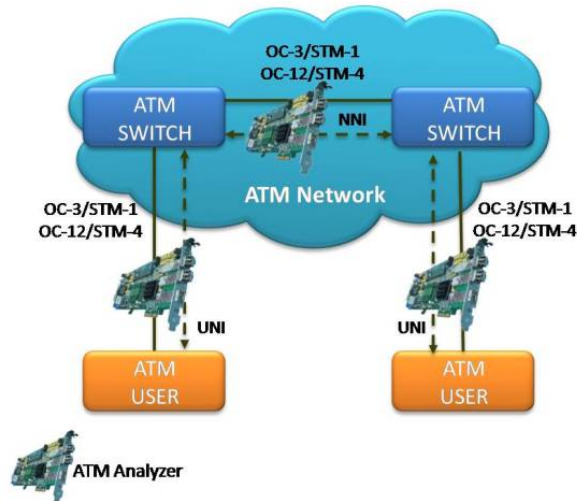


# ATM Protocol Analyzer

## for OC-3/STM-1 and OC-12/STM-4



Supports UNI 4.0, 3.1, & Q 2931 Signaling Protocols

Analysis Across UNI & NNI Interfaces

Supports SDH X<sup>43</sup>+1 Scrambling

Supports Filtering and Reassembly Options

Supports ATM, AAL2, & AAL5

Summary, Detail, Hex-dump, Statistics, & Call Detail Views

Search & Filtering Capabilities

Statistics Based on Various Protocol Fields

### Overview

Asynchronous Transfer Mode (ATM) is a flexible network protocol carrying voice, video, and data payload in fixed length cells. ATM supports different classes of service for multimedia traffic, efficient bandwidth management for burst traffic, LAN/WAN architecture and high performance using hardware switching.

GL's OC-3/STM-1 and OC-12/STM-4 ATM Analyzer is used to analyze and decode AAL2 (CPS-SDU, SSSAR-SDU, and SSCS), AAL5 (CPCS), UNI, and others across U plane and C plane of UNI and NNI interfaces.

### Main Features

- Displays Summary, Detail, Hex-Dump, Statistics, and Call Detail views.
- Summary View displays Dev #, Frame #, VPI/VCI, PT (Payload Type), OSF, AAL Type, Frame Type, CID, LI, CPI, UIU, SSSAR CID and SSCS message types, etc., in a tabular format.
- Detail View displays decodes of a user-selected frame from the Summary View.
- Hex Dump View displays raw frame data as hexadecimal and ASCII octet dump of a user-selected frame from the Summary View.
- Statistics View displays statistics based on frame count, byte count, frames/sec, bytes/sec, etc., for the entire capture data.
- Support of various UNI Signaling Protocols i.e. UNI 4.0, UNI 3.1 and UNI Q-2931.
- Call traces capability based on UNI signaling parameters, VPI/VCI etc.
- CRC verification for AAL5 carrying packet data.
- Comprehensive ATM field based hardware filtering
- Support software based search and filtering capabilities
- Capability to export Summary View details to the comma separated values (CSV) format for subsequent import into a database or spreadsheet
- Capability to export detailed decode information to an ASCII/text file.
- Captures, decodes, filters, and reassembles AAL-2 and AAL-5 frames in real-time, from within the ATM cells according to user defined VPI/VCI.
- Unscrambling of ATM cells based on SDH X<sup>43</sup> + 1 algorithm.
- Streams may be captured on selected ports
- Multiple streams of ATM traffic can be simultaneously decoded

For more details, visit our web page <http://www.gl.com/lightspeed1000-atm-protocol-analyzer.html>.



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## Summary, Detail, and Hex Dump Views

The analyzer displays Summary, Detail, Hex Dump, Statistics, and Call Detail Records views in different panes. The Summary pane displays Dev#, Frame#, Time, Length, Error, VPI/VCI, PT, etc. User can select a frame in the Summary View to analyze and decode each frame in the Detail View. The Hex Dump View displays the frame information in HEX and ASCII format.

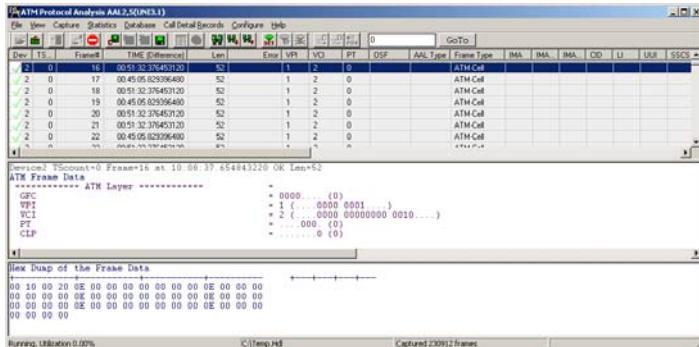


Figure: Summary, Detail, and Hex Dump Views

## Call Detail Records & Statistics View

Call trace defining important call specific parameters: Call ID, Call disposition, Call duration, VPI/VCI, and Call type (point-to-point/point-to-multipoint, etc) calculated based on UNI signaling messages are displayed in Call Detail Record view. Various statistics can be obtained for all frames based on protocol fields both in real-time as well as in the offline mode to study the performance and trend in an ATM network.

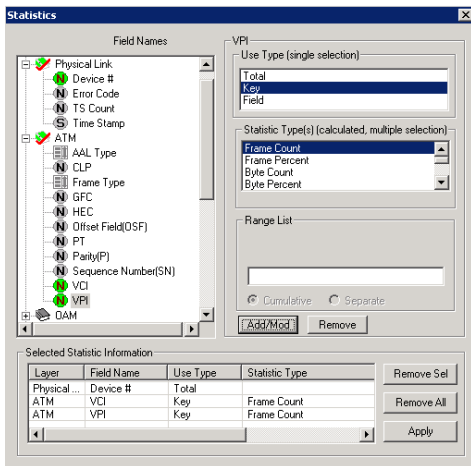


Figure: Define Statistics View

## Buyers Guide:

- [LTS204](#) – OC-3/STM-1ATM Protocol Analysis
- [LTS304](#) – OC-12/STM-4 ATM Protocol Analysis

## Related Software

- [LTS200](#) – OC-3/STM-1ATM Monitor, BERT, Tx/Rx Test, RAW
- [LTS300](#) – OC-12/STM-4 ATM Monitor, BERT, Tx/Rx Test, RAW
- [LTS202](#) – OC-3/STM-1ATM and RAW Record / Playback
- [LTS302](#) – OC-12/STM-4 ATM and RAW Record / Playback

## Related Hardware

- [LTS100](#) - Dual OC-3/STM-1 OC-12/STM-4 PCI Express Card
- [LTS105](#) - Portable Dual OC-3/STM-1 OC-12/STM-4 Unit

## Real-time and Offline Analysis

Multiple ports can be selected in a single instance of the analyzer to capture frames simultaneously. Users can analyze the captured trace files for UNI and NNI interfaces offline. The recorded trace file can be exported to an ASCII file, and printed. Real-time capturing requires a user to specify ports and user/network side. Captured raw ATM data can be transmitted using “Rx Packets to File” application.

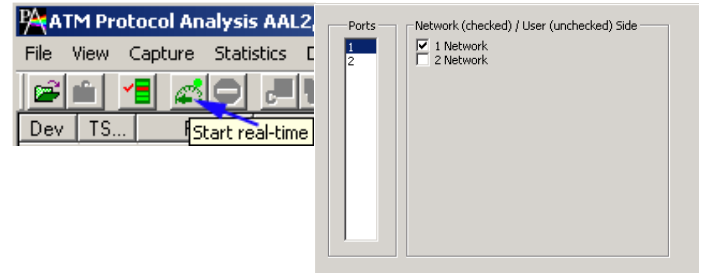


Figure: Port and Interface Selection

## Filtering and Search

Users can record all or filtered traffic into a trace file. Filter and search capabilities adds a powerful dimension to the ATM Analyzer. These features isolate required frames from all frames in real-time, as well as offline. The real-time capture filters are used to limit frames captured to a trace file.

Users can specify custom VPI, VCI, PT, and GFC values to filter frames for real-time capture. The frames can also be filtered after completion of capture according to Dev#, Frame #, Time, Length, Error, VPI/VCI, PT (Payload Type), and more. Similarly, search capability helps user to search for a particular frame based on a specific search criteria.

## Reassembly

Using reassembly option user can specify VPI /VCI value to reassemble using the segmentation and reassembly rules defined by the specified AAL type.

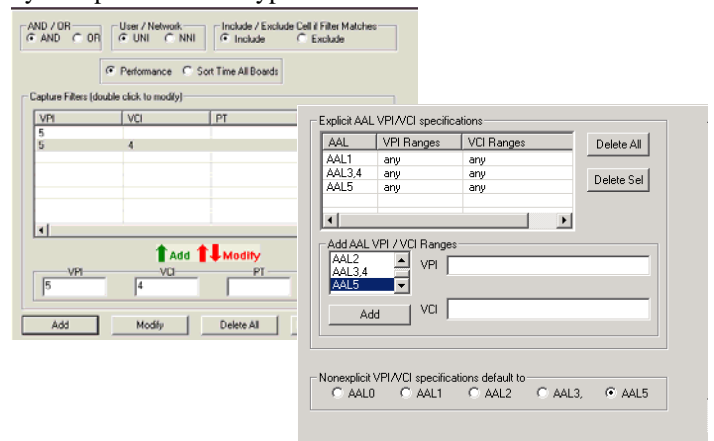


Figure: Filter and Reassembly Options