VIAVI

T-BERD® 6000A with Multi-Services Application Module

A complete SATCOM testing solution

In one rugged, handheld unit, the T-BERD 6000A with the Multi-Services Application Module (MSAM) provides a full suite of testing features for turning up and troubleshooting satellite links. Whether working with an IP-based time division multiple access (TDMA) link or a serial-based frequency division multiple access (FDMA) link, the T-BERD 6000A has it covered. A powerful, yet intuitive graphical user interface (GUI) helps technicians quickly set up and evaluate tests as well as troubleshoot problems.

Ethernet, IP, TCP, and UDP Support

The T-BERD 6000A MSAM supports Layer 1 through Layer 4 (TCP and UDP) Ethernet testing from 10 kbps to 10 Gbps. Test capabilities range from verifying end-to-end connectivity to determining whether throughput, utilization, frame loss, packet jitter, and round-trip delay (RTD) characteristics meet specifications.
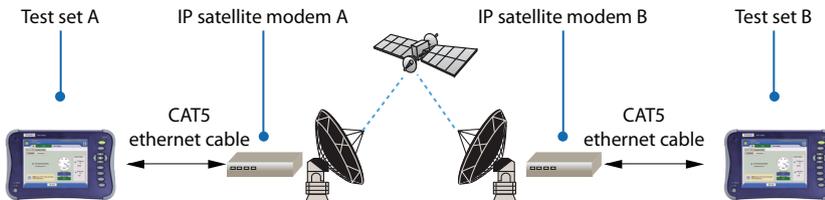
Key Features

- Serial datacom, conditioned diphase, and Ethernet/IP testing in one handheld platform
- Modular form factor enables field upgrade of test capabilities by adding or replacing modules
- Provides support for Layer 3 IP, Layer 4 TCP/UDP, CoS/QoS, and IPv6 testing
- Datacom testing for EIA530, EIA530A, RS449 (422 and 423), RS232, X.21, V.35, and V.36 serial interfaces

Applications

- Test rates from 10 Kbps to 10 G
- Tests Layer 1–4 Ethernet with RFC-2544, VLAN, Q-in-Q, VPLS, and MPLS
- Tests the higher layer protocol stack using packet capture and analysis capabilities
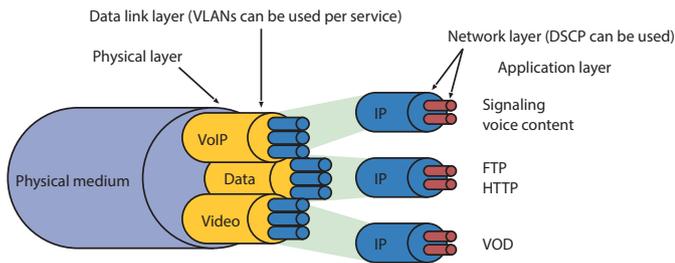- Performs BER analysis of serial datacom and conditioned diphase (CDI) circuits

Figure 1. The T-BERD 6000A MSAM provides a full suite of testing features for turning up and troubleshooting satellite links

Figure 2. Multiple data streams

Class of Service Support

Various mechanisms and tunneling technologies exist today that let providers effectively deliver voice, video, and data services simultaneously across their networks, while maintaining a specified Class of Service (CoS). In order to test these CoS prioritizations, operators can use the T-BERD 6000A Multiple Streams feature at Layers 2, 3, and 4 to generate and analyze multiple traffic streams with differing encapsulation and prioritization schemes.

Capture and Decode Option

The T-BERD 6000A Capture and Decode test option performs wire speed packet capture from 10 kbps to 10 Gbps. It provides post-capture decode analysis for the experienced technician using Wireshark directly on the test set and allows the pcap capture files to be exported for analysis by a specialist. The Capture and Decode option provides the visibility needed to solve problems such as incorrect priority provisioning, misconfigured IP addresses, Transmission Control Protocol (TCP) retransmissions, unresolved Address Resolution Protocols (ARPs), and routing issues.

IPv6 Option

IPv6 was developed as a way to address the limitations of IPv4: insufficient address space for everything over IP, complexity of address resolution, lack of data security, and lack of adequate quality of service (QoS) measurement. The T-BERD 6000 MSAM allows users to generate and analyze IPv6 traffic to ensure that the IPv6 network is configured properly.

Serial Datacom and Conditioned Diphase (CDI) Testing

Carrying on the tradition established with the FIREBERD® 6000 and 8000 platforms, the Datacom module for the T-BERD 6000A MSAM adds test functionality for verifying end-to-end circuit continuity and throughput, stressing and verifying clock recovery circuits, and verifying QoS over datacom circuits, including RS232/V.24, EIA530, EIA530A, V.35/306, RS449/V.36, X.21, MIL-188C, and MIL-188-114. The new CDI module adds support for testing diphase multiplexers and communication links.

Remote Operation, Results Storage, and File Transfer Protocol

Users can connect removable storage media to the T-BERD 6000A, facilitating the storage of test results for external reporting and analysis. Results can also be configured to print-to-file at the end of a test, at set periods during the test, or at any occurrence of an error. Users can also transfer results files from the unit via File Transfer Protocol (FTP). Customized electronic printouts are also available showing only the specified results, allowing for quick detection of hard-to-find bit error rate (BER) problems and easy interpretation of test results. Remotely control the T-BERD 6000A over an Ethernet connection using a Web browser.

Battery Operation

In keeping with the portable requirements of today's field user community, the T-BERD 6000A offers battery operation to maximize its portability, particularly in environments where AC power is unavailable or unreliable.

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