T1/E1 LIU Trunk Management Software

Key Features

- Provides standard compliant alarm processing
- Full support for Performance Monitoring both T1.231 and G.826 for an Line Interface
- Short Haul and Long Haul management
- Provides loopback control
- Includes driver for T1/E1 LIU device

Standard Compliance

- ANSI T1.231
- ANSI T1.403
- ANSI/TIA-464-C
- AT&T PUB 43801
- ITU-T G.703
- ITU-T G.704
- ITU-T G.826
- ITU-T Q.422
- Telcordia GR-303-CORE

Key Benefits

- Fully Standards Compliant
- Turnkey solution
- OS independent
- Pre-ported to Linux
- Easy to use APIs
- Sample application included
- ANSI C Source Code
- Driver Included
- Field proven by multiple customers
- Software deployed worldwide
- Zero defect policy

With NComm's proven source code and protocol stack, you have the quality and standard compliance interfaces that you need for less cost than you can do it yourself.

Product Overview

The NComm T1/E1 LIU Trunk Management Software provides a software solution to provide a T1 or E1 line interface functionality or to supplement a T1 or E1 driver without LIU capabilities.

The T1/E1 LIU TMS package provides full functionality for M13 multiplexing applications when used in conjunction with T3/E3 TMS or SONET/SDH multiplexing when used in conjunction with the SONET/SDH TMS.

Additionally, the T1/E1 LIU software is completely data driven, allowing operating mode, alarm timers, and thresholds to be configurable on a static or run time basis.

The suite includes two levels of ANSI C Application Programming Interfaces (APIs), encapsulating the details of T1/E1 LIU operation and the underlying hardware elements, and providing a clean integration to the target systems' operating environment.

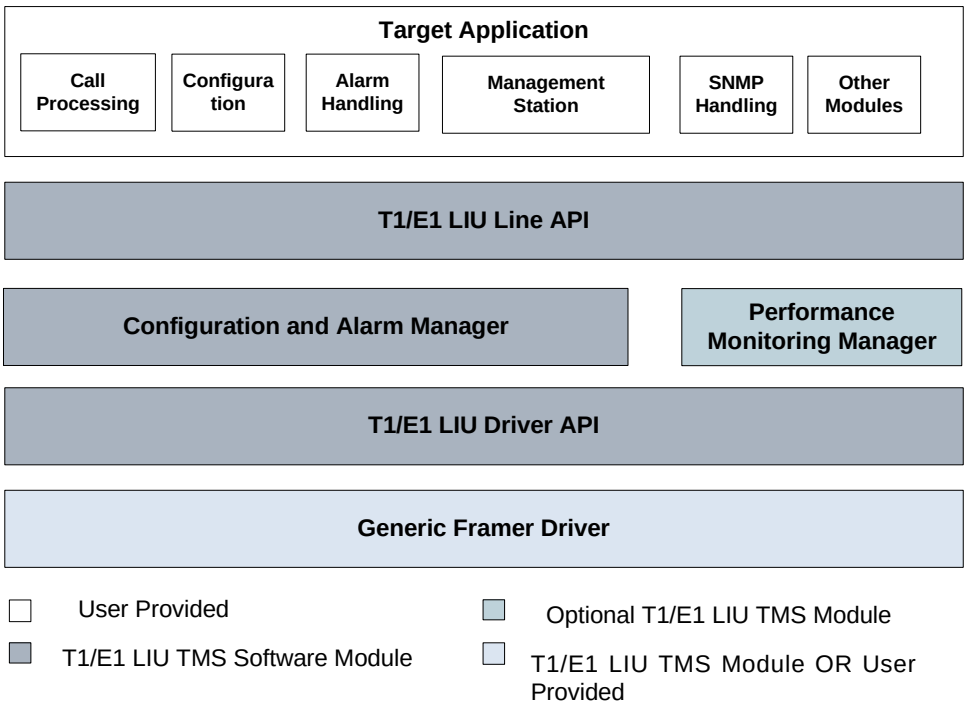
NComm's T1/E1 LIU TMS is supplied as ANSI C source code. User manuals, implementation training and technical support are also included with each license. A sample demo application provides functionality very quickly. This sample application also functions as a guide for integration of the T1/E1 LIU TMS API into the upper management or control systems of your choice.

Applications

- M13 multiplexers
- SONET/SDH multiplexers
- Pseudo-Wire applications
- T1/E1 repeaters
- HDSL Modems
- BITS clock interfaces

T1/E1 LIU OAM TMS Architecture

As in the entire TMS family of OAM software, T1/E1 LIU TMS is architected to be hardware and operating system independent. Well-defined APIs are employed for faster first time integration and ease of reuse.



T1/E1 LIU TMS Software Architecture

The T1/E1 LIU software API consists of a set of ANSI C functions and macros that encapsulate all functionality and data of the T1/E1 LIU software. The API provides a clean interface to the T1/E1 LIU software simplifying the integration of the T1/E1 software to the target customer application. The target application is implemented on top of the T1/E1 Line API layer, using the API to access the functionality provided by the T1/E1 LIU software.

The T1/E1 LIU Configuration and Alarm Manager Module (**CAMM**) provides the interface points for administering and configuring any of the T1 and E1 lines being controlled by the T1/E1 LIU Software. The CAMM maintains the configuration data for the lines, providing a clean interface to configuration data for the other software components, and controlling how line data is updated at runtime. The CAMM maintains and controls the operating state of the individual lines, processing alarm conditions and other runtime conditions as they occur. T1 alarm capabilities meet the standards per T1.231; E1 per I.431, G.731, and ETSI 300-233.

The optional Performance Monitoring Module **(PMM)** provides support for line maintenance operations like loopbacks and near end line performance monitoring. For T1 LIU, performance monitoring meets the standards per T1.231. It also handles bit-oriented code processing. For E1 LIU, performance monitoring meets the standards per G.826. The application can request current performance reports from the PMM for both the remote and local side.

The Device Driver and its associated API provide the interface between the T1/E1 LIU Software and the driver device. The LIU Driver API is comprised of a set of ANSI C functions and macros that handle the interaction with the device driver.