

TrendUnipro GbE

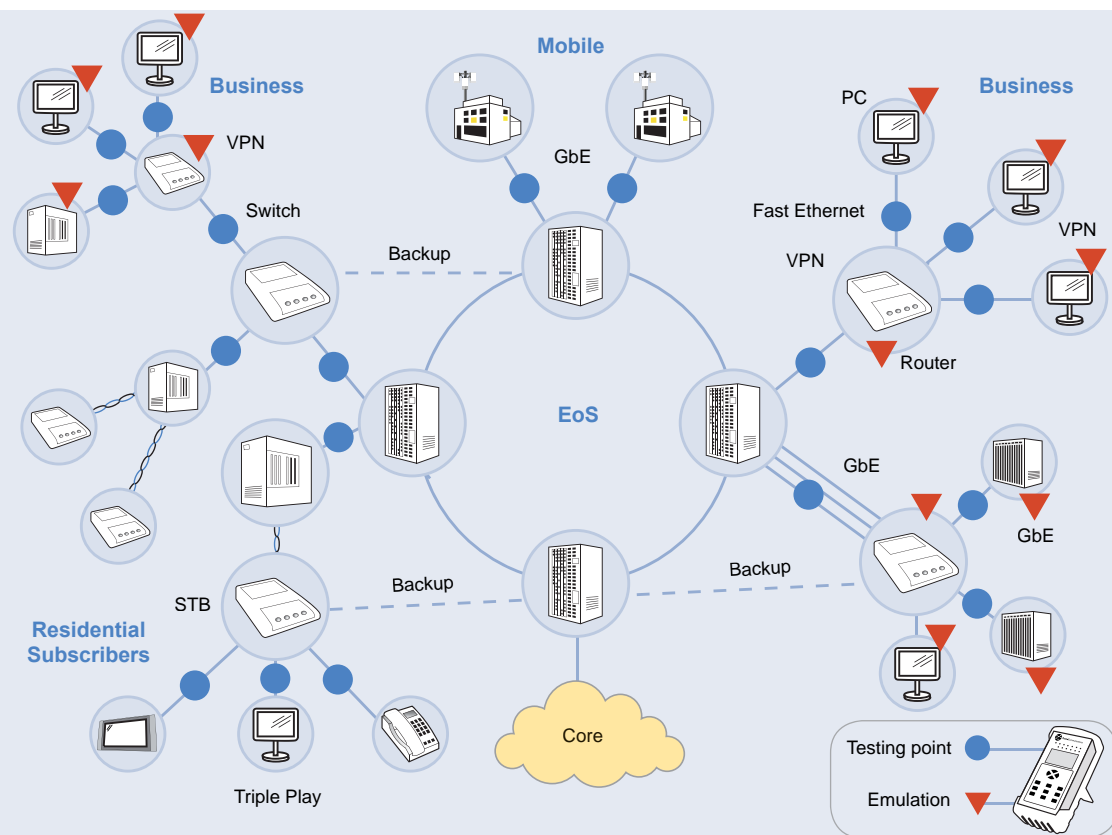
Quick and Efficient Ethernet Service Testing



Ethernet is a key technology for converged networks and multiplay services such as High-Speed Internet, IPTV and VoIP. To guarantee the quality and reliability of these services, they must be thoroughly tested. This is why Trend Communications created Trend Unipro GbE, a cost-effective test solution for IP-centric applications.

Trend Unipro GbE is an efficient field tester that combines simplicity with advanced features, supporting all the latest Ethernet and IP standards.

Trend Unipro GbE is as powerful and rugged as any laboratory test equipment, but optimised for field use and difficult conditions. The high-contrast screen and robust keypad make this tester ideal for both indoor and outdoor use.



- Bidirectional traffic monitoring by means of dual optical/electrical ports
- Network equipment acceptance in line with RFC 2544
- Statistics and error reporting for all network layers
- IPv4 and IPv6 support
- Q-in-Q (VLAN stacking) capability
- Power over Ethernet (PoE)
- Field-replaceable SFP interfaces
- Rugged design
- Long battery life
- IP ToS/DSCP configuration
- BER testing at physical, MAC and IP layers

High-Value Solution

– Spend less, make more!

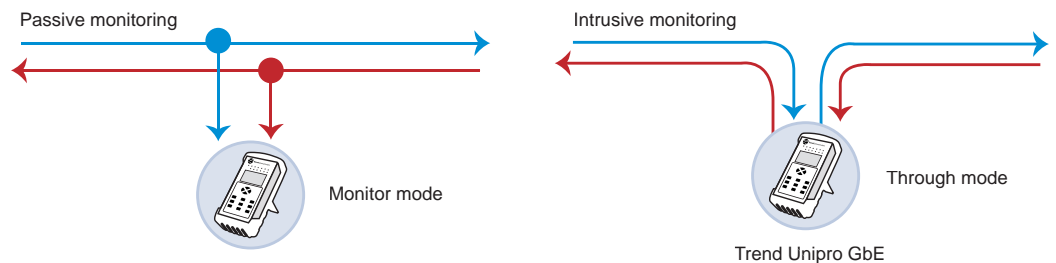


Improve Your Efficiency

Trend Unipro GbE is designed to make your everyday work easier and more productive. With a weight of only 1 kg, this tester is one of the most portable testing tools on the market.

Trend Unipro GbE is the tool of choice for busy test engineers and technicians who quickly need to resolve complex issues in both business and residential Carrier-Class Ethernet networks.

Trend Unipro GbE provides detailed statistics and error reports at physical, MAC and IP layers, supporting both Q-in-Q framing and IP datagrams.



Intelligent Loop-Back

Looping is a very common testing method. A technician may want to loop the traffic at the far end back to the tester, and analyse the signal to detect potential problems.

Trend Unipro GbE can be used in different loop-back modes. The most simple mode is the physical “wire” loop that sends all the received data back to the source without modifying it.

The layer-2 and layer-3 loop-back modes of Trend Unipro GbE swap source and destination addresses, making it easier to perform end-to-end tests in bridged and routed networks.

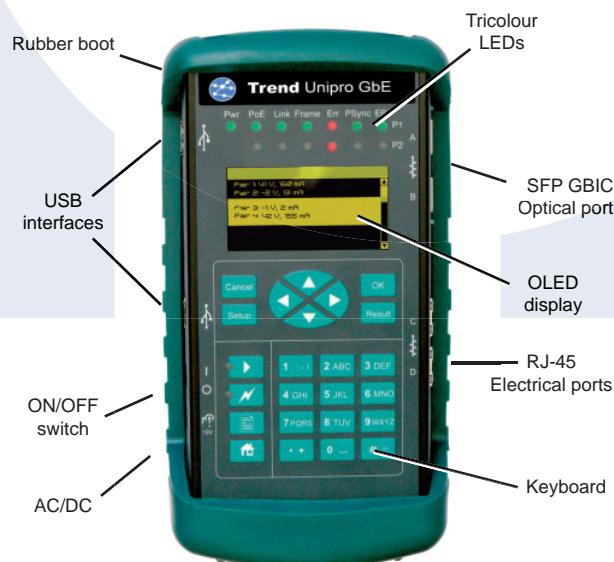
- Ping and trace route to test end-to-end connectivity
- Frame size, bandwidth and traffic composition statistics
- Loop-back at physical, MAC and IP layers
- Programmable traffic filter

Converged Networks

Trend Unipro GbE has all the features you need to effortlessly test converged networks.

The tester has two electrical RJ-45 interfaces and two optical SFP GBICs, which make bidirectional traffic monitoring really easy.

When Trend Unipro GbE is used in Through mode, it simultaneously works with two transmitters and two receivers, thus enabling intrusive monitoring. This mode is also very useful for general monitoring when no splitter is available.



Easy Troubleshooting

for Gigabit Ethernet



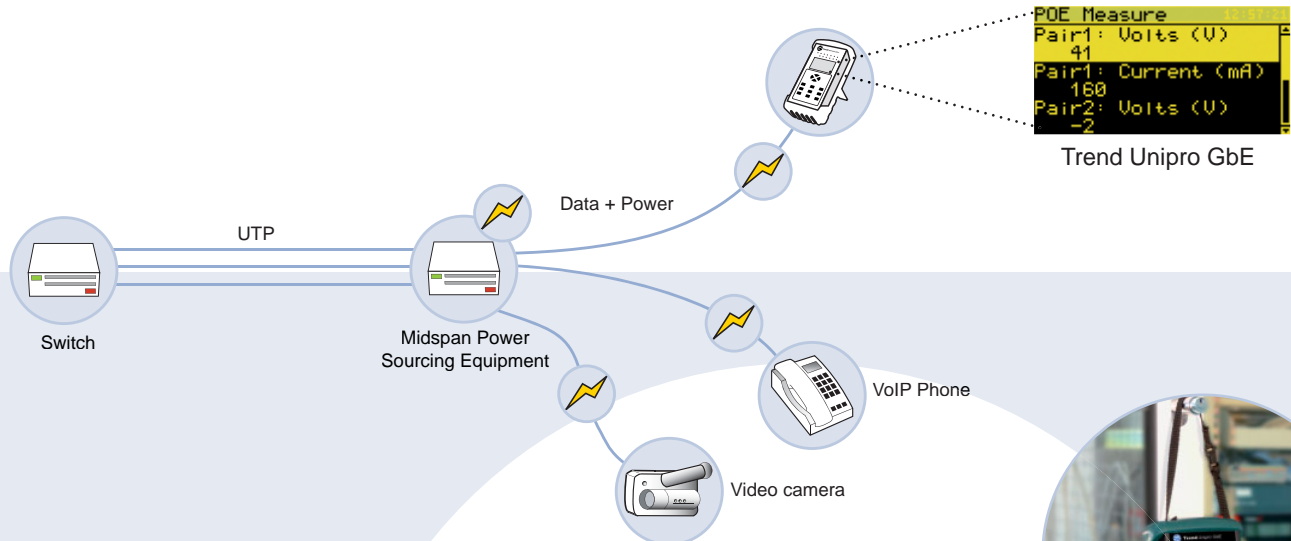
Power over Ethernet

Power over Ethernet (PoE), as defined in the IEEE 802.3af standard, enables Ethernet wires to power small portable devices such as telephones or video cameras. A Power-Sourcing Equipment (PSE) supplies power to the remote device by using standard network cabling, without disturbing data transmission.

Trend Unipro GbE first determines which pairs are transporting electrical power, and then measures the current and voltage transported by them to check if they comply with the IEEE standard. These measurements can be made in both Termination and Through mode.



Quick and easy testing
— anytime, anywhere



Increased portability

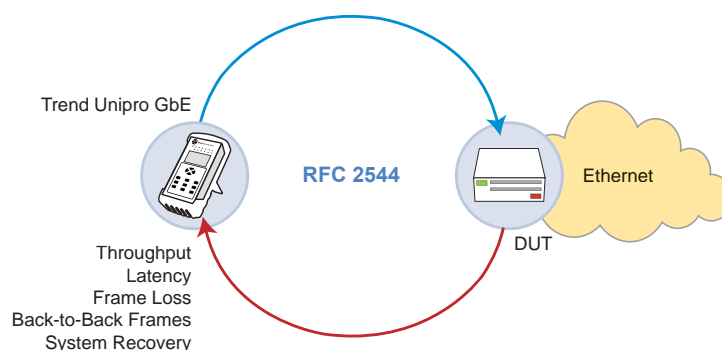
One-Button RFC 2544

Trend Unipro GbE supports RFC 2544 for the provision of Ethernet equipment and networks.

You can use the RFC 2544 test suite of Trend Unipro GbE to see if an Ethernet device achieves the performance level specified by the manufacturer. You can also check if a switch, or even the whole network operates as expected.

The RFC 2544 test is very easy to perform, thanks to the ease of use of Trend Unipro GbE: All you need is one keypress to run the test. You will instantly get basic Pass/Fail results, and detailed result tables are just a keystroke away, should you wish to get more information.

- Cable tests, including cable length estimation
- Optical power measurement
- VLAN priority in line with 802.1p



TrendUnipro GbE

Test Interfaces	Dual 100BASE-X and 1000BASE-X in SFP GBIC Dual 10BASE-T, 100BASE-T and 1000BASE-T in RJ-45
Operation Interfaces	USB 2.0 type A (master) USB 2.0 type B (slave)
Frame Formats	MAC frame, VLAN frame, Q-in-Q frame Jumbo frames IPv4 and IPv6 over Ethernet
Operation Modes	Terminate/Monitor, Pass through, Loop-back reflector
Physical Layer Tests	Cable status, Pair Length, Polarity, Swap and Skew PoE Current, Voltage and Pair information Optical Power Measurement Auto-negotiation verification
MAC Layer Tests	Frame size, bandwidth and traffic composition statistics Pause frame counts Alignment, Fragment and Jabber errors and FCS error counts Undersized, Oversized frame counts Lost and misordered frame counts
IP Layer Tests	DHCP Client DNS Support Ping and Trace Route
RFC 2544	Throughput Latency Frame loss Back-to-Back System Recovery
Traffic Generation	Configuration of: <ul style="list-style-type: none"> - Source and destination MAC addresses, frame length and payload - VLAN IDs and user priorities - Source and Destination IP addresses, ToS/DSCP, TTL, datagram length Constant, bursty and ramp traffic profiles
Functions	BERT (Physical, MAC and IP with error insertion) Loopback (Physical, MAC and IP) Filters for frame analysis
Relevant Standards	IEEE 802.3, 802.1Q, 802.1p and 802.1ad RFC 1242 and 2544
Ergonomics	Size: 120 x 200 x 50 mm Weight: 830 g (including batteries, no rubber boot), 1 kg (including batteries and rubber boot) Battery or 12V DC from mains conversion. More than 4 hours of continuous battery operation. OLED (Organic Light Emitting Diodes) graphic display 13 tricolour LEDs