

400G Tests

400G Transport Quality Tests using 4 x 100G Client Signals

MT1100A
Network Master Flex

MU100010A
10G Multirate Module
MU100011A
100G Multirate Module
MU100012A
40/100G Module CFP2



The rapid explosion in mobile data services, video streaming, and cloud computing is forcing today's Core and Metro communications networks to meet the need for more bandwidth by increasing deployment of 100G Ethernet and OTN. But the ever-increasing need for more speed is also driving active R&D into new 400G technologies. These high-bit-rate networks require particularly high reliability due to the huge transmitted data volumes and diversity of client signals.

Anritsu has developed its new MT1100A Network Master Flex as the ideal all-in-one transport tester supporting testing and evaluation of future high-speed networks.

Introduction

Network services are evolving rapidly due to demand for higher speeds caused by the popularity of smartphone and video streaming as well as the changing business paradigm driven by cloud computing. To support this explosion of network traffic volumes, Core and Metro networks are deploying wider bandwidth technologies supporting faster communications speeds such as 100 GigE and OTN, and demand for even higher future speeds is increasing expectations for 400G network rollouts.



Fig. 1. Network Speed-up

Applications

Although testing and development of 400G interfaces is now underway, commercial 400G services require both development of 400G interfaces and manufacturing of network equipment. Client signal tests making full use of the 400G band are ideal for testing and evaluating network equipment; with four built-in 100G ports, the all-in-one MT1100A is the ideal tester for supporting performance tests using 4 x 100G client signals.

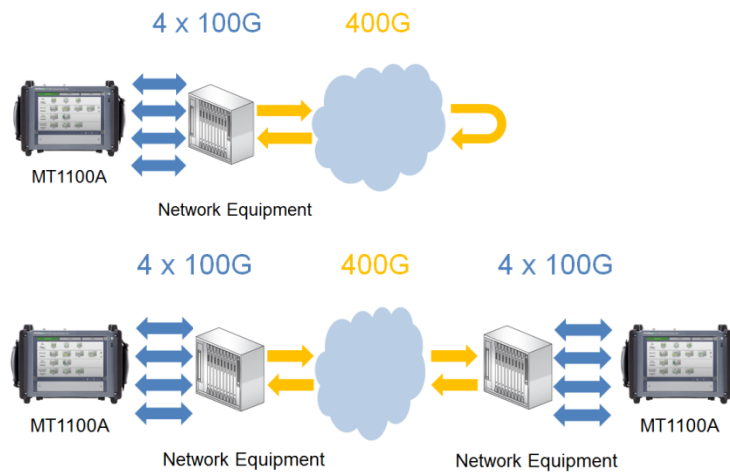


Fig. 2. 4 x 100G Client Signal Test

Measurement Examples

The MT1100A can generate and monitor 100G Ethernet Frames at four ports simultaneously and displays any errors at the ports using easy to confirm color indications.

Color Indications



Fig. 3. Ethernet BERT Measurement

Key Ethernet measurements such as Frame Loss, Latency, Jitter, Throughput, etc., are easy to measure and generation of up to 16 streams per port support confirmation of priority control using QoS.

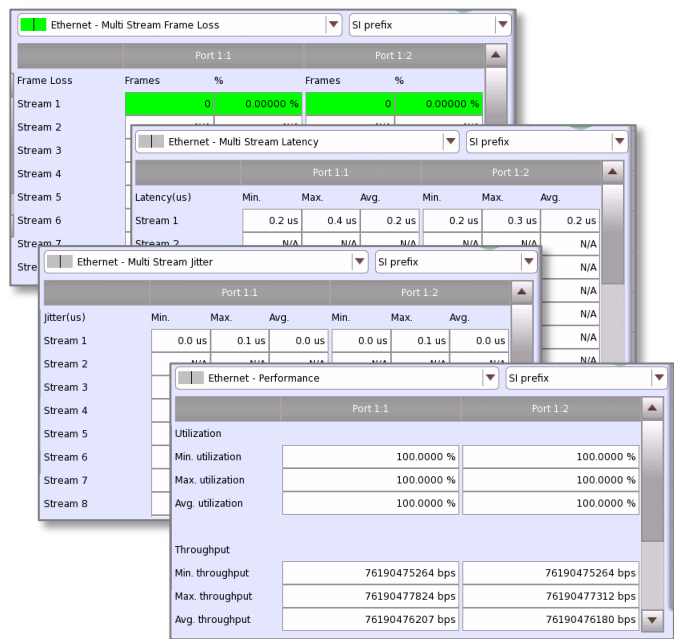


Fig. 4. Ethernet Measurements (Frame Loss, Latency, Jitter, Throughput)

The MT1100A can simultaneously generate and monitor 100G OTN (OTU4) frames at each of four ports as well as perform BER measurements using PRBS and alarm monitoring. Mapping Ethernet signals onto OTN supports Ethernet over OTN tests.

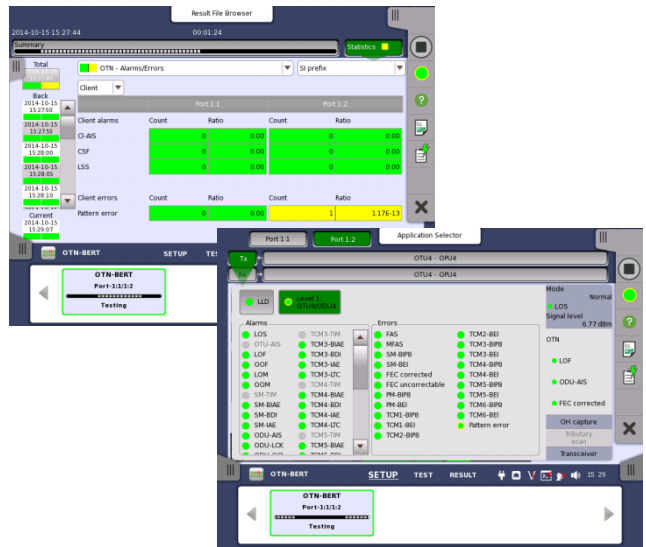


Fig. 5. OTN Measurements (BER, Alarm Monitoring)

Product Features

- Four all-in-one 100G ports (4 x 100G Client Signal Tests)
- 100G Ethernet and OUT4 support
- Ethernet, BERT, Frame Loss, Latency, Jitter, and Throughput tests
- OTN BER Tests, and OTN alarm monitoring
- OTN Tests with Ethernet client signals
- Responsive troubleshooting using color indications

Summary

The MT1100A is the ideal platform for testing and evaluating 400G network devices using 4 x 100G client signal tests over the full 400G bandwidth. It has been designed to play a key role in quality assurance of continually evolving and expanding high-speed networks.

Ordering Information

Mainframe	
MT1100A	Network Master Flex
Test Modules	
MU110012A (2 pcs)	40/100G Module CFP2
Power Supply Module	
MU110002A	AC only High Power Supply Module
Options	
MU110012A-016 (2pcs)	Ethernet 100G Dual Channel
MU110012A-056 (2pcs)	OTN 100G Dual Channel

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