



ParaScope Ethernet

- Handheld Ethernet Testers for 1GE/10GE/SDH/SONET/OTN/Fibre Channel



Benefits

- Accurate and Reliable Test and Measurement
- Comprehensive Ethernet and IP Testing Capabilities
- Easy to Learn and Operate
- Low Cost of Ownership
- Easy Expansion of Features (Future Proof)
- Hands Free Upgrade
- Multi-Testing Capability
 - 10M ~10G Ethernet
 - Fibre Channel
 - SDH/SONET/OTN : PS MTS only
- Wide Applications
 - Assurance
 - Activation/Turn Up Services
 - Cloud Computing Network Test
 - Network Installation
 - Troubleshooting & Maintenance
 - Network Performance Test & Measurement
- Ultra Portability
- Conforms to IEEE and ITU-T standards:

❖ User-friendly Graphical User Interface (GUI)

- High Resolution TFT LCD Touch Screen and Keypad
- Intuitive Menu Structure
- Easy to Operate

❖ Multi-Physical Port Support

- Copper 10/100/1000 BASE-T
- SFP 1000 BASE-SX/LX/ZX and 100 FX
- Optical 10GE SX/LX/ZX

❖ Multiple Testing Capability

- Ethernet Test (10GE WAN PHY)
- Fibre Channel Test (1x/2x, 4x- ParaScope MTS only)
- SDH/SONET/OTN : ParaScope MTS only

❖ Standard Features

- Performance Measurement (Traffic Generation/Throughput Test)
- Q-in-Q (up to 3 VLANs)
- Packet Filtering
- IP Tools (Ping, DHCP, Trace Route)
- Real Time In-Line Monitoring
- Ethernet OAM/Loopback (Layer 1/2/3/4)
- Framed Bit Error Rate Test (BERT)
- RFC 2544 (Network Equipment Benchmarking Test)
- Cable Faults Measurement
- Remote Operation
- File Management
- Reporting (ASCII, CSV, and PDF)
- System Tools

❖ Optional Features

- Packet Capture and Analyzer
- Packet Flooding (VLAN/L2/L3/L4)
- 32 Multi-Streams
- L1/Unframed BERT
- Network Discovery
- Monitor Auto negotiation (for Optic 1GE port)
- 10G WAN PHY (for 10GE)
- Fibre Channel (1x/2x, 4x-ParaScope MTS only)
- PBB (Mac-in-Mac)
- Y.1564
- SyncE and IEEE1588v2(PTP) : ParaScope MTS only
- IPv6

❖ Applications

- Network Assurance, Activation, and Installation
- Network Performance Test and Measurement
- Network Troubleshooting and Maintenance
- Cloud Computing Network Test

❖ Ultra Lightweight

- 1.3Kg (0.3Kg with Battery)
- Battery Life: Up to 4 Hours in Operation, 8 Hours in Standby



ParaScope Ethernet

- Handheld Ethernet Tester

ParaScope MTS – All-in-one Tester Ethernet/SDH/SONET/OTN/Fibre Channel

❖ OTN Features

- OTU-2F(11.317Gbps)
- OTU-1F(11.270Gbps)
- OTU-2E(11.095Gbps)
- OTU-1E(11.049Gbps)
- OTU-2(10.7Gbps)
- OTU-1(2.66Gbps)

❖ Mapping/De-mapping Features(Q1/2012)

- 1.ODU-1 to ODU-2
- 2.ODU-0 to ODU-2
- 3.ODU-0 to ODU-1

- Full overhead access/manipulation
- Rx Overhead Byte Capture
- Tx Overhead byte sequence generation
- Line thru/Intrusive thru mode
- Programmable Error/Alarm generation include TCM
- Error/Alarm detection include TCM
- SDT(Service Disruption Time) Measurement
- RTD(Round Trip Delay) Measurement

❖ Capable of all above listed Ethernet features

❖ SDH(SONET) Features

- Terminated/Line thru/Intrusive thru mode
- High-order mapping include ACAT
- Low-order mappings:
- Full Overhead Manipulation and Monitoring
- Rx Overhead Byte Capture
- Tx Overhead byte sequence generation
- Alarm/Error Generation and Monitoring
- Programmable Error/Alarm Generation
- Pointer Generation and Monitoring/Capturing
- Tandem Connection Monitoring
- Performance Monitoring
- Service Disruption Time (SDT) Measurement
- Round Trip Delay

❖ Fibre Channel Features

- 1x / 2x / 4x

Models and Port Configurations

❖ ParaScope MTS (multi-function test set)

- 1 Copper 10/100/1000 BASE-T
- 1 XFP : 9.6G - 11.1G
- 1 SFP : 155M - 4.25G
- 1 Bantam (Rx) : BITS Clock in
- 1 SMA (Tx) : Tx reference Clock Out

❖ ParaScope 10GE-2

- 2 Optical 10GE SX/LX/ZX

❖ ParaScope 10GE-3

- 1 Optical 10GE SX/LX/ZX
- 2 Optical SFP, 1000 BASE-SX/LX/ZX, 100 FX
- 2 Copper 10/100/1000 BASE-T

❖ ParaScope 10GE-1

- 1 Optical 10GE SX/LX/ZX

❖ ParaScope 1GE-2

- 2 Optical SFP 1000BASE-SX/LX/ZX, 100 FX
- 2 Copper 10/100/1000 BASE-T

❖ ParaScope 1GE-1

- 1 Optical SFP 1000BASE-SX/LX/ZX, 100 FX
- 1 Copper 10/100/1000 BASE-T

Hardware Specifications

❖ **Dimension:** 172.5 (W) x 227 (H) x 58.5 (D) mm

❖ **Weight:** 1.0Kg (Chassis), 0.3Kg (Battery)

❖ **Operating Temperature :** -10°C to 50°C

❖ **Storage Temperature:** -20°C to 70°C

❖ **Humidity:** 5% to 95% non-condensing

❖ **Display:** Color TFT LCD, Touch Screen

❖ **Power:** DC 14V ~ 21V

❖ **Battery:** Standard Li-Ion Battery
(More than 4 Hours Under Typical Operational Usage, 8 Hours Standby)

❖ **Internal Storage:** 2GB SD card