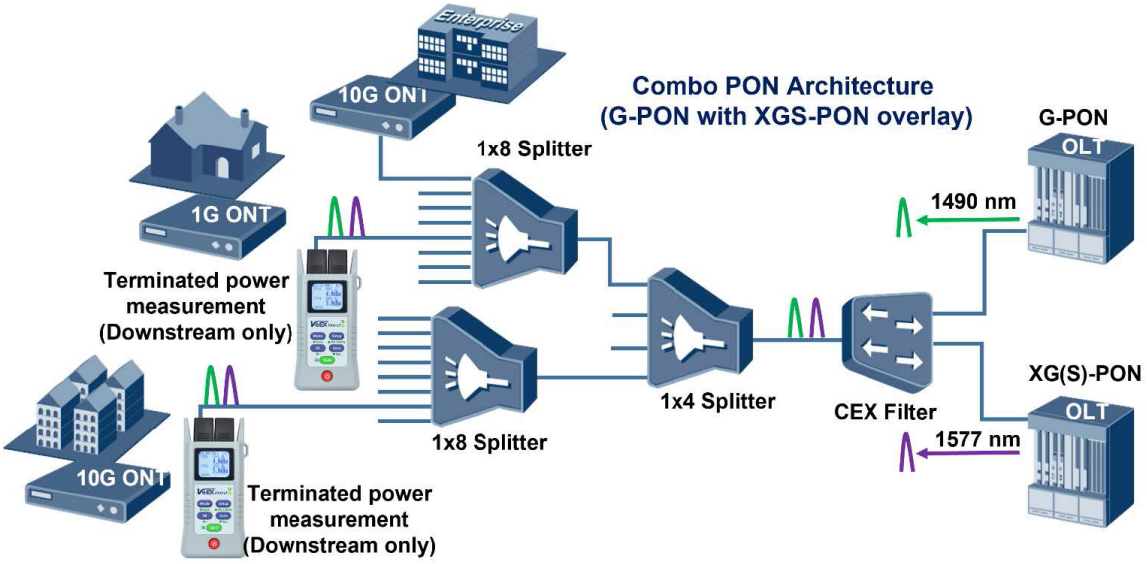
Key Specifications

- Wavelength-selective level measurements:
  - G-PON per ITU-T G.984.2
  - XGS-PON per ITU-T G.9807.1
  - EPON & 10G-EPON per IEEE 802.3av
- Calibrated PON wavelengths (Downstream):
  - 1490 nm (G-PON)
  - 1577 nm (XGS-PON)
- Narrow, Selective Spectral Passband*
  - Accurate measurements even in the presence of other wavelengths
  - 1490 nm (1480 to 1500 nm)
  - 1577 nm (1572 to 1582 nm)
- Display resolution: 0.1 dB
- Absolute Accuracy: ± 0.5 dB
- Communication Interface: Contact-less QR codes
- Battery Charging Interface: Micro-USB
- Battery Operating Time: ≥75 hours (with backlight)

**Meets ITU-T and IEEE PON passband specifications*

Coexistent PON Services and Overlay Networks

Check PON service wavelengths to ensure customers are connected correctly and verify downstream levels meet threshold criteria.



Test Result Saving and Transfer

A unique QR code method is used to save and transfer measurement results from the FX41xT power meter. Simply scan the QR code and process the test data directly on your mobile device. The NoApp™ feature eliminates the need to download specialized Android or iOS Apps to your mobile device – the QR code embeds all the necessary reporting, commenting, sharing, and uploading.*

VeSion 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 QR code test reporting function, this back-office application reduces customer call-backs and associated truck rolls, maximizing workforce efficiency and lowering operational costs.

**Patent pending*

Optical Specifications[1]

FX41xT PON-T Power Meter	
Calibrated Wavelengths (nm)	1490/1577
Continuous Data Measurement Range (dBm) - OLT - 1490 nm - 1577 nm	 -45 to +13 -45 to +13
Spectral Passband (nm)[2] - 1490 - 1577	 1480 to 1500 1572 to 1582
Isolation (dB) -1490 and 1577	 40
Power Measurement Accuracy, (dB)[3,4]	±0.5
Return Loss (dB)	40
Linearity (dB)	±0.11
Display Resolution (dB)	0.1
Display Result View	dBm and Pass/Fail (user defined thresholds)
Connector Interface (with dust cap protection)	Fixed SC/APC
Visual Fault Locator (VFL) (Optional)	
Emitter Type	Laser
Wavelength (nm)	655 nm ±5 nm
Output Power (mW)[2]	1 mW
Laser Safety	Class 2
Modulation	CW, 1 Hz, 2 Hz
Connector Type[5]	Universal 2.5 mm
Broadband Optical Power Meter (Optional)	
Wavelength Range (nm)	800 to 1700
Calibrated Wavelengths (nm)	1310/1490/1550/1625/1650 Optional - CWDM ITU-T 694.2 Grid
Detector Type	InGaAs
Measurement Range (dBm)	-50 to +25
Power Accuracy, % (dB)	±5 (±0.22)
Linearity, % (dB)	±2.5 (±0.11)
Display Resolution (dB)	0.1
Tone Detection (Hz)	270/330/1000/2000
Measurement Units	dBm, dB or Watt
Wave ID (Auto λ Detection)	Compatible with VeEX Light Sources only
Optical Adapters (Interchangeable)	SC, LC, FC, ST, Universal 2.5 or Universal 1.25 ferrule

Notes

1. At room temperature
2. FWHM (typical)
3. Calibration conditions (-10 dBm)
4. Typical value
5. 2.5 mm to 1.25 mm FC to LC converter available

Ordering Information

P/N	Description
Z06-99-255P	FX41xT PON Terminated Power Meter, 1G/10G - 1490/1577 nm with VFL
Z06-99-256P	FX41xT PON Terminated Power Meter, 1G/10G - 1490/1577 nm with High Power OPM, +25dBm to -50 dBm

General Specifications

Size:	129 x 61 x 38 mm (H x W x D)	Storage:	>2000 Single wavelength results >1000 Dual wavelength results
Weight:	200 g (0.44 lbs.) (including batteries)		
Construction:	Rugged, Polycarbonate chassis, 1 meter drop tested	Display:	High contrast, transflective LCD with backlight
Battery:	Two Alkaline AA or Rechargeable NiMH, 2150 mAH	Operating Temp:	-10 °C to +50 °C
		Storage Temp:	-20 °C to +70 °C
Power Supply:	Micro USB interface, 5 VDC charger	Humidity:	0% to 95%, non-condensing
Connectivity:	Micro USB		

Complementary Products for PON Verification and Troubleshooting

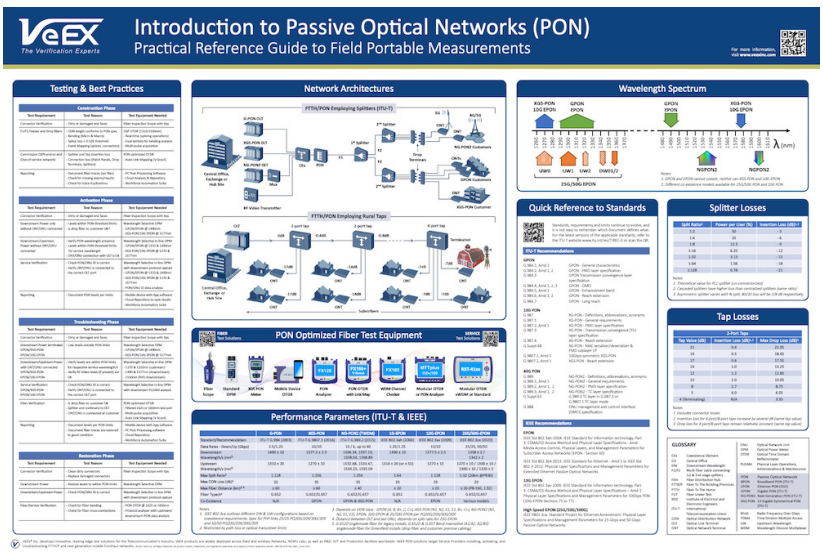
FL150 FaultScout® Multimeter

FL41 Optical Fault Locator

FX150+ PON OTDR

FX120 PON Analyzer

PON Technology Poster



VeEX Inc.
2827 Lakeview Court
Fremont, CA 94538 USA
Tel: +1.510.651.0500
Fax: +1.510.651.0505
www.veexinc.com
customercare@veexinc.com

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