DEVISER

TC702/TC712
1Gbps/10Gbps Ethernet Tester

Key Benefits

- 7" (800X480) color LCD touch screen
- Complete activating, verifying & fault diagnosing Ethernet service from 10Mbit/s to 1/10Gbit/s rapidly & easily
- Smooth, intuitive user interface
- Integrates multiple tools and functions needed for field measurement - at superior cost-performance
- Professional data report generation
- Unique memory function saves and loads multiple measurement configurations
- Chargeable lithium battery, offers 3.5hrs continuous operation (8hrs idle)
- FC-1 modular platform can be upgraded with additional test functions

Main Functions

Measurement Standard:
- RFC 2544
- Y.1564
- IEEE802.3ah
- EtherBERT

Measurement Analysis Functions:
- Device Discovery & Smart Loopback
- Stream Generation & Detection
- Alarming Detection
- Throuth Mode
- Flow Analysis & Statistic Function

App Functions:
- Optical Power Measurement
- IP Tools
- VLAN Support
- IEEE802.3OAM Support
- IPv6 Support
- MPLS Support
- SyncE(Option)
- IEEE1588v2 Support
- Dual-Port
- Cable Diagnosis

Product Overview

New from Deviser, the TC702/TC712 Ethernet Tester supports telecommunications Ethernet testing from 1Gbps (TC702) to 10Gbps (TC712). With Deviser's FC-1 modular platform, this instrument can be custom-configured with numerous test functions and communication protocols to satisfy a variety of measurement needs. It also shares compatibility with the AE4000 Series OTDR, the AE8100 Series optical spectrum analyzer, and other test modules - creating a comprehensive testing solution for technicians of any field.

TC702R/TC712R Module

The TC702R/TC712R Ethernet measurement modules are specially designed for Ethernet network maintenance and integrative measurements, meeting 1/10Gbps standards respectively. This user-friendly, flexible, and high-efficiency measurement suite is ideal for making reliable IPRAN measurements and fulfilling the SLA.
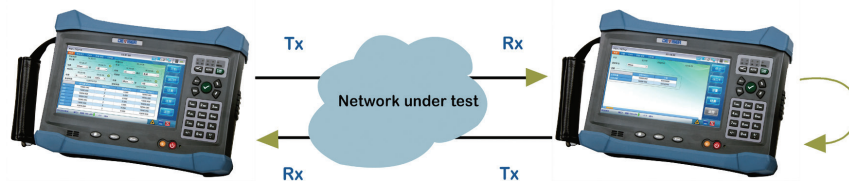
TC702/TC712 Series Ethernet Tester Application Schematic

Multiple Applications

The TC702/TC712 Series 1/10Gbps Ethernet Tester simplifies any Ethernet measurement task, including performance evaluation by service operators; metro region Ethernet/mobile backhaul; installing, activating and maintaining networks; planning of point-to-point joining-up services; online fault diagnosis for real-time information flow; and more. Optionally, it can also provide measurement support for IPRAN/PTN networks.
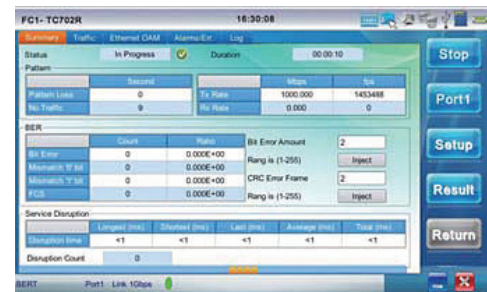
Functional Characteristics

Supports multiple Ethernet measurement standards – fulfills users' needs comprehensively

RFC 2544 Measurement Interface

EtherBERT Measurement Interface

RFC 2544 Measurement
- Thoughput/latency/frame loss/back-to-back test
- Set frame size to RFC definition or a custom value
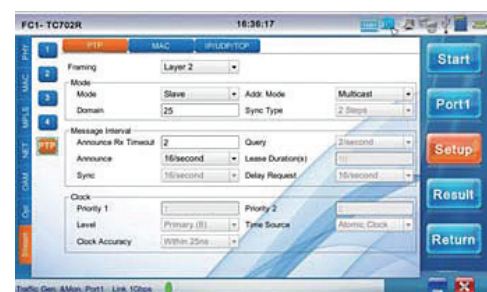
EtherBERT Measurement
- Support up to 4-layer BER measurement
- Support pattern measurement, user defined pattern, reversal pattern measurement
- Support error code measurement; insert error code at any time
- Support service disrupt statistic

Y.1564 Service Measurement Interface

IEEE 1588v2 Service Function Interface

Y.1564 Configuration Measurement
- Configure up to 10 service streams to choose service overview (such as audio, video and data) for different services
- Service configuration measurement: 0-CIR\CIR-EIR\ overshoots measurement
- Service performance measurement: KPI concerned in packet transmission would be obtained through long time measurement in CIR speed to describe the QoS of the network, including frame delay\frame jitter\frame loss rate\ frame out of sequence

IEEE 1588 Measurement
- Meet IEEE 1588v2 standard, support Master & Slave mode
- Handshake protocol message monitoring, time recovery function simulation

Total Ethernet analysis – manage network conditions and rapidly clear faults

Traffic Generation & Monitoring Interface
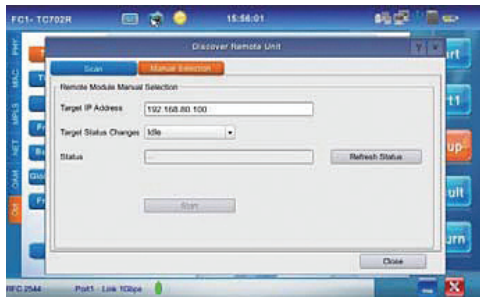
Traffic Generation & Monitoring

Generate a data flow, detect Ethernet and IP data flows, and classify statistics according to different conditions. Generate and monitor up to 10 data flows, then configure and analyze them in packets of variable size.

Device Discovery & Smart Loopback Interface
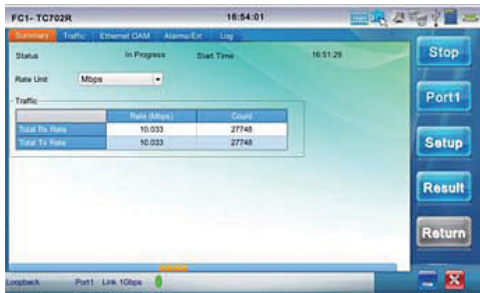
Device Discovery & Smart Loopback

Discover devices in the network intelligently, and automatically synchronize remote devices for Loopback Test. No need for human operators on the far end - meaning optimum efficiency.

Loopback Test Interface

Loopback Test

Support L1\L2\L3\L4 layer loopback test and transparent loopback.

Flow Analysis & Statistic Function Interface

Flow Analysis & Statistic Function

Count send/receive status for unicast, non-unicast, multicast, and broadcast frames, as well as received cast size.

Alarm Detection Interface

Alarm Detection

Support analysis & statistic of link down, LOS, frequency offset, symbol error, FCS error, alignment error, jabber error, runt error and undersize error.
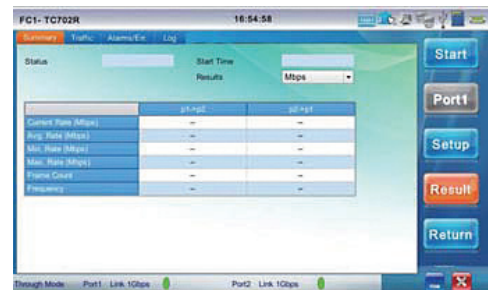

Through Mode Interface

Through Mode

Features online fault diagnosis for real-time data streams between users and service providers over the network.

VLAN Support Interface

Key Functions

- Optical Power Measurement
- IP tools: ping, trace route
- IP RAN Network Measurement
- Ethernet OAM Measurement
- FTP/HTTP Download Measurement
- SyncE Support(Option)
- IEEE1588v2 Support

- Cable Diagnosis Test
- Max. 3-layer VLAN for all items measurement
- Measurement of all items for up to 3 layers MPLS
- Network layer agreement application measurement directed at version IPv6
- Full dual-port measurement (allows 2 ports to conduct measurements independently)

Specifications

Optical Port						
TC702 port: SFP port x 2 TC712 port: SFP port x 2, SFP+ port x 1, support 1GigE 10GigE						
	TC702/TC712			TC712		
	1000Base-SX	1000Base-LX	1000Base-ZX	10GBase-SR	10GBase-LR	10GBase-ER
Available Wavelength	850nm, 1310nm & 1550nm					
Wavelength (nm)	850	1310	1550	850	1310	1550
Tx Level (dBm)	-9 ~ -3	-9 ~ -3	0 ~ +5	-9.5 ~ -1	-8.2 ~ +0.5	-4.7 ~ +4.0
Rx Level Sensitivity (dBm)	-20	-22	-22	-11.1	-12.6	-14.4
Transmission Distance	550m	10Km	80Km	550m	10Km	80Km
Transmission Bit Rate (Gbit/s)	1.25			10.3125		
Receiving Bit Rate (Gbit/s)	1.25			10.3125		
Tx Working Wavelength Range (nm)	830 ~ 860	1270 ~ 1360	1540 ~ 1570	840 ~ 860	1260 ~ 1355	1530 ~ 1565
Measurement Accuracy						
Frequency (ppm)	±4.6			±4.6		
Optical Power (dB)	±2			±2		
Jitter Compliance	IEEE802.3			IEEE802.3		
Ethernet Type	IEEE802.3			IEEE802.3		
Connector	LC			LC		
Transceiver Type	SFP			SFP+		

Electrical Port		
2 ports: 10/100/1000 Base-T Full duplex		
Auto/manually detecting straight-through/cross cable		
	10Base-T	100Base-TX	1000Base-T
Tx Bit Rate	10Mbit/s	100Mbit/s	1Gbit/s
Tx Accuracy (ppm)	±4.6	±4.6	±4.6
Rx Bit Rate	10Mbit/s	100Mbit/s	1Gbit/s
Rx Test Accuracy (ppm)	±4.6	±4.6	±4.6
Duplex Mode	Full duplex	Full duplex	Full duplex
Jitter Compliance	IEEE802.3	IEEE802.3	IEEE802.3
Connector	RJ-45	RJ-45	RJ-45
Max. Distance (m)	100	100	100

General	
Dimensions (LxWxH)	256mm x 183mm x 73mm (10.1" x 7.2" x 2.9")
Weight (with battery)	2.3kg (~4lbs)
Working Temperature	-10ºC ~50ºC
Storage Temperature	-20ºC ~70ºC
Relative Humidity	0% to 95% (non-condensation)
Working Time	>3 hrs (typical)
Charging Time	5 hrs for full charge
Language	English, Chinese