The MPEG-2 option for the CMA5000 Gigabit Ethernet test module allows users to capture and decode Ethernet frames from a network, and filter out an MPEG-2 transport stream. This MPEG-2 stream may then be fully analyzed on the unit in the field, or even played back on the CMA5000 with an MPEG-2 player such as VLC. This option allows field engineers and technicians to not only test the Ethernet network, but also the video service being delivered. The powerful MPEG-2 analysis software, powered by Triveni Digital, on the CMA5000 will completely analyze the entire video transport stream, or the MPEG-2 stream may be viewed to see issues such as loss of synchronization between video and audio or an overly pixilated video stream.

To simplify this testing in the field, the CMA5000 also supports IGMP and can perform an IGMP Join on up to six Multicast IP addresses. This capability allows the CMA5000 to analyze video streams directly from a switch or router without the need to mirror or span a port. Since VoD systems use IGMP as an essential method of maximizing bandwidth by multicasting, the ability of the CMA5000 to act as a host on an IGMP multicast system is necessary for easy, efficient MPEG-2 analysis. A router or a switch in a VoD or IPTV network sends out periodic messages to connected hosts to determine if they are a member of a multicast group. If not, that host will not receive the multicast stream. If the host is a member, it receives, or continues to receive the video stream. Through the use of IGMP, the CMA5000 can participate as a member host of a multicast group to receive and analyze the video stream without the need to mirror or span a switch port in the field greatly simplifying testing.

KEY FEATURES

- Display of 13 different transport stream errors
- Instant display of Virtual channels, elementary streams and PID’s in a stream
- Real time analysis capability
- Errors from user defined thresholds
- Percentages of audio, video and data in the stream
- Video and audio buffer graphs indicating buffer overflow or underflow
- PCR timing information including PCR jitter
- PSIP and MPEG tables
- Programs overview including Video and audio PID’s
- Approximately 5 minutes of video capture
- IGMP – Monitor
- Channel Statistics – Quickly identifies UDP ports and throughput per channel

The ability to easily and cost effectively test the quality of the video stream is essential to the successful rollout of an Ethernet based Video Transport System. Whether it is Video on Demand (VoD) or IPTV, if Gigabit Ethernet is being used as the transport protocol, the addition of MPEG-2 analysis capability to an Ethernet test set is a major benefit. In addition to testing the Throughput, Frame Loss and Latency of the Ethernet transport, the CMA5000 GigE module now offers an MPEG-2 video analysis option that enables field personnel to install, troubleshoot and verify the quality of MPEG-2 Video Transport Streams.
BENEFITS

- Full line rate Gigabit Ethernet modular test set plus MPEG-2 analysis. A single unit to cover many VoD and IPTV field test requirements.

  Options for physical layer test capability

  Measuring throughput, latency, jitter, etc. via RFC 2544

  Two 10/100/1000 electrical ports included on module

  Two optical GBIC ports included

- MPEG analysis on CMA5000

  Transport stream analysis

  Program Timing Reference

  Program table information
Anritsu Corporation has been a global provider of innovative communications solutions for more than 110 years. With the recent acquisition of NetTest and offices throughout the world, Anritsu provides solutions for existing and next-generation wired and wireless communication systems and operators. The company’s measurement solutions include wireless, optical, microwave/RF, and digital instruments, Operations Support Systems and solutions that can be used during R&D, manufacturing, installation, and maintenance. Anritsu also provides precision microwave/RF components, optical devices, and high-speed devices for design into communication products and systems. The recently combined companies sell in over 90 countries worldwide and have approx. 4,000 employees.