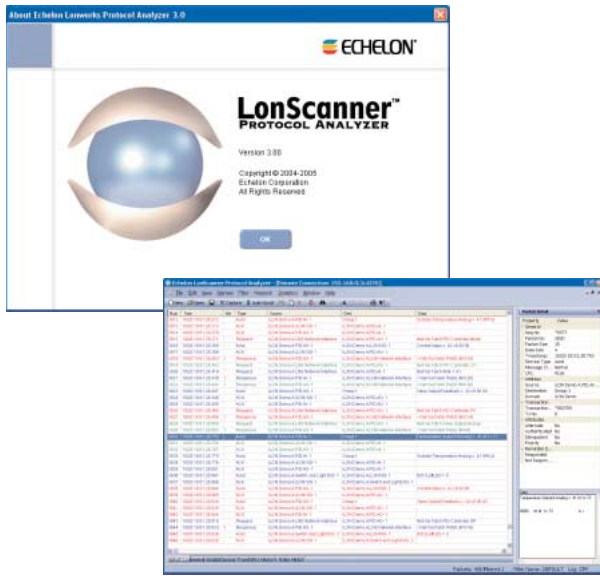


LonScanner™ Protocol Analyzer Models 33110-301 and 33110-302



Description

The LonScanner Protocol Analyzer provides LONWORKS[®] manufacturers, system integrators, and end-users with an easy-to-use Windows tool to allow users to observe, analyze, and diagnose the behavior of installed LONWORKS networks. The tool provides the advanced productivity features common in data network analyzers, adapted to the unique needs of control networks.

The protocol analyzer simplifies network maintenance by collecting, time-stamping, and saving all network communications into log files that can be later viewed and analyzed. Multiple logs and network interfaces can be active at the same time, making it simple to collect packets from multiple sources in a multi-channel network, or from multiple networks.

A sophisticated transaction analysis system examines each packet as it arrives and associates related packets to aid the user in understanding and interpreting traffic patterns in their network.

The protocol analyzer is compatible with a variety of network interfaces including Echelon's U10 and U20 USB Network Interfaces, PCC-10 PC Card Network Adapter, PCLTA-21 PCI Network Adapter, *i.LON* 100 Internet Server, and *i.LON* 600 Internet Server. Networks may be accessed locally or remotely via the Internet when using an *i.LON* 100 or *i.LON* 600 server. All network interfaces provide reliable diagnostics and accurate time-stamping—even if the network is saturated. The protocol analyzer can share any of these network interfaces with multiple LNS applications, including the LonMaker Integration Tool. This enables users to use a single network interface for all network monitoring, control, management, maintenance, and diagnostics operations.

The protocol analyzer can monitor IP-852 packets received by its host computer when it is used with an LNS Turbo runtime. The LNS runtime includes a built-in network interface to the IP-852

- ▼ Captures, analyzes, characterizes, and displays all ANSI/CEA-709.1 packets on a channel for detailed analysis of network activity and traffic patterns
- ▼ Supports the most popular 709.1 network interfaces including Echelon's U10 and U20 USB Network Interfaces, PCC-10 PC Card Network Adapter, PCLTA-21 PCI Network Adapter, *i.LON* 100 Internet Server, and *i.LON* 600 Internet Server
- ▼ Monitors IP-852 channels when used with an LNS[®] Turbo runtime
- ▼ Monitors local or remote networks when using the *i.LON* 100 or 600 Internet Servers
- ▼ Runs on Windows XP, Windows Server 2003, and Windows 2000
- ▼ Supports sharing a network interface with LNS applications including the LonMaker[®] Integration Tool
- ▼ Interprets packet contents without the need to interpret raw hex data
- ▼ Simplifies packet log interpretation with a sophisticated transaction analysis system that associates related packets
- ▼ Supports receive filters that reduce the amount of logged data to help isolate problems quickly
- ▼ Displays device and network variable names in addition to network addresses based on user definitions or based on names from any LNS network database including databases generated by the LonMaker Integration Tool
- ▼ Formats network variable values based on LONMARK[®] resource files to simplify data interpretation
- ▼ Displays comprehensive network statistics data to provide a detailed analysis of the network's health
- ▼ Displays network loading and error rate data in long-term trend graphs, allowing easy identification of excessive network traffic or errors
- ▼ Monitors multiple channels and networks simultaneously

channel, and the protocol analyzer can share this interface with multiple LNS applications on the host computer.

Logs are displayed in summary form with one packet per line for quick analysis. A packet details pane is displayed next to the packet list, allowing the user to quickly see the contents of a packet. A detailed packet view is also available by double-clicking a packet for more detailed analysis.

The protocol analyzer displays device addresses, network variable addresses, and network variable data in raw form so that it can be used with any network installed by any tool or with a self-installed or pre-installed network. The user can enter symbolic

names for devices, or import names from an LNS database, so that device names are displayed in addition to the raw network addresses. This simplifies interpretation of packet log data. The protocol analyzer can also import network variable names from an LNS database so that network variable update messages include the device and network variable name in addition to the raw addressing data. Use of an LNS database is optional, but simplifies decoding of device and network variable names. Any LNS database from any LNS tool can be used, including LNS databases from the LonMaker Integration Tool. The protocol analyzer provides text descriptions of each message and a description of the ANSI/CEA-709.1 protocol services used to transmit it. The protocol analyzer eliminates the need for the user to manually interpret the ones and zeros of the ANSI/CEA-709.1 protocol and reduces the time and effort needed to diagnose network problems.

The user can specify capture filters to limit the packets collected. Users can filter based on selecting packets to or from specific devices or network variables, and for packets using selected ANSI/CEA-709.1 protocol services. Filtering further simplifies network analysis by limiting the packet log files to relevant packets only.

A Statistics tab provides access to detailed statistics related to the network's behavior. The statistics include total packet counts, error packet counts, and network loading. The statistics display provides the user with an easy-to-read summary of network activity.

Bandwidth Utilization and Error Rate History tabs display network loading and error rate data in long-term trend graphs. These trend graphs provide easy identification of excessive network traffic or errors over longer periods of operation.

Specifications*

OS Requirements	Windows XP, Windows Server 2003, or Windows 2000
Network Interface	Echelon U10 or U20 USB Network Interface, PCC-10 (Protocol Analyzer or standard version), PCLTA-20 (Protocol Analyzer or standard version), PCLTA-21, <i>i</i> .LON 100 Internet Server, or <i>i</i> .LON 600 Internet Server

Ordering Information

The LonScanner Protocol Analyzer is available in three editions. A free Demo Edition can be downloaded from www.echelon.com/lonscanner. The Demo Edition discards every third packet, operates for no more than 10 minutes at a time, does not save packet logs, and only displays 20 packets from a packet log. The Professional Edition can be used standalone or with LNS Turbo Edition. The LonScanner Protocol Analyzer LNS Turbo Edition requires separate purchase of an LNS Turbo runtime and can be used with any LNS tool that includes an LNS Turbo runtime. The Professional Edition and LNS Turbo Edition provide identical features when used with an LNS Turbo runtime; the Professional Edition is required for computers that do not have an LNS Turbo runtime. Activation keys can be purchased to convert a Demo Edition to a Professional Edition or LNS Turbo Edition, or to upgrade an LNS Turbo Edition to a Professional Edition. **The LNS Turbo runtime is not included with any of the LonScanner products.**

Product	Echelon Model Number
LonScanner Professional Edition	33110-301
LonScanner LNS Turbo Edition	33110-302
LonScanner Professional Edition Activation Key	33110-305
LonScanner LNS Turbo Edition Activation Key	33110-306
LonScanner Professional Edition Upgrade Key	33110-309

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