



GPON Doctor 4k7 is a complete and autonomous solution: composed of GPON data capture hardware, a high-performance chassis/equipment, and analysis and evaluation software for the captured data.

Datasheet

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GPON Doctor 4k7 FTTH GPON protocol analyzer

Standalone, portable and rugged FTTH GPON protocol analyser. GPON Doctor 4k7 is a professional tool for troubleshooting, monitoring and debugging a GPON-based Fibre to the Home network. It is the perfect companion for on-site FTTH troubleshooting related to GPON protocol or IP service delivery.

1. General

- Fundamental tool for GPON networks optimum deployment
- Events and deviations Diagnosis and Analysis
- Interoperability troubleshooting
- Multi-vendors equipment coexisting in access network
- Analysis of user traffic within the GPON Networks
- Network state and all its active elements (OLT/ONTs)
- Automatic calibration
- Adaptive synchronization

Automatic behavior

- Capture
- Analysis
- Evaluation
- Reporting

2. Operation

2.1 Real Time Captures

- Inference of PON topology: ONU IDs, GEM ports
- Real-time detection of activity on GEM ports
- Capture and interpretation (C & I) of PLOAM messages
- C & I of OMCI messages
- C & I of Bandwidth Maps for ONT discovery
- C & I of Bandwidth Maps for bandwidth allocation on operation
- Real time capture mode
- Background capture mode
- Scheduled capture mode
- Messages color scheme
- Visualization and analysis of the capture
- Capture exportable to CBIN5 format
- Capture exportable to XML format
- Powerful filtering system
- Visualization
- Capture analysis

2.2 Analysis engine

PON characterization

- Topology
- PON parameters

ONU status

- ID, timing parameters

- Keys negotiated
- Operation status
- Alloc-IDs and GEM ports

Features

- List of discovered OMCI entities.
- Interpretation of their attributes and values
- Generation of accurate E/R diagrams
- TU-T G.988 reference integrated
- Quick access to the entity's definition
- Evaluation of conformity with ITU-T G.984
- Evaluation of conformity with ITU-T G.988
- Generation of a list of specification violations of ITU-T G.984
- Generation of a list of specification violations of ITU-T G.988
- Characterization of type and level of violations discovered
- Direct access to the messages of the entities
- Nonconformities presenting
- Exportable analysis in HTML format

3. User traffic extraction

- Extraction of user traffic
- Six simultaneous GPON
- Virtual Ethernet interface over USB 3.0

3.1 Bandwidth monitor

- Bandwidth used per port
- Bandwidth assigned per Alloc-ID
- Bandwidth utilized per ONU
- Real-time graphical visualization
- Exportable to CSV

3.2 Link integrity monitor

- Upstream FEC errors monitor
- Downstream FEC errors monitor
- Real-time graphical visualization
- Exportable to CSV

3.3 Automation

- Integrated CLI for remote operation
- Integration into automated certification
- Verification workflows
- Protocol: Telnet
- Configurable port

3.4 Interfaces

- USB 3.0
- SFP GPON ONT SC/PC TX 1310 nm / RX 1490 nm B+ (2.5Gbps)
- SFP GPON OLT SC/UPC TX 1490 nm / RX1310 nm (1.25Gbps)

4. Platform Requirements

- USB 3.0 Interface
- Windows Operating System

Accessories included

- Extraction splitter
- Optical modules
- Attenuators 4, 8 and 15 dB
- SC/UPC-SCAPC patch cords

4.1 Ergonomics

- Carrying case with accessories 1.5kg

Dimensions:

- 210mm x 160mm x 30mm without SFP's
- 230mm x 160mm x 30mm with SFP's

Weight

- Appliance weight: <1 kg

