

# Communication Solutions for Rockwell Automation® Users















# ELX3 ProLinx Edge™ Gateway

The newest protocol converter from ProSoft is the start of a new era for the company. The ELX3 ProLinx Edge Gateway unites operational technology (OT) protocol conversions with the ability to run custom Docker containers on a single hardware platform.

With this multi-purpose gateway:



- Enable seamless OT protocol conversion: Enables EtherNet/IP<sup>TM</sup> and Modbus TCP/ IP data exchange to allow for communication between your dissimilar devices in the field.
- Take control with user-defined containers: Empowers custom code and algorithm
  creation for advanced applications like machine learning and predictive maintenance.
- Industrial grade hardware: Designed for harsh environments. requiring class 1 Div 2 installations and extended temperature ranges of -40 to 70C.

The gateway is ideal for companies looking to unite data from disparate IIoT devices and legacy OT equipment. Via the ELX3, bring silos of automation into centralized control systems for analysis and action. By supporting both ProSoft Protocol Gateway containers and custom containers, the ELX3 gives you the flexibility you need to address today's most demanding edge applications and scale as your operation evolves.

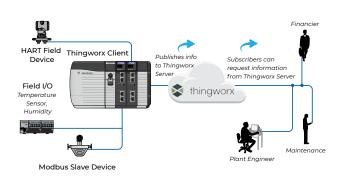
# **Linux Development Modules**

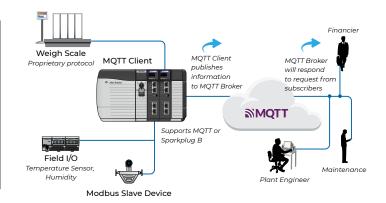
Connect Your Logix Processor to ThingWorx or to a MQTT Broker



These edge-compute modules are ideal for custom algorithm applications, including the transfer of key operational data. The ControlLogix module's library has sample applications (complete with source code!) for ThingWorx®, Sparkplug B MQTT, and standard MQTT. These samples help enable direct connectivity, expanding your IIoT application.

- In-chassis modules simplify your site and bring data directly into your ControlLogix or CompactLogix; help minimize cabinet space
- · Linux Virtual Machine (VM) and C/C++ development environment provided on separate DVD
- · VM contains preinstalled toolchain and libraries





# **Ethernet and Serial Gateway Solutions**

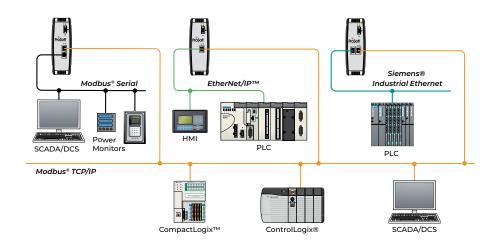
ProSoft Technology's stand-alone, DIN rail-mounted industrial gateways provide a means to read or write data from devices using dissimilar protocols. All gateways come with our ProSoft Discovery Service feature. With PDS, you don't have to change your PC to the default subnet of the module, saving you time during setup.

Building Automation solutions - including QuickServer gateways - bring key operational data directly to your Rockwell Automation controller. Use these solutions to boost energy efficiency, use the resource most productively, and decrease your usage and costs.



The Modbus Router enables EtherNet/IP™, Modbus TCP/IP and Modbus RTU connectivity for field devices. In addition to its gateway functionality, the module also functions a router, forwarding Modbus data from the unit's serial ports to its Ethernet port.

- Gateways with two Ethernet ports allow you to isolate networks, passing only the data you want between devices
- EtherNet/IP<sup>™</sup> gateways support multiple I/O connections for fast real-time data
- Remote configuration and diagnostics via Ethernet
- SD Card slot for disaster recovery of configuration data
- Up to four Serial ports



PROFIBUS DP, FOUNDATION Fieldbus, and many other protocols are also available.

# **Automotive and Inertial Navigation Gateways**



- · The CANOpen Router is an ideal solution for motion-oriented machine control systems, primarily in automotive applications. The module supports EtherNet/IP to CANOpen communications, and can support either Master or Slave mode
- The **J1939 Router** enables automotive diagnostic communications via EtherNet/IP between Logix controllers and J1939 devices. The module is used to facilitate automatic unpacking and scaling of J1939 devices' data to your controller's UDT structure, saving you time
- The **Time Sync Module** enables precise time syncing with Logix controllers and HMIs, and provides GPS data as well for inertial navigation applications. Velocity and odometer data is available thanks to the onboard GPS receiver. This module can also be used as a replacement for Rockwell Automation's discontinued 1756-TIME solution
- The XPosition Module delivers highly precise location data from GPS or inertial navigation devices, ensuring you know the placement of your crane system, marine crafts, or drilling equipment

## Serial & Ethernet Modbus® Solutions



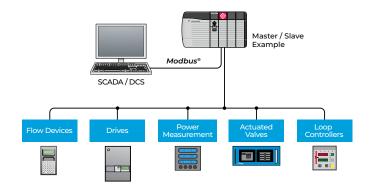
#### **Modbus® Serial**

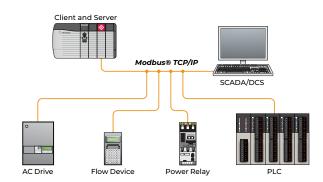
- Module configuration stored within the Studio 5000®/RSLogix™ 5000 project (ACD file) for simplified disaster recovery
- Add-On Profile (AOP) improves integration into Studio 5000/RSLogix 5000
- Add-On Instruction (AOI) reduces configuration effort and simplifies maintenance
- Modules also available for the Logix-XT platform; support operations in extreme environments at higher operating temperatures, and have a conformal coating to protect them in harsh conditions



#### Modbus® TCP/IP

- Fast Multi-Server/ Multi-Client capabilities
- Add-On Instruction reduces configuration effort and simplifies maintenance

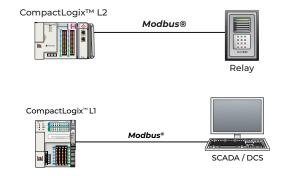


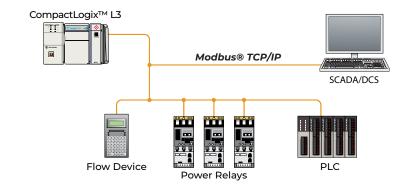


# Scalable Modbus® & Modbus® TCP Solutions for CompactLogix™



- Enhanced modules allow up to 10,000 I/O words
- · Lite modules allow up to 240 I/O words
- Integrated Modbus® Serial communications in 1734 Point I/O™ applications



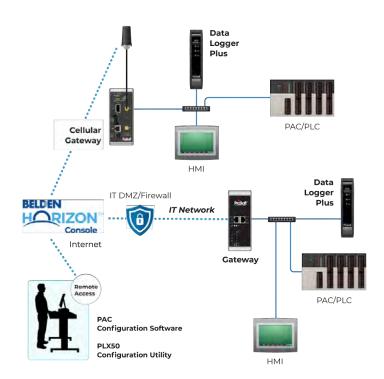


# **Secure Remote Connectivity**

Our Secure Remote Access suite, easy to use by design, provides IT-secure and OT-friendly solutions that help you connect to your equipment anywhere, at any time. Remote access gateways and always-on networks can be monitored securely and easily in Belden Horizon™ Console, part of Belden Horizon.

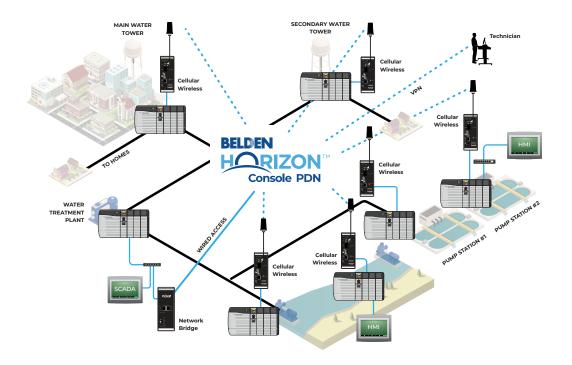
We aim to make remote access as secure and streamlined as possible, and put the end user in the driver's seat, ensuring complete access control of remote equipment. Our remote access solutions feature:

- Virtual Lockout-Tagout feature for greater access control of specific equipment
- A multi-layered Defense-in-Depth approach to security, including advanced two-factor authentication (we avoid the less-secure SMS mode of authentication) and Active Directory support via Single Sign-On (SSO), which means you can access Belden Horizon with your corporate login credentials
- Role-based device and user access
- No software updates on your part no userinstalled software means you'll eliminate an entry point for hackers, and save time for your team
- OpenVPN support: One-time-use tunnels provide a secure connection between your equipment and Belden Horizon
- Layer 2 Tunneling Protocol (L2TP)/IPSec and Secure Socket Tunneling Protocol (SSTP) support increases VPN security for all popular clients, including Windows, iOS, and Android products, and easily allows you to see your remote devices rather than try to remember them
- Support for SMS messaging from your EtherNet/ IP or Modbus TCP/IP PAC (Cellular Gateway only)



Persistent Data Network (PDN) Always-on, secure, and managed cloudbased network to connect geographically dispersed remote sites.

This simple, secure solution is ideal for infrastructure communications networks.



# **Secure Remote Connectivity Gateways**



#### Industrial Cellular Gateway (ICX35-HWC)

- 4G LTE cellular or wired access via WAN/LAN port
- Ethernet port available for Internet connection or SIM card
- · Monitor and manage via Belden Horizon Console



#### **Network Bridge (PLX35-NB2)**

- · Wired remote access
- · Monitor and manage via Belden Horizon Console
- Enable / Disable remote access locally via an EtherNet/IP message
- File Relay transfer files across segmented networks



#### Data Logger Plus (PLX51-DLplus-232)

- Ideal for remote sites with limited communications that need to log data (stores over 16M records!)
- Can help OEMs identify operational issues and improve OEE
- Data can be downloaded as a .csv file
- Support for 200 tags; minimum log interval: 50 milliseconds
- Features support for JSON interface, enabling easy exporting of logged data to business CRM systems
- Features an integrated webserver to trend variables and upload logged data
- XLReporter connection available



#### **Belden Horizon Console**

- EasyBridge™ technology enables your PC to act like it is connected directly to a switch on the remote network
- Allows software tools, such as RSWho and Studio 5000, to work without routing
- Multi-layered defense-in-depth approach, including support for Active Directory (SSO) and token-based 2F Authentication, keeps your data and equipment safe

#### **Belden Horizon Lite App**

What if you're not at your desk or office when the customer call comes in, or sitting on a beach and your customer calls with a critical issue? You don't have to give up that view or worry you'll upset your customer - Belden Horizon has gone mobile, and the app is available to download on the iOS platform!

Case Study: Wastewater Monitoring via Always-On Managed Network

psft.com/DC4

Case Study: Oil and Gas Company Now Remotely Monitoring Operation

psft.com/DCE

Case Study: Monitoring a City's Remote Lift Stations

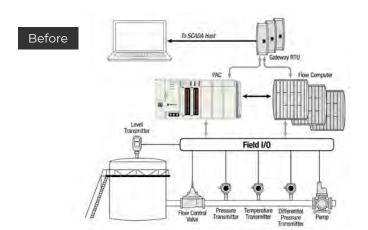
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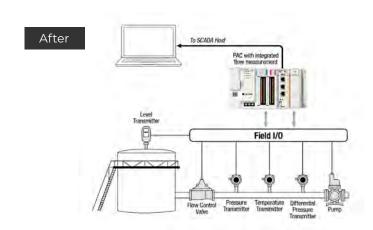


App Store is a trademark of Apple Inc.

# **In-Chassis Flow Computer Solutions**

For Multi-Well Pad and LACT Applications







**ControlLogix**<sup>6</sup>

- Supports 8-16 meter runs with 4 streams per meter run for the measurement of hydrocarbon gases and liquids
- In-chassis solution brings data directly into your ControlLogix® or CompactLogix™; helps minimize cabinet space
- Pair with Rockwell Automation's distributed I/O capability + ProSoft's wireless radios to reduce wiring to transmitters and I/O devices
- Includes the use of EAFC Manager, a free Windows 7-based tool for configuration, reporting, and monitoring; hourly or daily archives with user-selected data are available
- NMi certified for OIML, WELMEC, and MID type approval (AGA/API)
- No additional licensing fee for liquid meter runs
- Add another AFC card in same chassis if more meter runs are required
- Secure data archiving / meter run
- Archive records stored in non-volatile memory in module
- Archive data cannot be altered/changed
- Integration to SCADA with Modbus/Enron Modbus support (Cygnet, Autosol, and FlowCal)
- System designs can support more than 80 metering locations

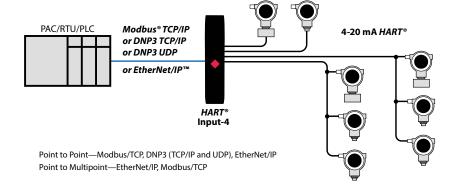


**CompactLogix**™

Case Study: ProSoft's integrated flow computer helped Pelican Gathering decrease the number of components, minimize their panel space, and streamline integration. psft.com/DCE

## **HART Solutions**

**Gain additional diagnostic information** from your distributed process equipment - and boost efficiency as a result.



Find out how you'll benefit psft.com/DCB

# Wireless Comparison Product Selection Chart

Model	802.11abgn Weatherproof Industrial Hotspot	802.11abgn Fast Industrial Hotspot	Industrial Cellular Gateway	ProLinx Edge Mini
	RLX2-IHNF-W(C)	RLX2-IHNF	ICX35-HWC	ELXM-SW6
Features & Specifications				
Device Connectivity	Ethernet	Ethernet/Serial	Ethernet/Serial	Ethernet, Digital Input & Output
Frequency Band(s)	2.4 & 5 GHz	2.4 & 5 GHz	Cellular	2.4 & 5 GHz
Regions Unlicensed Use Allowed	Global	Global	Global	Global
Wireless Technology	IEEE 802.11abgn (WiFi 4)	IEEE 802.11abgn (WiFi 4)	4G LTE Cellular HSPA	IEEE 802.11ax (WiFi 6)
Max Outdoor Range (miles/km)	5 mi /8 km	5 mi /8 km	Unlimited	5 mi /8 km
Fast Roaming (802.11r)	Yes	Yes	N/A	Yes
Fast Roaming (< 10 milliseconds)	Yes	Yes	N/A	-
Repeater Mode	Yes	Yes	N/A	-
Max RF Data Rate (Gross)	300 Mbps	300 Mbps	N/A	1020 Mbps
Security/Encryption	WPA2 PSK and Enterprise	WPA2 PSK and Enterprise	Internal Firewall, Belden Horizon VPN, OpenVPN, IPSec	WPA3 PSK and Enterprise
Advanced Diagnostics	Yes	Yes	N/A	Yes
Hazardous Location Approvals	Class 1, Div 2/ Atex Zone 2 (WC)	Class 1, Div 2/ Atex Zone 2	Class 1, Div 2	Class 1, Div 2/ Atex Zone 2
Outdoor/Wash Down Rated Model	IP67	-	-	-
Wireless Applications				
Mobile Robots, AGV	Yes	Yes	-	Yes
Long-Range SCADA	N/A	N/A	Yes	-
Short-Range SCADA	Yes	Yes	Yes	Yes
Mobile Worker (Wi-Fi)	Yes	Yes	-	Yes
EtherNet/IP™ Object	Yes	Yes	Yes	Yes
EtherNet/IP™ Implicit Messaging (High-Speed IO)	Yes	Yes	-	Yes
Serial DF1, ASCII, Modbus <sup>®</sup> , DNP3, etc.	-	Yes (encapsulation)	Yes (encapsulation)	-
Video	Fast Frame Rate	Fast Frame Rate	Yes	Fast Frame Rate

#### **In-Chassis Product Selection Chart**

Platform	ControlLogix <sup>®</sup>	CompactLogix™	Point I/O
Protocol/Application			
AGA/API Gas & Liquid Flow Computer	MVI56E-AFC	MVI69E-AFC	
ASCII	MVI56E-GSC MVI56E-GSCXT	MVI69E-GSC	
'C' Programmable	MVI56E-LDM	MVI69E-LDM	
DNP3 Ethernet	MVI56E-DNPNET		
FA Control/Network	MVI56E-FLN		
GE Ethernet Global Data	MVI56-EGD		
Generic Ethernet ASCII	MVI56E-GEC	MVI69E-GEC	
IEC 61850 Client	MVI56E-61850C		
IEC 61850 Server	MVI56E-61850S		
Modbus <sup>®</sup> Serial	MVI56E-MCM MVI56E-MCMR MVI56E-MCMXT	MVI69E-MBS MVI69L-MBS	ILX34-MBS232 ILX34-MBS485
Modbus® TCP/IP	MVI56E-MNET MVI56E-MNETC MVI56E-MNETR MVI56E-MNETCR MVI56E-MNETXT	MVI69E-MBTCP MVI69L-MBTCP	
PROFIBUS DP Master	ILX56-PBM	ILX69-PBM	
PROFIBUS DP Slave	ILX56-PBS	ILX69-PBS	
Siemens® Industrial Ethernet	MVI56E-SIE		
PROFINET	ILX56-PNC	ILX56-PND	

# Have a legacy product that's no longer on these charts?

ProSoft can help you migrate to a newer solution with expanded functionality.

Learn more about solutions for legacy controllers at psft.com or by contacting your local ProSoft office.

Many of ProSoft's in-chassis and gateway modules for Rockwell Automation systems feature Add-On Instructions or Add-On Profiles to help you increase efficiency and reduce configuration.

Learn more: psft.com/DCC

# Stand-Alone Gateways Product Selection Chart

Application/Protocol	ASCII DF1	DF1 Master/Slave	DNP 3.0 (Serial + Ethernet)	EtherNet/IP <sup>TM</sup>	HART Multidrop/Analog (4 chl)	IEC 60870-5-104 Server	Modbus® Serial	Modbus® TCP/IP	OPC UA	PROFIBUS DP Master	PROFIBUS DP Slave	PROFINET
ASCII				PLX31-EP-ASCII PLX31-EIP-ASCII4				Contact support				
BaCnet <sup>®</sup> /IP, BaCnet <sup>®</sup> MS/TP				PS-0S-2010-F (250 Pt) PS-0S-2210-F (500 Pt) PS-0S-3010-F (250 Pt) PS-0S-3110-F (500 Pt) PS-0S-3110-F (1000 Pt)			PS-0S-2010-F (250 Pt) PS-0S-2210-F (500 Pt) PS-0S-3010-F (250 Pt) PS-0S-3110-F (500 Pt) PS-0S-3110-F (1000 Pt)	PS-GS-2010-F (250 Pl) PS-GS-2210-F (500 Pl) PS-GS-3010-F (250 Pl) PS-GS-3110-F (500 Pl) PS-GS-3210-F (1000 Pl)				
DF1 Master/Slave		Contact support PLX51-DL-232 PLX51-DLplus-232		PLX51-DF1-ENI PLX51-DF1-MSG			Contact support	Contact support			Contact support	
DH485				A-DH485R/B								
DNP 3.0 (Serial + Ethernet)				PLX51-DNPM PLX51-DNPS	PLX51-HART-4I (4 channel)		PLX51-DNPM PLX51-DNPS	PLX51-DNPM PLX51-DNPS			Contact support	
EtherNeVIP"	PLX31-EIP-ASCII PLX31-EIP-ASCII4	PLX51-DF1-ENI PLX51-DF1-MSG	PLV51-DNPS PLX51-DNPS	PLX35-NB2	PU/S1-HART-4I (4 channe)) PU/S1-H/RFT-40	PLX32-EIP-104	PLX31-EIP-MBS PLX31-EIP-MBS4 A-MBR/B	PLX3-EP-MBTCP PLX3-EP-MBTCP PLX3-ER-MBTCP-UA A-XGPS A-MBR/B ELX3	PLX32-EIP-MBTCP-UA	PLX51-PBM	PLX51-PBS	PLX31-EIP-PND PLX32-EIP-PND PLX82-EIP-PNC
HART® Analog				PLX51-HART-4I PLX51-HART-40				PLX51-HART-4I PLX51-HART-40				
HART® Multi-drop			PLX51-HART-41	PLX51-HART-4I (4 channel) PLX51-HART-40				PLX51-HART-4I PLX51-HART-40				
IEC 60870-5-104 Server				PLX32-EIP-104				PLX32-MBTCP-104				
IEC 61850				PLX82-EIP-61850				PLX82-MNET-61850				
LonWorks		PS-QS-1011-F (250 Pt) PS-QS-1211-F (500 Pt)		PS-QS-1011-F (250 Pt) PS-QS-1211-F (500 Pt)			PS-QS-1011-0154 (250 Pt) PS-QS-1511-0154 (500 Pt)	PS-0S-1011-0154 (250 Pt) PS-0S-1511-0154 (500 Pt)				
Metasys® N2		PS-0S-2010-F (250 Pt) PS-0S-2210-F (500 Pt) PS-0S-3010-F (250 Pt) PS-0S-3110-F (500 Pt) PS-0S-3210-F (1000 Pt)		PS-GS-2010-F (250 Pt) PS-GS-2010-F (500 Pt) PS-GS-3010-F (250 Pt) PS-GS-3110-F (500 Pt) PS-GS-3110-F (500 Pt)			PS-0S-2010-F (250 Pt) PS-0S-2210-F (500 Pt) PS-0S-3010-F (250 Pt) PS-0S-3110-F (500 Pt) PS-0S-3110-F (1000 Pt)	PS-GS-2010-F (250 Pt) PS-GS-2210-F (500 Pt) PS-GS-3010-F (250 Pt) PS-GS-3110-F (500 Pt) PS-GS-3110-F (500 Pt) PS-GS-3210-F (1000 Pt)				
Modbus® Serial			PLX61-DNPS PLX51-DNPM	PLX31-EIP-MBS PLX31-EIP-MBS4 A-MBP/B	Contact support		Contact support			PLX51-PBM	PLX51-PBS	PLX31-PND-MBS PLX31-PND-MBS4
Modbus <sup>®</sup> TCP/IP	Contact support		PLX51-DNPA PLX51-DNPA	PLX3-EP-MBTOP PLX32-EP-MBTOP PLX32-EP-MBTOP-UA A-XGPS A-MBNB ELX3	PUX51-HART-40 PUX51-HART-41	PLX32-MBTGP-104			PLX32-EIP-MBTCP-UA	PLX51-PBM	PLX51-PBS	PLX31-MBTCP-PND PLX32-MBTCP-PND PLX82-MBTCP-PNC
OPC UA				PLX32-EIP-MBTCP-UA				PLX32-EIP-MBTCP-UA				
PROFIBUS DP				PLX51-PBM PLX51-PBS			PLX51-PBM PLX51-PBS	PLX51-PBM PLX51-PBS				
PROFIBUS PA				A-PAL/B				A-PAL/B				
PROFINET				PLX31-EIP-PND PLX32-EIP-PND PLX82-EIP-PNC			PLX31-PND-MBS PLX31-PND-MBS4	PLX31-MBTCP-PND PLX32-MBTCP-PND PLX82-MBTCP-PNC				
Siemens Industrial Ethernet				PLX31-EIP-SIE PLX32-EIP-SIE				PLX31-MBTCP-SIE PLX32-MBTCP-SIE				
CAN Protocols (CAN Open, DeviceNet, J1939)				A-CANOR/B A-DNTR/B A-J1939/B			A-CANOR/B A-DNTR/B A-J1939/B	A-CANOR/B A-DNTR/B A-J1939/B				
ControlNet				A-CNR				A-CNR				
PTP/NTP				A-TSM/B								
Data Logging	PLX51-DL-232 PLX51-DLplus-232			PLX51-DL-232 PLX51-DLplus-232			PLX51-DL-232 PLX51-DLplus-232	PLX51-DL-232 PLX51-DLplus-232				
FOUNDATION Fieldbus				A-FFL/B				A-FFL/B				



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#### Support and expertise for your projects

ProSoft provides a variety of resources and services for wireless applications from initial system design to site surveys to launch support and configuration support.

#### Tech Support

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**Contact Us** 



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