ProSoft Technology
General information
ProSoft Technology EMEA

Europe, Middle East, Africa HQ: ProSoft Technology SAS France

Local Office Warsaw: ProSoft Technology SAS PL, EN, RU speaking

Latin America

Brazil Sales & Technical
Venezuela Sales
Mexico Sales
Bakersfield (CA) Sales & Technical
North America 6 Sales offices.
Madison Wireless
Houston LA H.Q.

Asia Pacific

Singapore Sales
Shanghai Sales & Technical
UAE Sales & Technical
Kuala Lumpur AP H.Q.

Free technical support
3 year warranty
400+ partners world wide
25 Years of innovation

2015 – ILX69, DH+ Migration update, MVI56E-AFC …
2014 – LDM, ILX34, RLX2-FH, PROFINet
2013 – RLX2, MVI56E new firmware, MVI69L/E, SIE
2012 – **NEW** range of PLX31 gateways and Micro800 SMS module
2011 – ProLinx IEC61850 gateway solutions and P3 Partners program
2010 – Automation-class **Industrial 802.11n** wireless
2009 – Introduction of “**Message Manager**” in-rack protocol interface
2008 – **Wireless POINT I/O** development
2006 – 802.11 standard +“**Reliable I/O Message Delivery**” to transport EtherNet/IP
2004 – Acquisition of Locus for their 2.4 GHz **Industrial Wireless** technology
2000 – ProLinx standalone **Interface** Gateways
1999 – Regional office in **Asia**, in **Latin America**
1997 – First regional office outside USA, in **France**, to get closer to users
1993 – **Growing range of protocols**, with first in-rack modules
1992 – Strengthen **partnership** with Allen-Bradley
**1990** – Company is created: “**ProSoft Technology, Inc.”**
1988 – Opened **Allen-Bradley PLC-5** to Modbus => EEPROM
Where Automation Connects.
Hardware Product Solutions

- 185+ in-rack solutions for Rockwell Automation
- 160+ stand-alone interface gateways
- 40+ Industrial Wireless solutions

Communication solutions for industrial automation: ABB, Emerson, Honeywell, Invensys, Mitsubishi, **Rockwell Automation**, Schneider Electric, Siemens, Yokogawa...
Ethernet solutions
Wireless
Industrial wireless solutions

**Why use wireless?**

- Save money by saving time
- Save money reducing plant wiring costs
- Communication to moving/spinning equipment
- Harsh environment communications
- Remote access for mobile workers
- Wireless as an alternative to Leased Telephone Line
- Remote access for data recording, alarms follow-up, programming

Don’t say NO to wireless just because you don’t KNOW wireless...Talk to ProSoft Technology

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### 802.11abgn
- 802.11a/g/b/n
- Up to – 300Mbps
- High speed I/O communication
- Short range SCADA
- Mobile application
- Video
- ATEX approval

### Radiating cable
- Installed instead of antenna
- Conducts RF waves
- Ethernet speed up to 300Mbps
- Guaranteed LOS
- Moving/rotating applications with 802.11n radios

### Frequency Hopping
- 900MHz & 2.4GHz
- Ethernet & Serial
- 19.2kbps – 1.1Mbps
- 1 Watt
- Long range SCADA

### Cellular
- 3G GSM & CDMA
- Remote SCADA
- Remote Machine Access
Introducing a NEW antenna

- RF transmitted through slots cut into the shield (under the insulation)
- Acts as a long, flexible antenna
- Provides uniform RF signaling along monorail tracks
- Solves line-of-sight challenges in corridors and tunnels
- Supports 802.11 2.4 GHz and 5 GHz wireless systems
Radiating Cable Applications
Radiatin Cable Typical applications

Communication inside a rail tunnel, road tunnel, subway

But today leaky cable is also used for other types of mobile applications:

♦ Distribution warehouse ♦ Cranes in aluminum plant ♦ Baggage handling system ♦ Funiculars ♦ Trolleys ♦ Monorail ♦ Conveyors ♦ Rotating machines ♦ Slip ring communication replacement ♦ Mobile application with I/O communication ♦ ...
Metal environment

- Warehouse: wireless connectivity for mobile workers, AGV, conveyors, ...
- Cranes inside the building, cranes for aluminum production, ...

Benefits:
- Metal environment is not an issue
- Easy to install
- No wave outside your building.
Automated warehouse

- **Application description**
  - Material handling for warehouses and stocks.

- **Application requirements**
  - A lot of metal frames
  - Moving part
  - Metal moving parts (cabinets) between rows of the warehouse
  - Reliability, availability (moving cabinet must not lose connection when at stop points).

- **Location**
  - Dornach, Switzerland
Wireless carries at FORD SPb

Ford St Petersburg Vsevolozhsk facility.
The RadioLinx Automation-class wireless solution from ProSoft Technology, allowed the number of carriers simultaneously in use over the loop in the paint-shop, to grow from 13 up to 20. Almost 54% increase!

Migrating DH+ to EtherNet/IP and slip-ring to RadioLinx network
Amusement ride

RadioLinx® 802.11n Industrial Hotspot RLXIB-IHN

100 meters of leaky cable LCK5100

RadioLinx® 802.11n Industrial Client RLXIB-ICN
Rotating machines

- All types of rotating machines: carousels, entertainment equipments, typical applications with slip ring communication replacement

**Benefits:**
Near field application: only few centimeters between mobile antenna and the leaky cable.
- clear line of sight guaranteed!
RLX2
New radio family
802.11n Fast Industrial Hotspot

- High speed 802.11n technology
  - Channel Bonding & MIMO Antenna (2 streams)
  - Up to 300 Mbps RF data rate
  - 2.4 GHz or 5 GHz band – including DFS channels

- Optimized for Ethernet IO & Producer/Consumer systems
  - Up to 4,000 packets/sec – very fast scan rates
  - IGMP snooping/packet filtering

Multiple Data Streams (MIMO)

Multiple Channels (Bonding)
802.11abg Industrial Hotspot

- High speed 802.11abg technology
  - Up to 54 Mbps RF data rate
  - 2.4 GHz or 5 GHz band
  - For general usage

- RLX2 Family Features
  - Fast roaming (less than 50ms) with full bridging
  - Free OPC server
  - SD recovery card
  - IGMP snooping/packet filtering
  - Serial communication transparent or with Modbus and DNP ethernet encapsulation
  - Possibility to mix 802.11abg and 802.11n radios in one network
ProSoft FAST ROAM Technology

- **Fast Roam** between Access Points
  - Less than 50 msec roam time
  - Bridging – multiple Ethernet devices on machines/carriers
  - No Wireless Controller required

![Overhead Cranes](image1.png)

![Automotive Assembly](image2.png)

![Automatic Guided Vehicles](image3.png)
Fast Roam Radiating Cable System

- 802.11abgn Fast Industrial Hotspot Performance
  - 2 RC segments per radio (up to 125m per segment)
  - Fast Roam support
    - less than 50 ms transfer time between masters
  - Up to 150 Mbps
Designed for Extreme Conditions

- Extended Operating Temperature
  - -40 to +75°C (-40°F to +167°F)
- High Shock/Vibration Rated
- Hazardous Location Certified
  - Class 1, Division 2
  - ATEX Zone 2
- Industrial Power Options
  - 12/24 VDC
  - Power over Ethernet (PoE)
Technical Support
The solution is not only radio module

The solution is not only solved by choosing the radio module.

Cables,
Antennas,
Splitters,
Lightning Protection,
etc.,
built the whole solution.

Wrong choices can generate a lot of problems.
Where to start?

❖ Collect the information on the application
  ❖ Simple word doc – Customer to complete
    – Country of installation
    – Where is it located (indoors or outdoors)
    – Number of radios (point-2-point or multipoint)
    – Mobile or fixed
    – Devices or equipment connected
    – Protocols
    – RPI times/baud rates
    – Distances between antenna
    – Obstacles
  ❖ Get a plant layout
  ❖ Google Earth
  ❖ Drawings/sketches
What next? Wireless designer

- ProSoft Technology Wireless Designer (PWD)
  - Help you in defining the architecture
  - Data from the collection form
  - BOM generator
What next? Site study

- Site study
  - This type of site survey can be done by non radio expert.
  - To identify antennas position, to determine the numbers of repeaters, feasibility, power requirements, etc
  - Serve as a guide for the design of the network, bill of materials, report, etc

TIP:
- Clear Line of sight – KEY POINT
- inSSIDer from MetaGeek
- Radio Browser – available parents
- Take pictures of the positions
- Record the information
- Write the report
What next? Site Survey

- Site survey
  - This type of survey requires a radio expert with the specific measuring systems
  - Analyse frequency bandwidth, the signals, the networks, etc
  - ProSoft Technology can assist you with the type of survey
- On site assistance during your project commissioning
Application examples
EtherNet/IP™
Wireless IO system

- Application description
  - Automotive
  - Metal press

- Customer needs

  **Challenges:**
  - Communication cable damaged or broke 4 to 6 times per year per press
  - Cost of >$14,000 each time plus lost production.
  - RF line of sight & multipath!

- Customer
  - Gestamp

- Location
  - Alabama, USA

- ProSoft Technology’s partner
  - Rockwell Automation
Wireless IO system

Our solution

- Migrate I/O traffic to media independent Ethernet
- Industrial wireless Ethernet between I/O and controller Ethernet card
- FHSS Wireless

Customer benefits

- "$174,000 savings per year plus profit from additional parts due to downtime elimination."
- “The radios work better than expected. We’ve been very happy with them.”
Overhead Cranes

- Application description
  - Use new machines at full speed
  - Transparent integration with existing control systems
  - Safe wireless network solution for the OEM to satisfy the End-User

- Customer needs
  - Increase capacity of material handling for
    - Uploading (raw material)
    - Download and buffering (manufactured product)
  - 2 new cranes
    - Each for both up and downloading
  - Lifting, rotating, translating movements

- Customer
  - Location
    - Australia

- ProSoft Technology’s partner
Foundry

- Application description
  - Communication between crane and HMI

- Customer needs
  - Increase capacity of material
  - Know the weigh embedded on the crane in real time
  - Exchange critical data for producing the cast-iron expected
  - Harsh environment: dust, heat, vibrations, metal parts

- Customer
  - Fonderies Dechaumont

- Location
  - Muret (Toulouse) - France

- ProSoft Technology’s partner
  - Rockwell Automation
ProSoft Technology Solution

**Wireless architecture**
- Radios used: RLX-IHW

**Customer benefits**
- **End-User can use his new machine at full speed**
- **Cost saving**
  According to the experience of the automation engineer, festooning cable would be more expensive. Necessary to change them every 2/4 years.
- **Time saving**
  No engineering. Radios implemented in 2 hours.
- **Product quality improved**
  With the right weight, the product expected will be generated.
- **Higher reliability network**
  With cables, interferences would be a problem → Communication losses.
Radios localisation
Application overview

Customer
- Grand Port Maritime du Havre – Minerals terminal (raw material)

Location
- Le Havre, France

ProSoft Technology’s partner
- 2AR Group – Airicom

Application description
- Wireless communication between harbor cranes and a control room

Customer needs
- System Remote control
  - Configuration
  - Programming
  - Diagnostics
- Manage crane speed
- Coexistence (other wireless networks)
- Extreme conditions
  - Dust, marine environment
ProSoft Technology Solution

**Wireless architecture**
- Radios used: RadioLinx RLXIB-IHW

**Customer benefits**
- Reliable solution
  - Replacement of low reliability modules
  - No more communication losses
- Time saving
  - No mechanical engineering
  - Possibility to work on the crane from the office or from home
  - 2 hours per week spared
Radios localisation
Gateways – 60+ protocols

- DNP 3.0
- BACnet
- ASCII
- ‘C’ Programmable Ethernet
- DH-485
- ‘C’ Programmable Serial
- DeviceNet
- DF1 Master/Slave
- IEC 61850
- IEC 60870-5-101
- Metasys N2
- HART
- LonWorks
- IEC 60870-5-103
- EtherNet/IP
- Modbus
- Modbus TCP/IP
- PROFIBUS
- AB Remote I/O
- Bosch
- Honeywell DE Master
- DNP over Ethernet
- LonWorks
- Modbus Plus

Connectivity & Migration
Smart protocol gateways

Features and Benefits:

- **High performance gateway**
  - Supports multiple IO connections
  - Allows combination of PLC/PAC to communicate with various end devices

- **Bi-directional data transfer**
  - Send and receive data

- **Cost effective & easy to configure**
  - Configure the unit over Ethernet
  - Maintain the network remotely
  - Remote diagnostic and status information
  - EDS files, and AOP

- **Built in SD card slot for config.files**
  - Reduces downtime – Disaster recovery

Protocols Supported

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* New devices
PLX30 EtherNet/IP to SIE

PLX31-EIP-SIE
- EtherNet/IP to Siemens Industrial Ethernet

PLX31-MBTCP-SIE
- Modbus TCP/IP to Siemens Industrial Ethernet

Key benefits
- Allows EtherNet/IP and Modbus TCP devices to interface easily with multiple S7-200, S7-1200, S7-300, and S7-400 PLCs.
- The multi-Client module improves performance when exchanging data with multiple S7 CPUs on a single network, by supporting up to 20 Clients.
- Supported register types: DB, Inputs, Outputs, Flags, Counters, Timers
Profinet gateway

- EtherNet/IP to Profinet Device
  - Embedded EDS Add-On Profile
  - No ladder programming is required when using I/O connections.
  - Multiple I/O connections
  - Communication via an I/O connection
  - SD card slot (SD card optional)
  - Video setup tutorial provided at psft.com/Ap5
EtherNet/IP to Modbus TCP/IP
- PLX32-EIP-MBTCP

EtherNet/IP to Siemens IE
- PLX32-EIP-SIE

Modbus TCP/IP to Siemens IE
- PLX32-MBTCP-SIE

Modbus TCP/IP to PROFINET
- PLX32-MBTCP-PND
Difference from PLX31

❖ Two Ethernet ports
  ❖ Each Ethernet **port has to operate** on a different network.

ControLogix

PLX32-EIP-MBTCP

10.1.2.15 ✔ 192.168.1.50
10.1.2.15 ✗ 10.1.2.105
ProSoft Technology has your PROFIBUS solutions

**PROFIBUS**

- PROFIBUS DP V0 Slave to:
  - HART
  - ASCII
  - DNP3
  - IEC 60870-5-101
  - IEC 60870-5-103
  - IEC 60870-5-104
  - MODBUS
  - DH485
  - DF-1
  - and many more...

- PROFIBUS DP Slave Module for CompactLogix, ControlLogix, SLC, Flex I/O, SCANport

**PROFIBUS**

**ETHERNET**

In-chassis solutions
For Rockwell Automation

- PROFIBUS DP V0 Slave to:
  - BACnet
  - LONworks
  - XML
  - METASYS
  - ControlNet
  - DeviceNet
  - and many more...

- PROFIBUS DP V1 MASTER

Stand alone gateways

- BACnet
- LONworks
- XML
- METASYS
- Controlnet
- DeviceNet
- and many more...

FDT Communication
- FactoryTalk Asset Centre
- FieldCare
- PSFT comDTM

ProSoft Technology has your PROFIBUS solutions
Energy Solutions

- IEC 61850
- DNP 3.0
- DNP 3.0 over Ethernet
- IEC 60870-5-101
- IEC 60870-5-103
- IEC 60870-5-104
- Modbus TCP/IP
The ProSoft Technology® EtherNet/IP™ to IEC 61850 communication gateway allows Rockwell Automation® PACs to interface with IEC 61850 Intelligent Electronic Devices (IED) such as substation power monitors and relays. The gateway acts as an IEC 61850 Client polling the devices on your network.

The two ports allow the IEC 61850 and EtherNet/IP™ protocols to reside on separate subnets.
Factory Utilities

- Smoothly integrate your Factory Utilities into your Rockwell Automation Architecture
- Easy to configure and cost effective
- ProSoft Technology provides technical support, as well as the “option to purchase” custom configuration service.

- Over 100 dedicated protocols....
- Energy management
- Data centres
- Life safety & fire alarm systems (gas leak detection, plant shut down)
- Legacy Networks
- Chillers, boilers, UPS (uninterruptable power supplies), VFD (variable frequency drives)......
- Building automation and other vertical market applications

Slot Server
In-rack module

Quick Server
Stand-alone gateway
ProSoft Technology offer a full suite of migration solutions for Rockwell Automation architectures.

- Phased migration
- Life cycle extension
- Connect a Data Highway Plus Network to ControlLogix or CompactLogix PLC via RSLogix5000
  - Enables combinations of HMI, programming terminals, and/or processors on an EtherNet/IP network access to the legacy processors on a DH+ network

- Any computer with an Ethernet port can connect to DH+ using the gateway
- Removes need for specific hardware cards (ISA, PCI, PC card, etc)
DH+ migration / Life cycle extension
AN-X2-AB-DHRIO with RIO ADAPTER firmware installed

- DH+ to Ethernet/IP HMI
- Upgrade your HMIs without replacing your Control System
  - Migrate to the latest PanelView Plus 6 products

PanelView Plus 6**
AN-X2-AB-DHRIO
EtherNet/IP
Blue Hose
DH+
PLC5

**PanelView Standard in Silver Series
End of year deadline

Firmware will be available for download at February 2015
All AN-X2-AB-DHRIO will have chance to be upgraded
It works with PLC5 only
When configured as a Remote I/O scanner, it enables a Programmable Automation Controller (PAC) to control a legacy Remote I/O system facilitating processor upgrades – allows a phased approach to be used when upgrading or replacing legacy PLC5 or SLC controllers.
Remote I/O Adapter to Ethernet/IP HMI
- Upgrade your HMIs without replacing your Control System
  - Migrate to the latest PanelView Plus 6 products

A-B Remote I/O Adapter to EtherNet/IP Drives
- Connect up to 4 EtherNet/IP drives to an existing Remote I/O Network
MIGRATION SOLUTIONS
EtherNet/IP over Blue Hose
Huge installed base

- Huge install base of Allen Bradley Remote I/O Systems

- Most of the products pictured above are either Silver Series or Discontinued
Traditional Control system Upgrade

❖ Install new Ethernet network infrastructure
  ❖ Cat 5 cables, Managed Switched, Fiber Optics
  ❖ Pull through existing cable trays or new Conduit

❖ Convert programs
  ❖ PLC5 or SLC
  ❖ Drives
  ❖ PanelViews

❖ Schedule enough downtime to upgrade entire system

❖ Rewire and commission new system
  ❖ Debug wiring, PLC code, Drive Config and PanelView Config
Remote I/O networks have been installed for many years and typically run long distances.
You already got cables
Functionality Overview

EIP

Master

Repurposed Remote I/O Cable

Slave

Trunk

滴

Drip

RIO

EIP

Drip

RIO
Allen Bradley RIO Before

Remote I/O
Blue Hose

Cabinet 1

Cabinet 2

Cabinet 3
EtherNet/IP After

Repurposed Blue Hose

Cabinet 1

Cabinet 2

Cabinet 3
Rockwell Automation Solutions
inRAX Communication solutions

Covering entire Rockwell Automation PLC range:
ControlLogix; CompactLogix; SLC500; PLC-5; FLEX I/O;
SCANport; Micro800
Premier Integration Tools

- **AOP – Add on Profile**
  - Installs in RSLogix 5000
  - Simplifies setup and commissioning via predefined tags and a setup wizard
  - Makes ProSoft Technology products easier to deploy in a Rockwell Logix system
  - AOPs are available for the MVI56-PDPMV1, MVI56E-MCM, MVI56E-GSC and the MVI69 CompactLogix family of interfaces.

- **AOI – Add on Instruction**
  - Incorporates the module’s ladder logic, controller tags, and user defined variables into one simple instruction.
  - Add-on instructions are available for many products.

- **Faceplates – HMI objects for PV Plus and FTView ME**
  - Free to customers
  - Displays product diagnostics & configuration for operators and engineers to troubleshoot the process
  - Works with AOIs – Add on Instructions to get display data
EtherNet/IP modules

**EtherNet/IP Client/Server** Network Interface Module for **SLC500, CompactLogix, PLC5, Micrologix 1500** allows:

- PLC processors to interface with EtherNet/IP protocol (Explicit Messaging) compatible devices and hosts
- remote Ethernet programming and troubleshooting (by PLC com port)
- SCADA access

**Perfect for:**
- Enabling old PLC’s to EtherNet/IP
- Exchanging data with EtherNet/IP PLC’s
- Adding additional communication channels
- Adding additional subnet access
- PLC based interface to DH+/ RIO, DH-485 devices
- VPN access
- Ethernet programming (Virtual COM port)
- Building unified network using ethernet

**Devices available:**
- MVI46-DFNT
- MVI69-DFNT
- MVI71-DFNT
MVI69-DFNT module acts as **Client and/or Server** on EtherNet/IP network

- Support for **explicit messages** (No I/O connection supported)
  - Our module doesn’t allow remote RSLogix5000 programming software connection
  - Our module doesn’t allow access to CompactLogix tags directly.

**Typical Applications**

- Machine builders/SI/OEM looking to “lock down” the application
- Machine builders/SI/OEM looking for a separate subnet for communicating with HMI/SCADA host

Customer has to transfer data values in internal module database from the CompactLogix processor. This action is done through ladder logic program. Remote devices like SCADA will access to data stored into the MVI69-DFNT database.
PROFIBUS in-chassis solution

- **FDT Communication**
  - FactoryTalk Asset Centre
  - FieldCare
  - PSFT comDTM

- **PCB Communication**
  - Module & Network Configuration
  - Diagnostics
  - Network monitoring

- **EtherNet/IP**
  - PROFIBUS DP V1 Master module

- **PROFIBUS DP field devices**

- **DP/PA third-party coupler or link module**

- **PA Field Devices**

- **PROFIBUS DP Slave Module for CompactLogix, ControlLogix, SLC, Flex I/O, SCANport**

- **FDT Communication**
  - FactoryTalk Asset Centre
  - FieldCare
  - PSFT comDTM
Modbus solutions

ProSoft Technology Modbus solution covers nearly all Rockwell Automation platforms

We got scalable solution! Even for cheaper applications
Modbus Serial solutions for CompactLogix

General Features for MVI69 E/L modules:
- MVI69E/L acts as a co-processor reducing impact on PLC scan time
- Configuration transferred and stored in CPU and is part of RSLogix
- Backed up with tools such as FactoryTalk Asset Centre
- Improved integration with AOI/AOP
- Diagnostic data available in RS Logix Controller tags

MVI69E-MBS – suitable for CompactLogix L2, L3 L4
- 2 Serial ports/channels
- Master and/or Slave
- 250 Max Modbus commands per port
- 10,000 words of data
- For ALL applications

MVI69L-MBS – suitable for CompactLogix L2, L3, L4
- More cost sensitive smaller applications
- 30 Modbus commands, 240/240 words of IO data
- Configuration stored in processor
- 1 Serial port
- Master or Slave

ILX34-MBSxxx -CompactLogix L1 & PointIO adapters
- 1 serial port
- 30 Modbus commands with 35 words of data per command
- Configuration stored in processor – Eliminates need to maintain multiple configuration files
- Works with PointIO adapters in distributed IO applications
Modbus TCP/IP solutions for CompactLogix

General Features for MVI69 E/L modules:
• MVI69E/L acts as a co-processor reducing impact on PLC scan time
• Configuration transferred and stored in CPU and is part of RSLogix
• Backed up with tools such as FactoryTalk Asset Centre
• Improved integration with AOI/AOP
• Diagnostic data available in RS Logix Controller tags

MVI69E-MBTCP – suitable for CompactLogix L2, L3, L4
• Multi Client/Multi Server
• 20 Server/20 Client simultaneous connections
• Up to 16 commands per connection, each fully configurable for function
• Configured commands can be directly controlled from Ladder Logix
• Error codes available on an individual command basis
• 10,000 words of I/O data

MVI69L-MBTCP – suitable for CompactLogix L2, L3, L4
• More cost sensitive smaller applications
• Multi Client/Multi Server
• 10 Server/10 Client simultaneous connections
• Up to 16 commands per connection, each fully configurable for function
• Configured commands can be directly controlled from Ladder Logix
• Error codes available on an individual command basis
• 240 words of I/O data
C programmable modules

MVI56E-LDM

C programmable modules based on Linux

**Key Features:**
- 2 Serial Ports
- 2 Ethernet Ports
- Free VMWare image with preconfigured programming environment

MVI69E-LDM

C programmable modules based on Linux

**Key Features:**
- 2 Serial Ports
- 1 Ethernet Ports
- Free VMWare image with preconfigured programming environment
Provides a powerful option for custom applications requiring ControlLogix and CompactLogix connectivity.

Why you should use LDM card?:

- Protect Know How – key part of code could be moved to LDM and compiled.
- Lock application – no possibility to change/copy code
- Additional features like adapting PID generated from MatLAB
- Specific communication code
- LDM as coprocessor – speed up calculations
- Linux based system – possibility to use web server, ftp, Linux applications …
- Any application requiring special development for Ethernet or serial connectivity