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Mobile Backhaul Installation and Verification

MT1100A Network Master Flex



Synchronous Ethernet is an essential technology in Mobile Backhaul networks and faults in Synchronous Ethernet seriously jeopardize the performance of mobile networks and can cause system downtime. Consequently, mobile operators need a test tool to verify the correct functioning of Synchronous Ethernet. The Synchronous Ethernet test function of the Network Master Flex MT1100A supports comprehensive testing and analysis of both Synchronous Ethernet technologies: SyncE (ITU-T G.826x), and PTP (IEEE 1588 v2). The user can quickly identify problems at all levels in Synchronous Ethernet, solving issues quickly, reducing system downtime and customer churn, and improving operating expenses for mobile operators. The MT1100A is ideally suited to supporting the current evolution in Mobile Backhaul networks requiring engineers to test from legacy technologies to 10 Gbps.

The all-in-one MT1100A supports all the latest communications network technologies. Selecting and installing up to two modules from a range of three module options supports all-in-one R&D, manufacturing, installation and maintenance tests of network and transport equipment operating at bit rates from 1.5 Mbps to 100 Gbps. The large, 12.1-inch color LCD touch panel with easy-to-use GUI plus remote operation of a full range of test functions over an Internet connection greatly improves test efficiency and helps cut costs.





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|--------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Key Platform Benefits and Features: | Key Mobile Backhaul Benefits and Features: |
| All-in-one transport tester | • Test and analysis of Synchronous Ethernet: (up to 10 Gbps) |
| Supports testing from 1.5 Mbps to 100 Gbps | ○ SyncE (ITU-T G.826x) |
| OTN, Ethernet, CPRI/OBSAI, Fibre Channel, | ○ PTP (IEEE 1588 v2) |
| SDH/SONET and PDH/DSn | G.8265.1 and IEEE 1588 v2 profile for telecommunication |
| OTN testing with Ethernet, CPRI, Fibre Channel, | Synchronous Ethernet run together with normal Ethernet |
| SDH/SONET client signals | functions including: (up to 10 Gbps) |
| Easy and intuitive GUI | Ethernet tests at 10 Gbps, 1 Gbps, 100 Mbps and 10 Mbps |
| Up to 4 ports at all rates | Ethernet Service Activation Test (Y.1564) |
| • Electrical interfaces of CAUI, XLAUI using optional extenders | Automated RFC 2544 tests of Throughput, Frame Loss, |
| WLAN*/Bluetooth*/LAN connectivity | Latency or Packet Jitter, Burstability |
| • PDF, CSV and XML report generation for documenting test | BER tests – include Frame Loss and Sequence Error tests |
| results | Service disruption measurements |
| Remote operation using VNC or dedicated GUI operation | Event log |
| software via Ethernet, WLAN | Fiber end face inspection using VIP |
| Remote control (scripting, via Ethernet, WLAN, GPIB) | |
| Portable design for maximum portability | |

- Modular platform ensuring maximum return on investment
- *: Available for certified countries and regions including USA, Canada, Japan and all EU countries.

| Port 2:1 | | Application Selector | | | | | | | Result File Browser | | | 111 |
|-----------------------|-------------------------|-------------------------------|---------------------|------------------------------|---------|-----------------------------------|---------------------------------|--------|----------------------|-------------|---------------|------|
| - | | ings Synce III | E 1588V2 OAM | - Chur | | 2014-10-31 16:33 | | | 00 00 50 | | , | |
| Port WAN | Stream Answer: | | e 1588v2 OAM off | Filter Off | | Summary | | | DAM Log | | Statistics II | |
| Local Clock | - | Wall Clock | | Link Speed | 8 | Total | Ethernet - IEEE | 1588v2 | | V SI prefix | | 1 |
| State: | SLAVE | UTC | N/A | Duplex: FDX | | 126.0221 | | | | ort 2.5 | | |
| offset | 4 ns | Current 2014 | 4-10-31707-27-04 | Ethernet Traffic | | Back 2014-10-31 16-33-28 | Offset Stat. | Min. | Max. | Aug. | | |
| ean path delay | 139 ns | Contraction of the second | | O MPLS frame | 2 | 2014-10-31 | Offset | | -20 ns | 4 ns | -8 ns | |
| nc timeout | | UTC offset | N/A | O MPLS-TP frame | 0 | 16 33 33 | Absolute offset | | 0 ms | 20 ns | 8 ns | |
| arent Clock entity | 00 00 00 FF FE 00 00 02 | Grandmaster Clock | 00 FF FE 00 00 02 | O VLAN frame | | 2014-10-31 16:33:38 | Deviation | | -12 ns | 11 ns | 0 ns | |
| rt number | 1 | Class | 100 | SyncE IEEE 1588v2 | Ē. | 2014-10-31 16-33-43 | Offset Variance | Mn. | Max | Avg | | |
| oreign Master | | Accuracy Use | r defined (0x0) | OH Capture | | 2014-10-31 16-33:48 | Offset variance | PHIL. | 8.82E-17 | 1156-15 | 4.75E-16 | |
| rt number | 10.02 | Variance ann/est 1.00E- | 12 / 5.61E-17 | CIAM | × | | Consec variance | | 0.02017 | 115015 | 4.730-10 | |
| nounce count | 262 | Priority 1/2 | 0 / 0 | Frame Capture Transceiver | | Current 2014-10-31 16-34-12 | Mean Path Delay | Min. | Max. | Avg | 1 | - |
| 📑 ЕТН-ВЕЯ | T SET | UP TEST RESULT | | V 💽 🗩 🌒 18 25 | | | H-BERT | SETU | P TEST RES | | V 💽 🗩 📢 16 | 1:34 |
| 4 | ETH-BERT Port-2:1 | ETH-BERT Port-2:2 Idlie | | • | | | ETH-BERT Port-2:1 Testing | | ETH-BERT Port-2:2 | | | |

Easy overview of the IEEE 1588 v2 status

Comprehensive IEEE 1588 v2 statistics

Test Modules:

- 10G Multirate Module MU110010A
 - Up to 2 ports: 1.5 Mbps to 10 Gbps (SFP/SFP+, RJ45, BNC, RJ48, Bantam)



- *: MU110010A supports Synchronous Ethernet. (up to 10 Gbps)
- 100G Multirate Module MU110011A Single port: 40 Gbps (CFP) or 100 Gbps (CFP) Up to 2 ports: 10 Mbps to 40 Gbps (QSFP+, SFP/SFP+, RJ45)



*: MU110011A supports Synchronous Ethernet. (up to 10 Gbps)

• 40/100G Module MU110012A

Up to 2 ports: 40 Gbps to 100 Gbps (CXP, QSFP+)

| Annitsa MUTTOREA 4010 | OG Module CFP2 | the second s | COLUMN TWO IS NOT THE OWNER. |
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