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CEA-709 Automation Server
LINX-110, LINX-111
IEC 61131-3 Programmable

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Features

- ◆ IEC 61131-3 programming languages (FBD, ST, LD/KOP, SFC, C)
- ◆ Online testing via RS-232, TCP/IP (Ethernet) or CEA-709 network
- ◆ Offline simulation
- ◆ Traceability of IEC 61131-3 variables via the L-logiCAD programming tool
- ◆ Program download without interruption of the currently executed application program
- ◆ Program download via LINX-110 configuration tool or the Web interface
- ◆ Unicode support for IEC 61131-3 project documentation
- ◆ Fully compliant with CEA-709, CEA-852, and EN 14908 standard
- ◆ Support of dynamic and static NVs
- ◆ Support of User Defined NVs (UNVTs) and Configuration Properties (SCPTs, UCPTs)
- ◆ Automatic mapping of SNVTs to IEC 61131-3 variables
- ◆ Supports network variable type conversation
- ◆ Supports one TP/FT-10 or IP-852 (CEA-852, Ethernet) channel (configurable)
- ◆ M-Bus Master according to EN 13757-3
- ◆ Modbus TCP Master and Modbus RTU Master
- ◆ Integrated Router between IP-852 and TP/FT-10 (LINX-111 only)
- ◆ Event-driven e-mail notification
- ◆ Supports Alarming, Scheduling, and Trending (AST ™)
- ◆ Supports up to 1,000 CEA-709 network variables
- ◆ Supports up to 1,000 address table entries
- ◆ RTC support
- ◆ Access to network statistics via NVs
- ◆ Support of Remote LPA with LPA-IP
- ◆ Build-in Web server for device configuration and data point monitoring
- ◆ Remote Network Interface (RNI) with 2 MNI-devices (LINX-110 only)
- ◆ NTP support for time synchronization
- ◆ Status and activity LED (CEA-709)
- ◆ Network diagnostic LEDs
- ◆ Ethernet link and activity LED
- ◆ IEC 61131-3 status LED (PLC)
- ◆ Firmware update via serial port, CEA-709, or Ethernet
- ◆ Supply voltage: 12-35 VDC or 12-24 VAC, power consumption typical 3 W
- ◆ 105 x 86 x 60 (L x W x H in mm) i.e. 6 TE
- ◆ DIN rail mountable

Description

LINX-110 and LINX-111 are CEA-709 compliant

programmable devices. They are programmed using the graphical L-logiCAD programming tool (IEC 61131-3). It offers a number of programming languages including Function Block Diagram (FBD), Structured Text (ST), Ladder Diagram (LD, KOP), Sequential Function Chart (SFC), and C. All available languages can be used in combination within a project. NVs are mapped to the IEC 61131-3 variables within the configuration software. This software either acts as an LNS® plug-in or runs as a stand-alone tool.

Both static and dynamic Standard Network Variables (SNVTs) as well as User Defined Network Varibles (UNVTs) and Configuration Properties (SCPTs, UCPTs) are supported. The configuration tool allows reading UNVTs from a device resource file and accessing Configuration Properties via LonMark File Transfer.

NVs are mapped to binary, analog, or multi-state objects. Each scalar NV is mapped to one data point object. Each structured NV is mapped to several data point objects, one for each member (members can be selected individually). Each device can handle up to 1,000 network variables. Several devices can be installed in a network at the same time.

Automation functions such as Alarming, Scheduling, and Trending are supported. Access to these functions can be done with the embedded Web server via a Web browser. Schedulers

Order Number	Configuration
LINX-110	1 x Ethernet 1 x TP/FT-10 1 x EIA-485 (RS-485) f. Modbus RTU incl. Remote Network Interface
LINX-111	1 x Ethernet 1 x TP/FT-10 1 x EIA-485 (RS-485) f. Modbus RTU incl. Router (IP-852 to TP/FT-10)
L-logiCAD	IEC 61131-3 programming tool

can be configured from remote using the configuration tool, the Web interface, or by downloading an XML file onto the device. Alarming includes functionality to generate, deliver, acknowledge, and display alarm conditions. Logged information is available through CSV file export for third party applications. In addition, e-mail notification is supported. Thus, a user is promptly informed about problems like e.g. a specific status of the device or an exceeded high-limit.

Communication

LINX-110 and LINX-111 can run as fully compliant M-Bus Masters according to the EN 13757-3 standard. An optional converter (RS-232 to M-Bus) must be connected.

Modbus devices can also be integrated with LINX-110/111. A Modbus TCP Master (Ethernet) and a Modbus RTU Master (EIA-485 / RS485) are available.
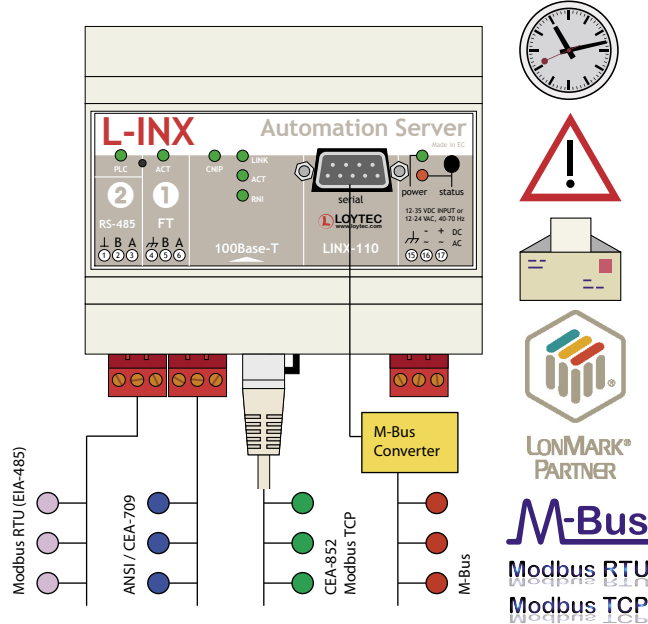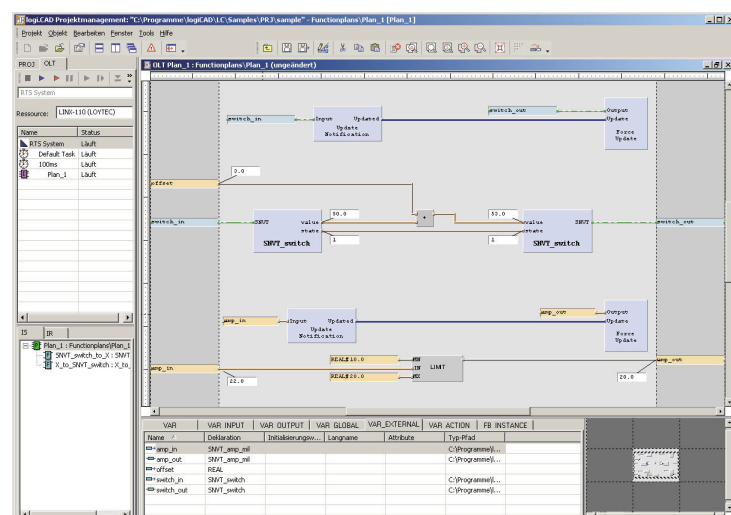

LINX-110/111 either supports one TP/FT-10 or IP-852 channel (configurable). A LINX-110 provides an embedded Remote Network Interface (RNI) to handle 2 MNI devices. On the other hand, a LINX-111 has got a full featured router between TP/FT-10 and IP-852 channel.

Server objects of LINX-110 resp. LINX-111 can be accessed from the CEA-709 network either with the TP/FT-10 or the IP-852 channel. Additionally, network statistics data points can be mapped to NVs and therefore accessed by the IEC 61131-3 application for further processing.
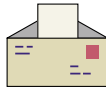
Easy and Fast Programming

Easy and fast programming of IEC 61131-3 is accomplished with the L-logiCAD software. The drawing area is organized in pages for the sake of clarity. Off-page connectors are used to connect between the pages. The configuration software is used to create data points and to connect the data points from the network with IEC 61131-3 variables. It can be used as a stand-alone tool or as an LNS® plug-in, compatible with NL220, ALEX and LonMaker.

Multiple IEC 61131-3 programs can be executed in parallel with different cycle times down to 10 ms. The IEC 61131-3 programming tool allows online testing of an application over the CEA-709 and the TCP/IP network (Ethernet). New IEC 61131-3 applications can be downloaded onto the device without interrupting the current program execution.