LOYTEC
www.loytec.com

Features

♦ Supports binding of network variables across domain boundaries

♦ Represents up to 5 network nodes

♦ Supports up to 512 network variables per node

♦ Supports up to 512 alias-network variables per node

♦ Supports up to 512 address table entries per node

♦ Supports dynamic, static and external (polled) network variables

♦ Configuration using standard network management tools (LNS® and non-LNS® based)

♦ Conversion between different SNVT types

♦ L-Gateway configuration software supplied with the unit (runs as LNS® Plug-In or stand-alone tool)

♦ Compatible with LNS® 3.0 and LNS® TE applications e.g. NL220, ALEX, LonMaker®

♦ Supports remote firmware update and configuration over each network interface

♦ Supports the following channels: TP/FT-10, IP-852 (Ethernet/IP)

♦ Configuration via Web interface

♦ 12-35V DC / 12-24V AC supply voltage

♦ 105 x 86 x 60 (L x W x H in mm) i.e. 6 TE

♦ DIN-rail mountable

Description

L-Proxy is a gateway node for EIA-709 networks that acts on network variables. This gateway allows exchanging data packets across domain boundaries. L-Proxy represents up to 5 independent network nodes (1 on each of the two TP/FT-10 channel and up to 3 on the IP-852 channel). Input and output network variables can be created dynamically on each of the L-Proxy nodes using standard network management tools. Each L-Proxy node can be configured to either reside in a different domain (and therefore in a different LNS® database) or to sit in the same domain like other L-Proxy nodes.

The number of applications for L-Proxy is manifold. Some applications require sending the output information from one node into several domains. A classical example is a weather station on top of a larger building that needs to report wind speed and temperature

information into every single floor. Inter-domain communication is also required if larger networks are subdivided into multiple domains (or LNS® projects) and communication between the subprojects is desired. Other installations use different domains for different subsystems (e.g. lighting, HVAC, access control) where subsystems need to exchange information across domain boundaries. L-Proxy is the ideal solution for all these scenarios.

Larger networks sometimes suffer from the limited addressing capabilities of single nodes. Most of the ANSI/EIA-709 nodes typically addresses up to 15 destination addresses. If more destination addresses are required the only workaround is to use broadcast addresses, which can diminish overall network performance. Another critical system resource is the number of group addresses, which is limited to 256 per domain. An alternative to group addressing for multicasts are alias network variables, which again are limited on standard ANSI/EIA-709 nodes.

Due to the almost unlimited number of network variables, alias network variables, and address table entries inside L-Proxy, it is possible to overcome the limitations of standard nodes. Therefore all resource intense network variables should be bound not directly to the destination node itself but to L-Proxy first and from L-Proxy to the final destination nodes.

Another application area for L-Proxy are networks with security requirements. L-Proxy can be used to exchange information between networks with different domains and/or different authentication keys. It is also possible

Order Information

| Order number	Configuration
LP-33E100	1 x Ethernet/IP (IP-852)
	2 x FT-10

to keep network traffic away from network segments that are installed in the non-secure part of the systems. It is up to the system integrator to decide which network variables will be exposed to the rest of the system.

L-Proxy can be used for SNVT translation. If e.g. a variable of type 'SNVT_temp_p' must be bound with a variable of type 'SNVT_temp' L-Proxy will convert the type and allow the binding tool to make the proper binding.

Some installations require a poll-update mechanism. If e.g. an ANSI/EIA-709 power meter can only be polled but the SCADA system doesn't support polling, there needs to be a middle man who polls the power meter and updates the input network variables of the SCADA system. L-Proxy can be configured to support self initiated polling on one side and update the network variable which is bound to the SCADA system on the other side.

Example Application

The diagram below shows a typical use case of L-Proxy in a building automation scenario. The use case is as follows. A central weather station on the roof of the building needs to report its weather information into 4 additional domains (equivalent to 4 additional LNS® databases). Therefore 2 input network variables named "nviWindSpeed" and "nviTemp" must be created on Node 5 and bound to the corresponding output network variables on the weather station.
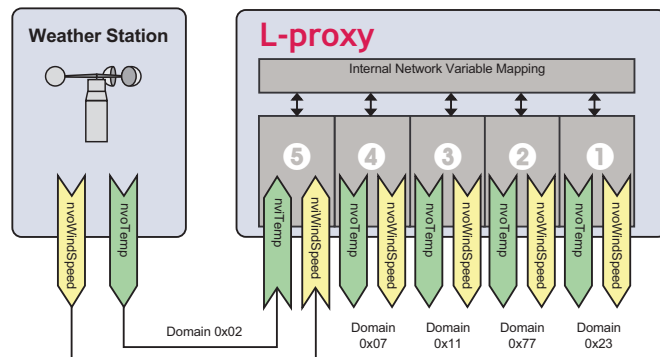
L-Proxy maps these input network variables to corresponding output network variables on Node 1, Node 2, Node 3, and Node 4. If an update occurs on "nviWindSpeed" or "nviTemp" L-Proxy automatically updates the corresponding output network variables on Node 1-4. Node 1, 2, 3, and 4 can be used as independent nodes in different LNS® projects that can reside in different domains. As a result the current wind speed and temperature will be available in all projects at any time.
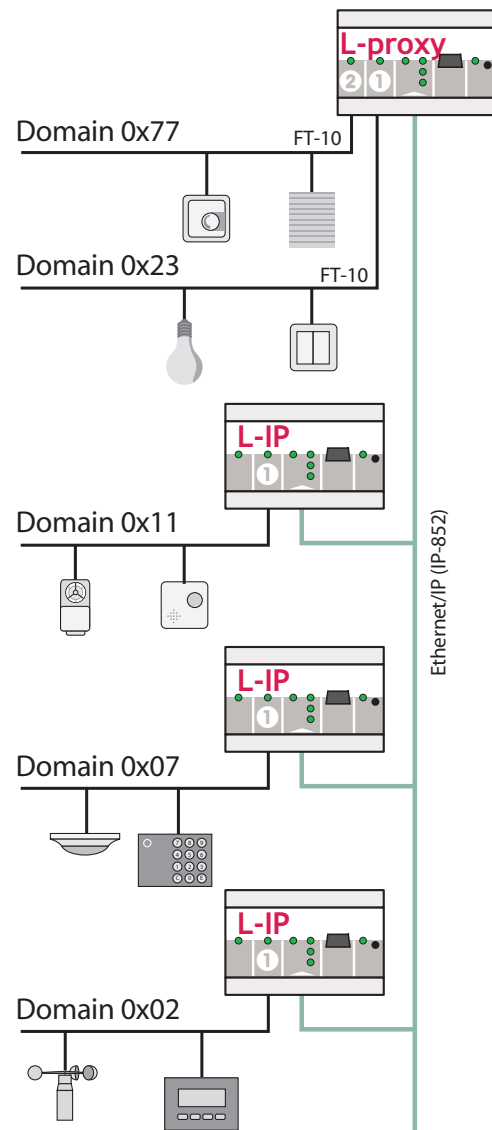
LPA, L-Chip, L-Switch, L-IP, L-Proxy, L-VIS, L-OPC, L-DALI, L-Gate, L-Core, LC3020 are trademarks of LOYTEC electronics GmbH. Other trademarks and trade names used in this document refer either to the entities claiming the markets and names, or to their products. LOYTEC disclaims proprietary interest in the markets and names of others.

LOYTEC reserves the right to make changes to these specifications without further notice for performance, reliability, production technique, and other considerations.