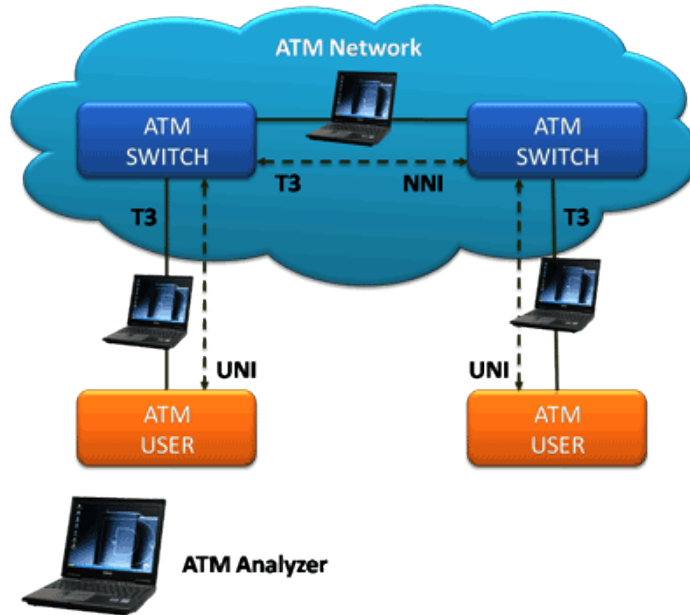


T3/E3 ATM Protocol Analyzer



Overview

Asynchronous Transfer Mode (ATM) is a flexible network protocol carrying voice, video, and data payload carried 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 T3 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 interface.

Main Features

- Displays summary, detail, hex-dump, statistics, and call trace views.
- Summary view displays Dev #, Frame #, VPI/VCI, PT (Payload Type), HEC, OSF, AAL Type, Frame Type, CID, LI, CPI, UII, 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.
- Call traces capability based on UNI signaling parameters, VPI/VCI etc.
- CRC verification for AAL5 carrying packet data.
- Support of various UNI Signaling Protocols i.e. UNI 4.0, UNI 3.1 and UNI Q-2931.
- Search and filtering capabilities.
- Ability to configure .ini file for PVC carrying UNI signaling messages to get the proper decoding options
- Capability to export summary to the comma separated values (CSV) format for subsequent import into a database or spreadsheet
- Capability to export detailed decode information to an ASCII 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 X⁴³ + 1 algorithm.
- Streams may be captured on selected ports
- Multiple streams of ATM traffic on various T3/E3 ports can be simultaneously decoded

For more details, visit our web page <http://www.gl.com/t3-e3-atm-analysis.html>



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Supports UNI 4.0, 3.1, & Q 2931 Signaling Protocols

Analysis Across UNI & NNI Interfaces

Supports SDH X⁴³+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

Analyzer Interfaces

The analyzer displays summary, detail, call trace, 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 decode all fields in the detail view. The hex dump view displays the frame information in HEX and ASCII format.

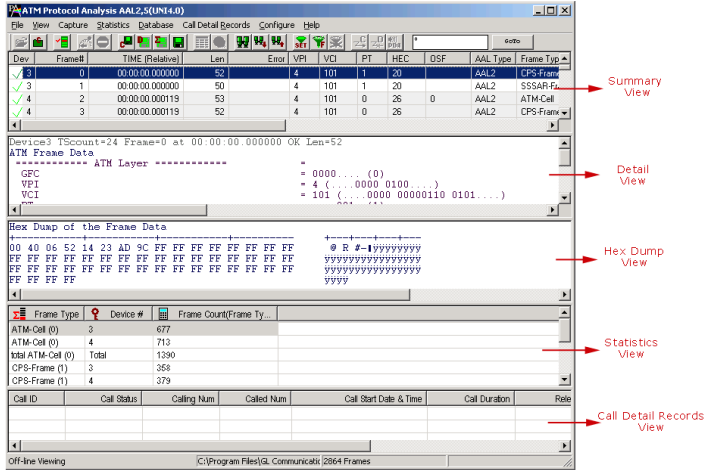


Figure: Analyzer Views

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, or printed. Real-time capturing requires a user to specify ports and Frame Check Sequence (FCS) type. Captured raw data can be transmitted using playback file application.

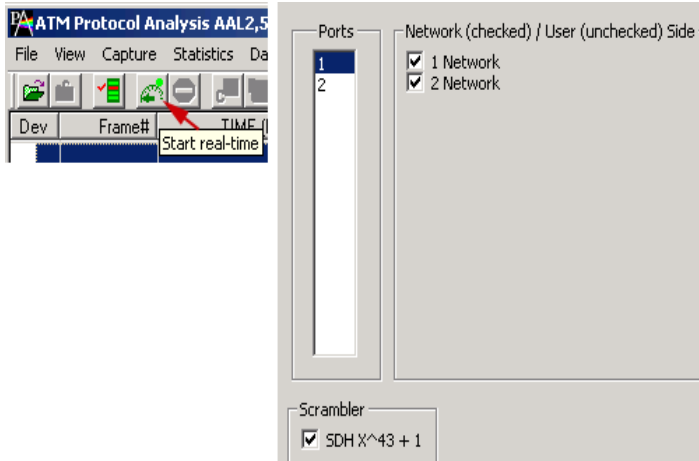


Figure: Port, Interface, and Scrambling Selection

Buyers Guide:

[TE3001](#) - Portable (USB) Dual T3 E3 / T1 E1 Hardware Unit - requires TT3001 or EE3001

[TT3160](#) - T3 ATM Analyzer (GUI)

Analysis and decode of ATM cells over T3

Filtering and Search

There are two types of filters: capturing filter and view filter. The capturing filter is used to limit frames captured to a trace file. The view filter applies to the trace file before it is displayed.

Filtering and search capabilities add a powerful dimension to the ATM Analyzer. These features isolate frames of interest from all frames in real-time, as well as offline. Users can specify custom VPI, VCI, and PT type values to filter frames for real-time capture. The view filter applies to the captured frames and is based on the data link and decoded protocol field values: Frame #, Time, Length, Error, VPI/VCI, PT (Payload Type), HEC, etc. 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.

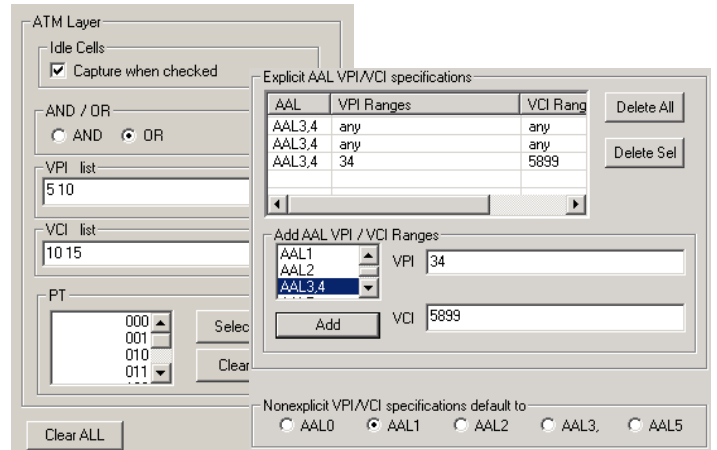


Figure: Filter and Reassembly Options

Call Detail Record & Statistics View

Call trace defining important call specific parameters: Call ID, Call disposition, Call duration, VPI/VCI, 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.

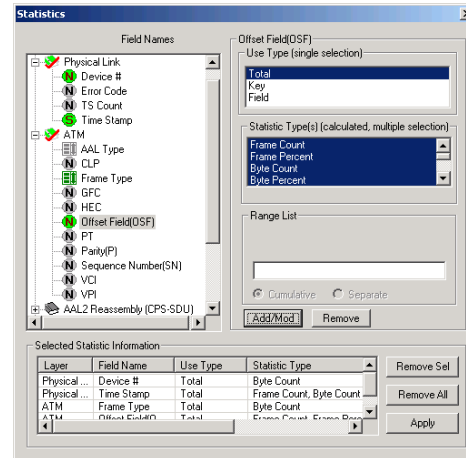


Figure: Define Statistics View