



PA PCP, 2024

# Compact Product Suite

Automation Products for the Process Industry

3BSE041303 EN Q

**ABB Products Proudly Distributed by Gross Automation.**  
**Please call +1 (262) 252-1600 or email [sales@grossautomation.com](mailto:sales@grossautomation.com).**



# Compact Product Suite

The right products to make your next process automation project a success.

## Compact Control Builder

Powerful engineering tool for creating control solutions and reusable control libraries for AC 800M controllers.

*When engineering efficiency matters.*



## Compact HMI

The perfect HMI/SCADA solution for sustainable operations.

*When intuitive operation matters.*



## Controller, I/O, Panels, Network equipment

Scalable and robust hardware from field connection, to control towards visualization.

*When equipment reliability matters.*



## Independent High Integrity

TÜV certified safety system for safety applications up to SIL3.

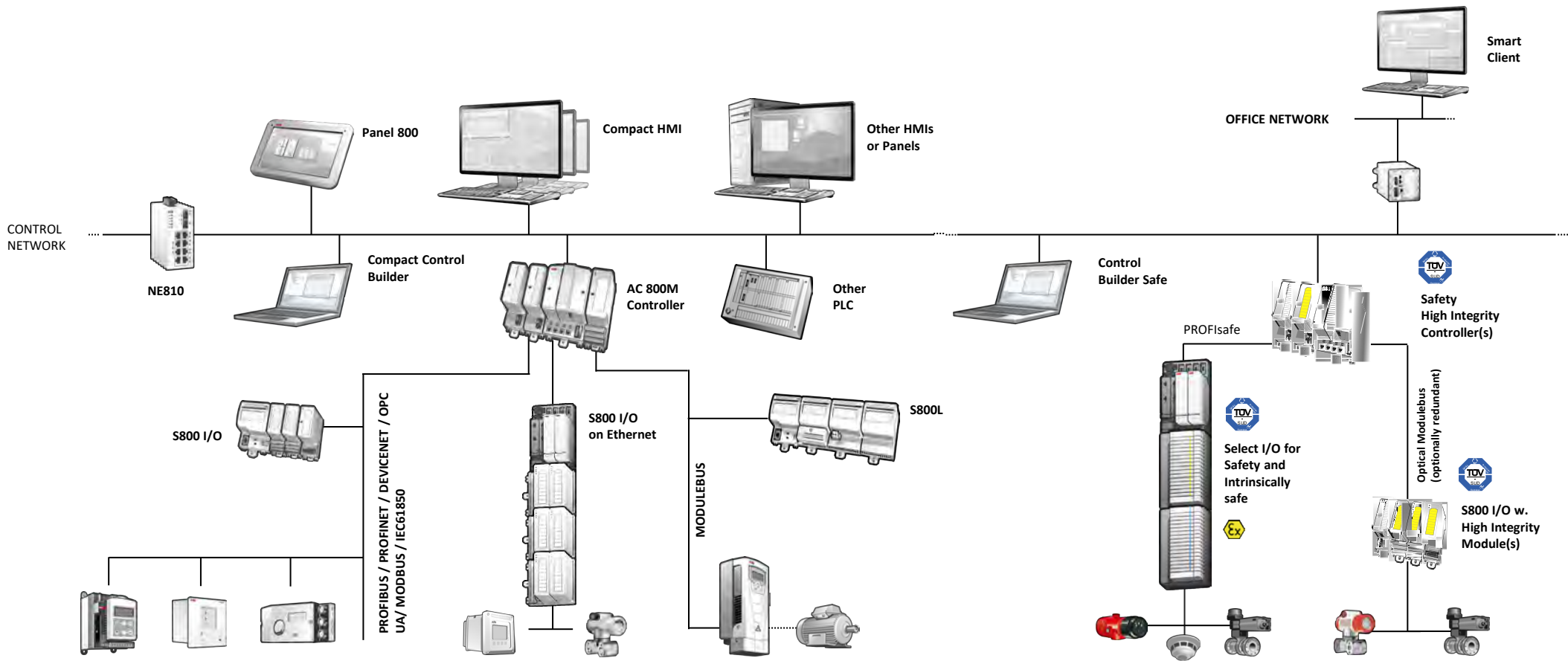
*When protecting people, environment, equipment and business matters.*





# Compact Product Suite

Automation Products for the Process Industry



Mix and match products, as you like.

or

Leverage Compact Product Suite synergies by using them together

# Compact Product Suite


## Examples of perfect fit

**ABB** [HOME](#) [COMPRESSOR](#) [DISTRIBUTED CONTROL SYSTEMS](#) [DCS](#) [INDUSTRY-SPECIFIC SOLUTIONS](#) [METALS PROCESSING](#)

Share this page  
f in t w p

### Compact Product Suite for Elektrokoppar copper wire manufacturer

Just the right control solution size and price for keeping a better check on processes – both in Sweden and China



Previous good experience with the S800 I/O system, made Elektrokoppar look at process control solutions from ABB's Compact Product Suite

#### Upgrading control systems for wire profiles

Elektrokoppar is one of the classic companies in the south district of Helsingborg, Sweden. The story begins in 1799 when Count Eric Ruuth founded a sister company that would much later become Höganas AB. The company's structure would change orientation several times before Elektrokoppar came about in 1953, with 75 percent of the company owned by Asea/ABB and 25 percent by Ericsson. The company is now owned by the Liljedahl Group.

Elektrokoppar manufactures rolled and profiled wire for cables. The majority of the copper comes from Bolden. Six days a week, a copper train arrives in Helsingborg from Norrland. "It's a train with about 500 tons of copper cathodes aboard," says Thomas Roslund, who heads the company's electrical department. The raw materials are extracted from the Atik mine, among others, just outside Gällivare. They are refined at the Rönnskär mill in Skelleftehamn before being sent to us. The copper cathodes, which weigh about 50 kilos, arrive in Helsingborg in compartments with 10 tons in each."

A few years ago, it became necessary to assess the control systems for profile production at Elektrokoppar. The oldest components were from the 1980s. At this point, Elektrokoppar went

**Main facts**

Industry	Metals
Customer	Elektrokoppar
Country	Sweden
Solutions	<p>Compact Product Suite consisting of:</p> <ul style="list-style-type: none"><li>• Compact HMI</li><li>• AC 800M controllers</li><li>• S800 I/O modules</li><li>• Compact Control Builder</li><li>• Operator workplaces</li></ul>

Thomas Roslund, head of the electrical department, Elektrokoppar:  
"System 800xA was too large for us, we instead settled on ABB's new compact


"System 800xA was too large for us, we instead settled on ABB's Compact system. It was just **the right size**"

**ABB** [HOME](#) [COMPRESSOR](#) [DISTRIBUTED CONTROL SYSTEMS](#) [DCS](#) [INDUSTRY-SPECIFIC SOLUTIONS](#) [METALS PROCESSING](#)

Share this page  
f in t w p

### Compact Product Suite for Tubosider pipe-rolling mill in UK

Rolling mill process control upgrade boosts capacity, improves product precision, reduces scrap and provides better diagnostics



John Merriman & Sons helped Tubosider U.K. improve its pipe-rolling by designing an automation solution with all the major system components coming from the same source: ABB

#### A successful manufacturer of corrugated pipe

Tubosider U.K. is a prominent manufacturer of corrugated pipe from 300 to 3600 mm in diameter in a variety of stock materials. These pipes are used in civil works for many purposes such as surface water culverts, as storm water and harvesting tanks, and as tunnels and underpasses under roads and railways.

The machine, representing a major production asset to Tubosider, has been producing helical pipes since its installation in 1969. Mechanically it is still in very good condition but the electrics had, quite obviously, become old and difficult to maintain, so the need to upgrade that part had been felt for some time.

Mark Inger, Engineering Manager at Tubosider:  
"The new equipment has boosted the capacity of the machine, improved the

**Main facts**

Industry	Metals
Customer	Tubosider U.K.
Country	United Kingdom
Solutions	<p>From Compact Product Suite portfolio:</p> <ul style="list-style-type: none"><li>• AC 800M controllers</li><li>• S800 Remote I/O stations</li><li>• Compact HMI</li><li>• Compact Control Builder Engineering stations</li><li>• Panel 800</li><li>And also, DC S800 DC drives</li></ul>
System integrator	John Merriman & Sons (JMS)

"The system is easy to extend, it has a full range of redundant solution and HMI selection, **the engineering efficiency is very high.**"

# Compact Product Suite

The right products to make your next process automation project a success.

## Compact Control Builder

Powerful engineering tool for creating control solutions and reusable control libraries for AC 800M controllers.

*When engineering efficiency matters.*



## Compact HMI

The perfect HMI/SCADA solution for sustainable operations.

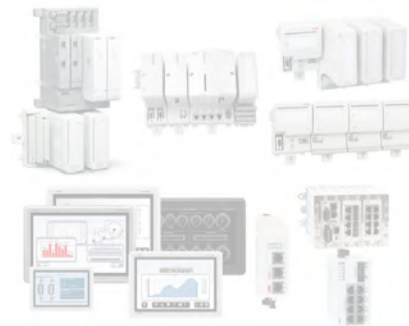
*When intuitive operation matters.*



## Controller, I/O, Panels, Network equipment

Scalable and robust hardware from field connection, to control towards visualization.

*When equipment reliability matters.*



## Independent High Integrity

TÜV certified safety system for safety applications up to SIL3.

*When protecting people, environment, equipment and business matters.*



---

# Compact HMI

Information, just a click away

**Based on and compatible with ABB Ability™ System 800xA technology**

- Object-based architecture
  - Enabling efficient configuration and operation.
- DCS functionality in an HMI
  - The most feature rich HMI/SCADA in the market?
- Scalability
  - Going from an HMI with a few signals to embedded electrical control, asset management and safety.



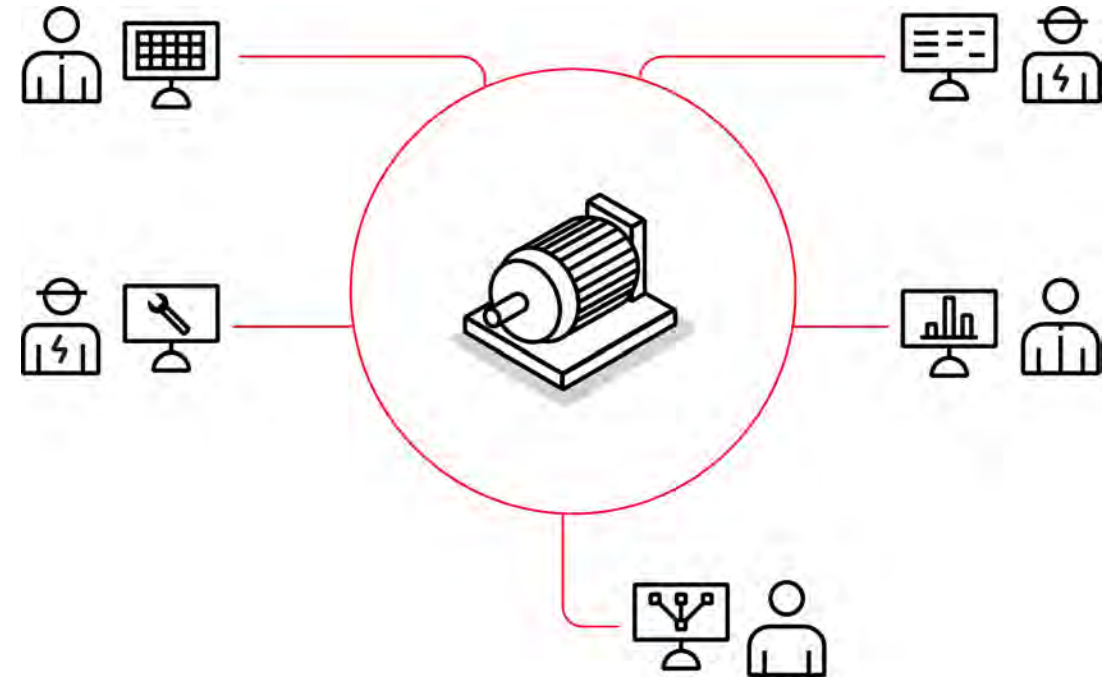


# Object-based architecture

How much information do you have for each thing?

## Aspect object technology

- Faceplates, Graphic Symbols
- Alarm management
- Trend, History
- Drawings
- Instructions
- ...







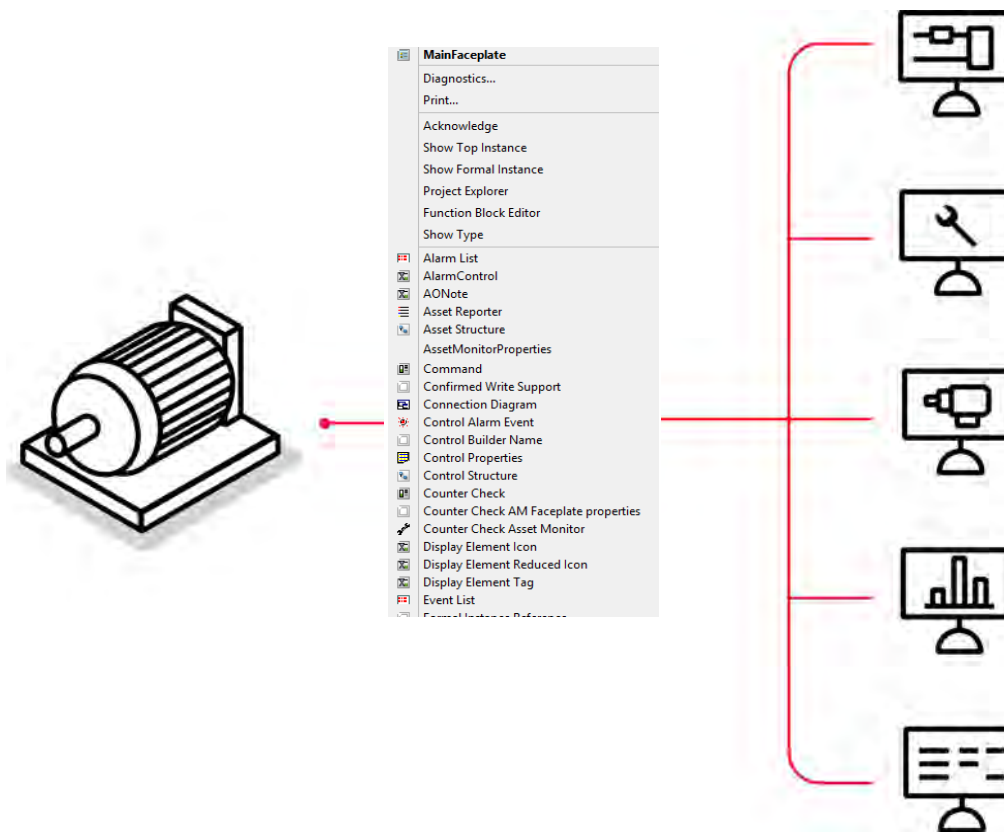
# Object-based architecture

The Solution – A system representation of the real world.

ABB's Aspect Object technology organizes information, not into files and folders, but into aspects of plant and business entities.

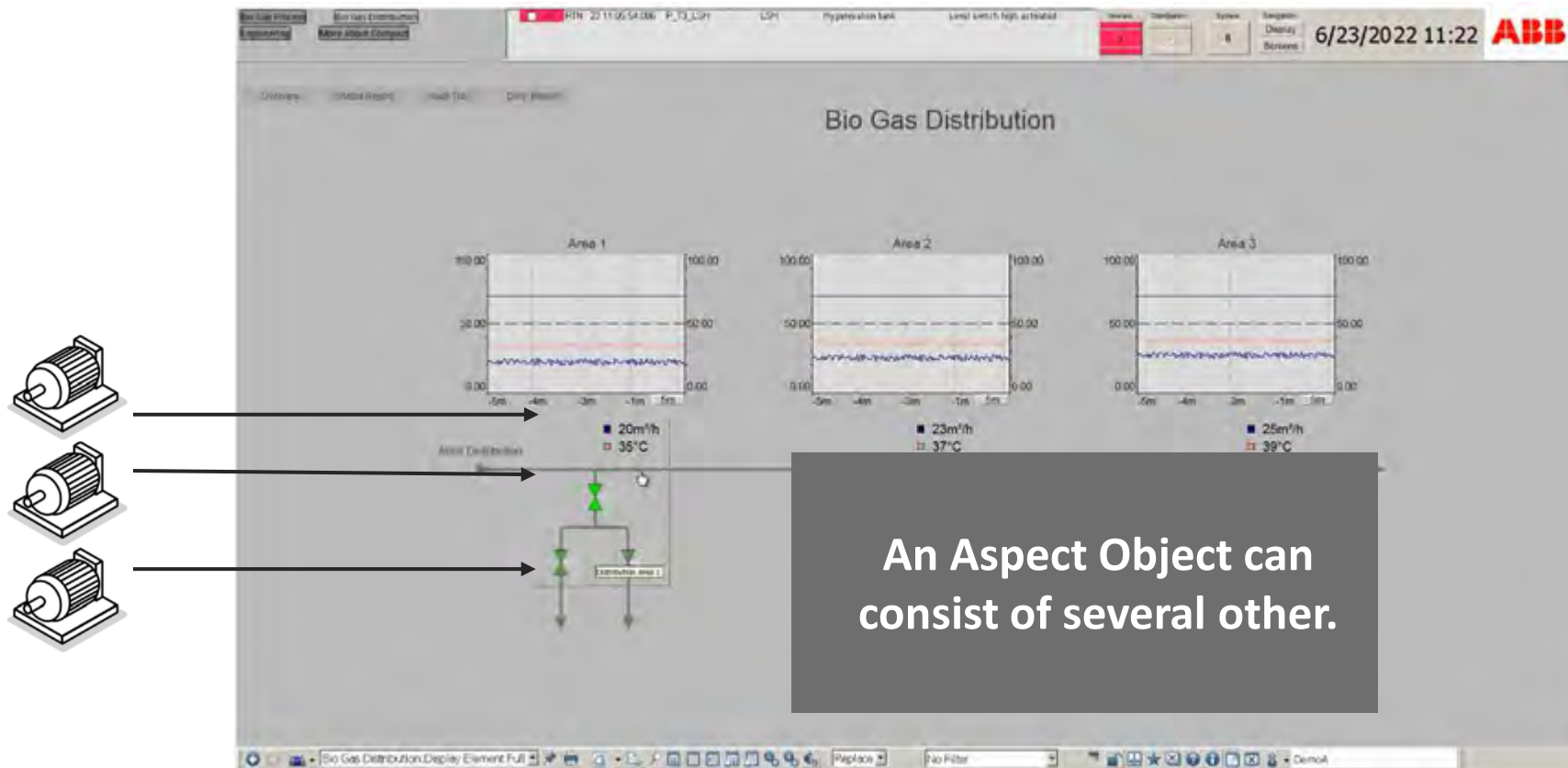
## Benefits

- Operator effectiveness - Seamless access to information to improve operations
- Engineering efficiency - Organizational structures, object-oriented engineering, libraries, ...
- Continuous improvement at a lower cost of ownership. Perfectly setup for supplying information for further analysis (i.e., the Internet of Things, Services, and People)



# Object-based architecture

The Solution – Things on many levels



---

# Compact HMI

When intuitive operation matters

**Based on and compatible with ABB Ability™ System 800xA technology**

- Object-based architecture
  - Enabling efficient configuration and operation.
- DCS functionality in an HMI
  - The most feature rich HMI/SCADA in the market?
- Scalability
  - Going from an HMI with a few signals to embedded electrical control, asset management and safety.





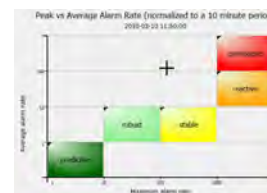
## Features available

- Ready to use workplaces
- Tab navigation with alarm indication
- History & advanced trending
- CAD Viewer included
- Bulk data handling
- Calculations and Soft points

PLC Connect - Bulk Data Manager			Signal Configuration Report						
Channel	Module Address	Component	Ranking	Life/Status	Unit	Subaddress	Mask1	Threshold	
0	0	DI16xDC24V/0.5A	0	OK	16	0	0	0	
0	0	DO16xDC24V/0.5A	0	OK	16	0	0	0	
0	0	AI5x12Bit	0	OK	5	0	0	0	
0	0	AO2x12Bit	0	OK	2	0	0	0	
0	0	Counter	0	OK	1	0	0	0	
0	0	Timer	0	OK	1	0	0	0	
0	0	Position	0	OK	1	0	0	0	
0	0	Speed	0	OK	1	0	0	0	
0	0	Temperature	0	OK	1	0	0	0	
0	0	Pressure	0	OK	1	0	0	0	
0	0	Flow	0	OK	1	0	0	0	
0	0	Level	0	OK	1	0	0	0	
0	0	Weight	0	OK	1	0	0	0	
0	0	Force	0	OK	1	0	0	0	
0	0	Distance	0	OK	1	0	0	0	
0	0	Angle	0	OK	1	0	0	0	
0	0	Acceleration	0	OK	1	0	0	0	
0	0	Velocity	0	OK	1	0	0	0	
0	0	Position	0	OK	1	0	0	0	
0	0	Speed	0	OK	1	0	0	0	
0	0	Temperature	0	OK	1	0	0	0	
0	0	Pressure	0	OK	1	0	0	0	
0	0	Flow	0	OK	1	0	0	0	
0	0	Level	0	OK	1	0	0	0	
0	0	Weight	0	OK	1	0	0	0	
0	0	Force	0	OK	1	0	0	0	
0	0	Distance	0	OK	1	0	0	0	
0	0	Angle	0	OK	1	0	0	0	
0	0	Acceleration	0	OK	1	0	0	0	
0	0	Velocity	0	OK	1	0	0	0	
0	0	Position	0	OK	1	0	0	0	
0	0	Speed	0	OK	1	0	0	0	
0	0	Temperature	0	OK	1	0	0	0	
0	0	Pressure	0	OK	1	0	0	0	
0	0	Flow	0	OK	1	0	0	0	
0	0	Level	0	OK	1	0	0	0	
0	0	Weight	0	OK	1	0	0	0	
0	0	Force	0	OK	1	0	0	0	
0	0	Distance	0	OK	1	0	0	0	
0	0	Angle	0	OK	1	0	0	0	
0	0	Acceleration	0	OK	1	0	0	0	
0	0	Velocity	0	OK	1	0	0	0	
0	0	Position	0	OK	1	0	0	0	
0	0	Speed	0	OK	1	0	0	0	
0	0	Temperature	0	OK	1	0	0	0	
0	0	Pressure	0	OK	1	0	0	0	
0	0	Flow	0	OK	1	0	0	0	
0	0	Level	0	OK	1	0	0	0	
0	0	Weight	0	OK	1	0	0	0	
0	0	Force	0	OK	1	0	0	0	
0	0	Distance	0	OK	1	0	0	0	
0	0	Angle	0	OK	1	0	0	0	
0	0	Acceleration	0	OK	1	0	0	0	
0	0	Velocity	0	OK	1	0	0	0	
0	0	Position	0	OK	1	0	0	0	
0	0	Speed	0	OK	1	0	0	0	
0	0	Temperature	0	OK	1	0	0	0	
0	0	Pressure	0	OK	1	0	0	0	
0	0	Flow	0	OK	1	0	0	0	
0	0	Level	0	OK	1	0	0	0	
0	0	Weight	0	OK	1	0	0	0	
0	0	Force	0	OK	1	0	0	0	
0	0	Distance	0	OK	1	0	0	0	
0	0	Angle	0	OK	1	0	0	0	
0	0	Acceleration	0	OK	1	0	0	0	
0	0	Velocity	0	OK	1	0	0	0	
0	0	Position	0	OK	1	0	0	0	
0	0	Speed	0	OK	1	0	0	0	
0	0	Temperature	0	OK	1	0	0	0	
0	0	Pressure	0	OK	1	0	0	0	
0	0	Flow	0	OK	1	0	0	0	
0	0	Level	0	OK	1	0	0	0	
0	0	Weight	0	OK	1	0	0	0	
0	0	Force	0	OK	1	0	0	0	
0	0	Distance	0	OK	1	0	0	0	
0	0	Angle	0	OK	1	0	0	0	
0	0	Acceleration	0	OK	1	0	0	0	
0	0	Velocity	0	OK	1	0	0	0	
0	0	Position	0	OK	1	0	0	0	
0	0	Speed	0	OK	1	0	0	0	
0	0	Temperature	0	OK	1	0	0	0	
0	0	Pressure	0	OK	1	0	0	0	
0	0	Flow	0	OK	1	0	0	0	
0	0	Level	0	OK	1	0	0	0	
0	0	Weight	0	OK	1	0	0	0	
0	0	Force	0	OK	1	0	0	0	
0	0	Distance	0	OK	1	0	0	0	
0	0	Angle	0	OK	1	0	0	0	
0	0	Acceleration	0	OK	1	0	0	0	
0	0	Velocity	0	OK	1	0	0	0	
0	0	Position	0	OK	1	0	0	0	
0	0	Speed	0	OK	1	0	0	0	
0	0	Temperature	0	OK	1	0	0	0	
0	0	Pressure	0	OK	1	0	0	0	
0	0	Flow	0	OK	1	0	0	0	
0	0	Level	0	OK	1	0	0	0	
0	0	Weight	0	OK	1	0	0	0	
0	0	Force	0	OK	1	0	0	0	
0	0	Distance	0	OK	1	0	0	0	
0	0	Angle	0	OK	1	0	0	0	
0	0	Acceleration	0	OK	1	0	0	0	
0	0	Velocity	0	OK	1	0	0	0	
0	0	Position	0	OK	1	0	0	0	
0	0	Speed	0	OK	1	0	0	0	
0	0	Temperature	0	OK	1	0	0	0	
0	0	Pressure	0	OK	1	0	0	0	
0	0	Flow	0	OK	1	0	0	0	
0	0	Level	0	OK	1	0	0	0	
0	0	Weight	0	OK	1	0	0	0	
0	0	Force	0	OK	1	0	0	0	
0	0	Distance	0	OK	1	0	0	0	
0	0	Angle	0	OK	1	0	0	0	
0	0	Acceleration	0	OK	1	0	0	0	
0	0	Velocity	0	OK	1	0	0	0	
0	0	Position	0	OK	1	0	0	0	
0	0	Speed	0	OK	1	0	0	0	
0	0	Temperature	0	OK	1	0	0	0	
0	0	Pressure	0	OK	1	0	0	0	
0	0	Flow	0	OK	1	0	0	0	
0	0	Level	0	OK	1	0	0	0	
0	0	Weight	0	OK	1	0	0	0	
0	0	Force	0	OK	1	0	0	0	
0	0	Distance	0	OK	1	0	0	0	
0	0	Angle	0	OK	1	0	0	0	
0	0	Acceleration	0	OK	1	0	0	0	
0	0	Velocity	0	OK	1	0	0	0	
0	0	Position	0	OK	1	0	0	0	
0	0	Speed	0	OK	1	0	0	0	
0	0	Temperature	0	OK	1	0	0	0	
0	0	Pressure	0	OK	1	0	0	0	
0	0	Flow	0	OK	1	0	0	0	
0	0	Level	0	OK	1	0	0	0	
0	0	Weight	0	OK	1	0	0	0	
0	0	Force	0	OK	1	0	0	0	
0	0	Distance	0	OK	1	0	0	0	
0	0	Angle	0	OK	1	0	0	0	
0	0	Acceleration	0	OK	1	0	0	0	
0	0	Velocity	0	OK	1	0	0	0	
0	0	Position	0	OK	1	0	0	0	
0	0	Speed	0	OK	1	0	0	0	
0	0	Temperature	0	OK	1	0	0	0	
0	0	Pressure	0	OK	1	0	0	0	
0	0	Flow	0	OK	1	0	0	0	
0	0	Level	0	OK	1	0	0	0	
0	0	Weight	0	OK	1	0	0	0	
0	0	Force	0	OK	1	0	0	0	
0	0	Distance	0	OK	1	0	0	0	
0	0	Angle	0	OK	1	0	0	0	
0	0	Acceleration	0	OK	1	0	0	0	
0	0	Velocity	0	OK	1	0	0	0	
0	0	Position	0	OK	1	0	0	0	
0	0	Speed	0	OK	1	0	0	0	
0	0	Temperature	0	OK	1	0	0	0	
0	0	Pressure	0	OK	1	0	0	0	
0	0	Flow	0	OK	1	0	0	0	
0	0	Level	0	OK	1	0	0	0	
0	0	Weight	0	OK	1	0	0	0	
0	0	Force	0	OK	1	0	0	0	
0	0	Distance	0	OK	1	0	0	0	
0	0	Angle	0	OK	1	0	0	0	
0	0	Acceleration	0	OK	1	0	0	0	
0	0	Velocity	0	OK	1	0	0	0	
0	0	Position	0	OK	1	0	0	0	
0	0	Speed	0	OK	1	0	0	0	
0	0	Temperature	0	OK	1	0	0	0	
0	0	Pressure	0	OK	1	0	0	0	
0	0	Flow	0	OK	1	0	0	0	
0	0	Level	0	OK	1	0	0	0	
0	0	Weight	0	OK	1	0	0	0	
0	0	Force	0	OK	1	0	0	0	
0	0	Distance	0	OK	1	0	0	0	
0	0	Angle	0	OK	1	0	0	0	
0	0	Acceleration	0	OK	1	0	0	0	
0	0	Velocity	0	OK	1	0	0	0	
0	0	Position	0	OK	1	0	0	0	
0	0	Speed	0	OK	1	0	0	0	
0	0	Temperature	0	OK	1	0	0	0	
0	0	Pressure	0	OK	1	0	0	0	
0	0	Flow	0	OK	1	0	0	0	
0	0	Level	0	OK	1	0	0	0	
0	0	Weight	0	OK	1	0	0	0	
0	0	Force	0	OK	1	0	0	0	
0	0	Distance	0	OK	1	0	0	0	
0	0	Angle	0	OK	1	0	0	0	
0	0	Acceleration	0	OK	1	0	0	0	
0	0	Velocity	0	OK	1	0	0	0	
0	0	Position	0	OK	1	0	0	0	
0	0	Speed	0	OK	1	0	0	0	
0	0	Temperature	0	OK	1	0	0	0	
0	0	Pressure	0	OK	1	0	0	0	
0	0	Flow	0	OK	1	0	0	0	
0	0	Level	0	OK	1	0	0	0	
0	0	Weight	0	OK	1	0	0	0	
0	0	Force	0	OK	1	0	0	0	
0	0	Distance	0	OK	1	0	0	0	
0	0	Angle	0	OK	1	0	0	0	
0	0	Acceleration	0	OK	1	0	0	0	
0	0	Velocity	0	OK	1	0	0	0	
0	0	Position	0	OK	1	0	0	0	
0	0	Speed	0	OK	1	0	0	0	
0	0	Temperature	0	OK	1	0	0	0	
0	0	Pressure	0	OK	1	0	0	0	
0	0	Flow	0	OK	1	0	0	0	
0	0	Level	0	OK	1	0	0	0	
0	0	Weight	0	OK	1	0	0	0	
0	0	Force	0	OK	1	0	0	0	
0	0	Distance	0	OK	1	0	0	0	
0	0	Angle	0	OK	1	0	0	0	
0	0	Acceleration	0	OK	1	0	0	0	
0	0	Velocity	0	OK	1	0	0	0	
0	0	Position	0	OK	1	0	0	0	
0	0								

- Audit Trail
- Advanced access control
- Digital signing of aspects
- User management
- User log-over
- Scheduled System Backup

- Alarms & events
- Alarm shelving
- Alarm analysis



- Snapshot reports
- Document handling
- Connectivity
- Office access using Smart Client
- Multisystem Integration provider
- OPC connectivity (DA, HDA, AE, UA)
- Dial-up connectivity
- SMS and e-mail messaging

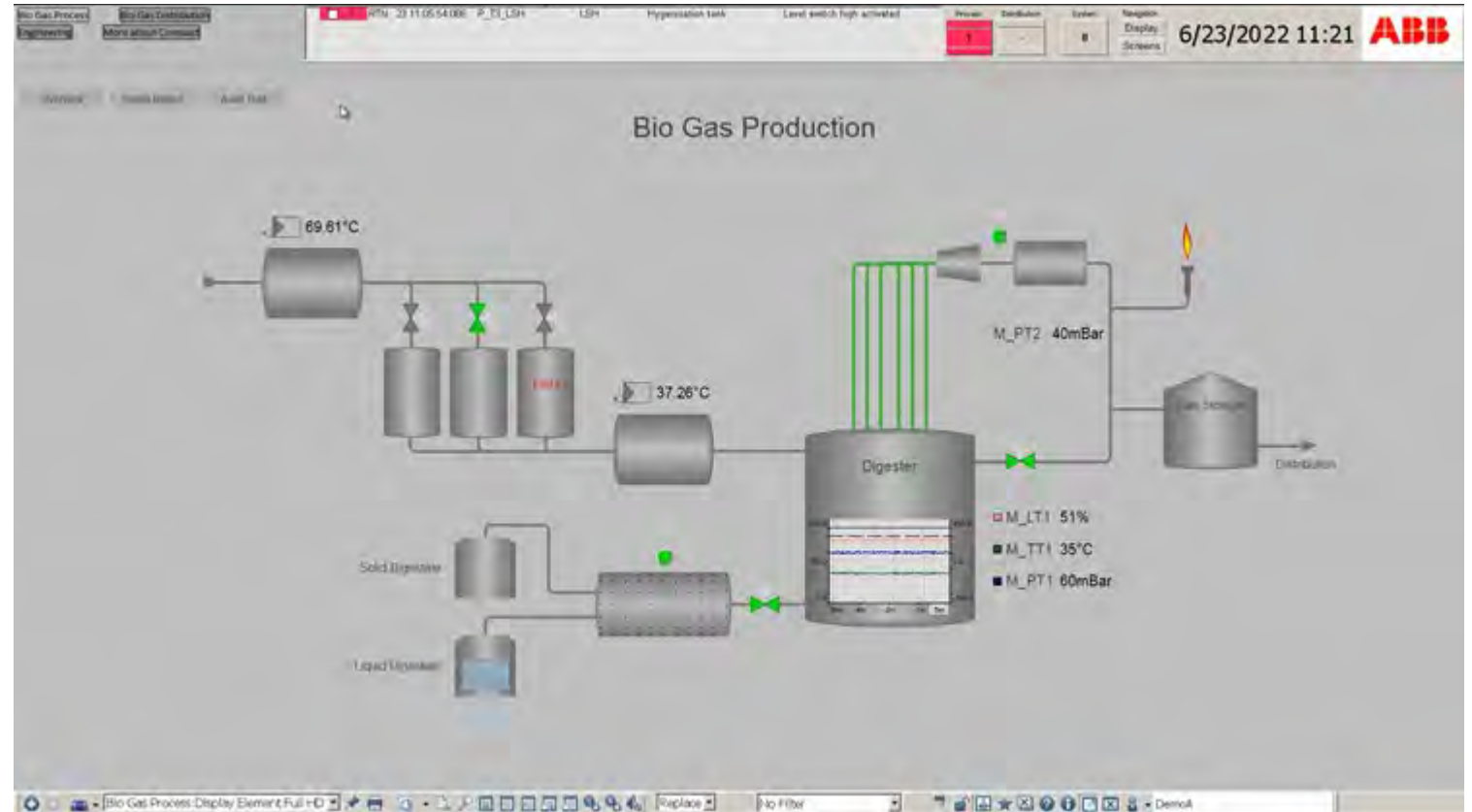


## A wide range of functionalities

# DCS functionality in an HMI

## High Performance Graphics

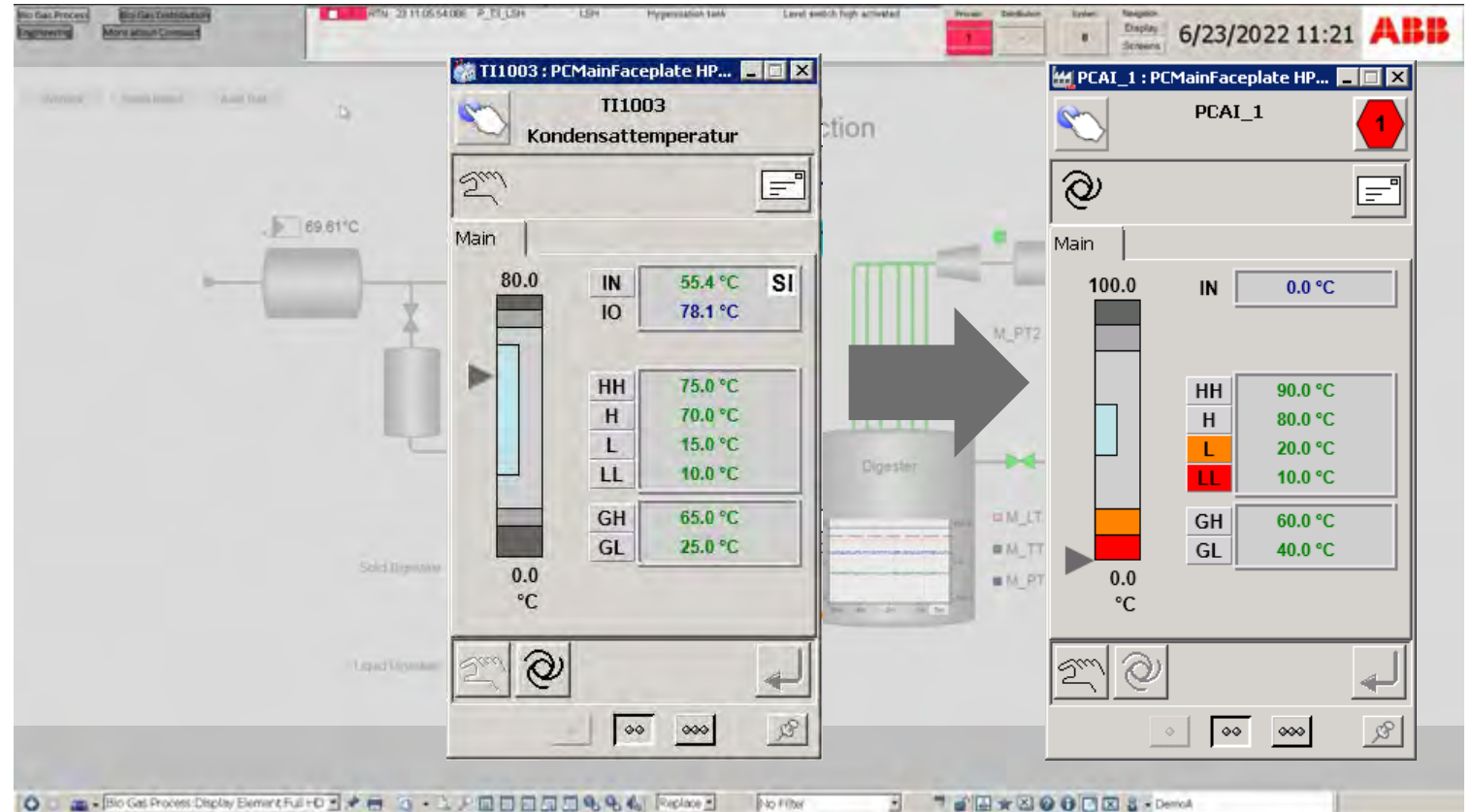
- Predefined workplaces including navigation, alarming, trending, view handling, favorites, etc.
- Modern engineering tool with wide range of ready to use graphical elements.
- Advanced trending functionality including auto scaling, zooming, alarm indication, etc.



# DCS functionality in an HMI

## High Performance Graphics – A faceplate example

- Example: Analog input
- Color concept:
  - Normal: Gray
  - Process values: Dark blue
  - Setpoints and changeable values: Green
  - Alarms: Red, Orange, Yellow (depending on priority)
  - 4 Limits (HH, H, L, LL) and “Good-Range” (GH, GL)





# DCS functionality in an HMI

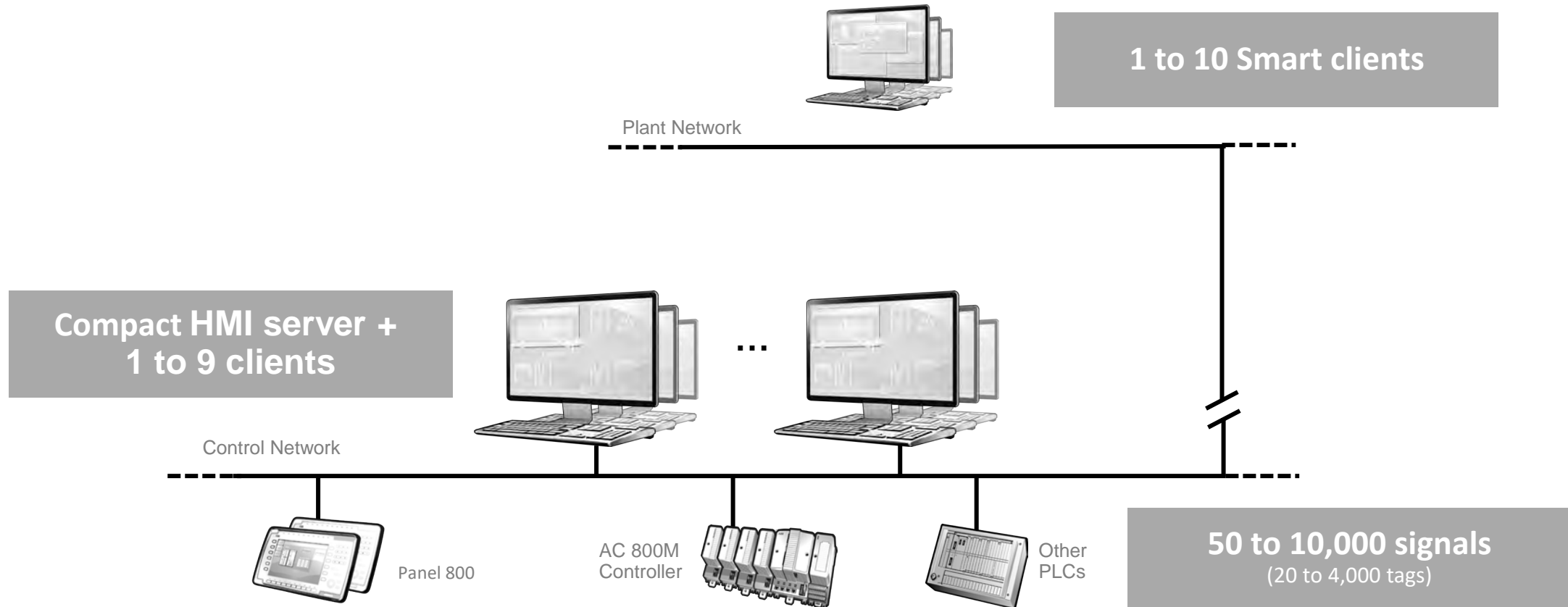
## Smart Client for Compact HMI

- True thin client office workplace that seamlessly retrieves data from Compact HMI.
- View KPIs, Compact HMI process graphics, and create your own specific reports.
- Intelligent data access and functions to assist all personnel.
- Inside or outside the plant facility.



# Compact HMI scalability

Flexibility



---

# Compact HMI

When intuitive operation matters

**Based on and compatible with ABB Ability™ System 800xA technology**

- Object-based architecture
  - Enabling efficient configuration and operation.
- DCS functionality in a HMI
  - The most feature rich HMI/SCADA in the market?
- Scalability
  - Going from an HMI with a few signals to embedded electrical control, asset management and safety.



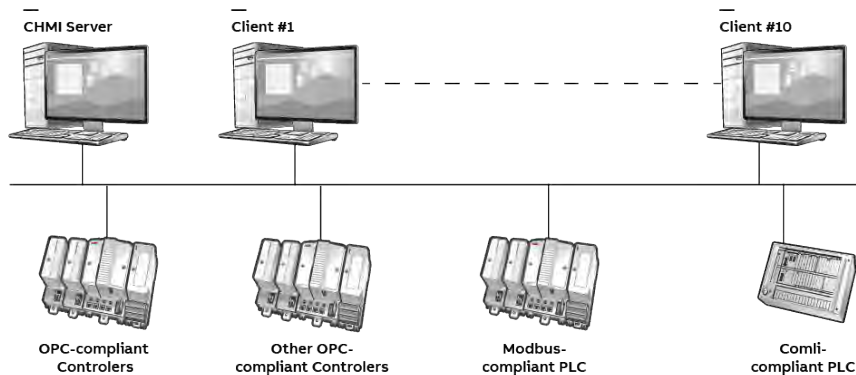


# Compact HMI scalability

Allow the system evolve with growing business needs

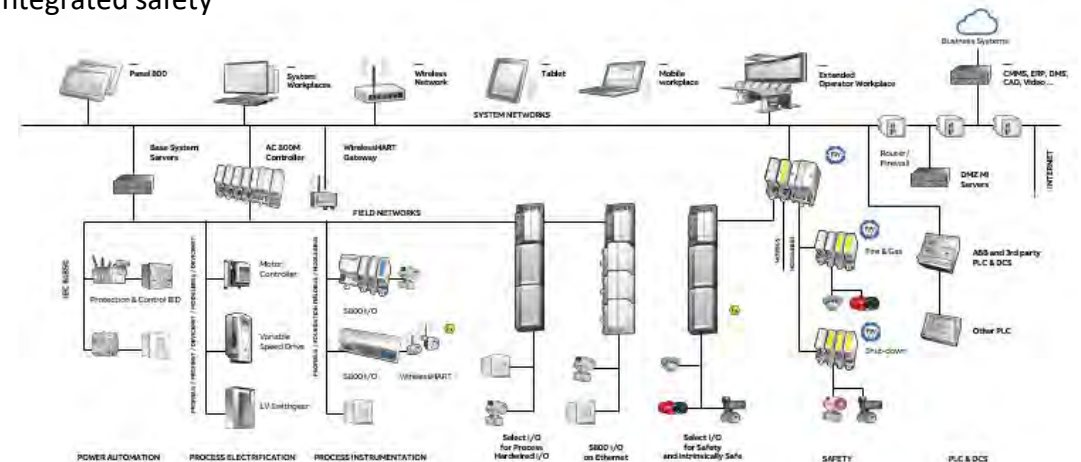
## Compact HMI

- 1 Server Workplace (Operations and Engineering)
- 1 to 9 additional client workplaces
- 50 - 10,000 signals (20 - 4,000 tags)



## ABB Ability™ System 800xA

- Up to 120,000 tags
- Deep integration with AC 800M
- Embedded electrical control
- Integrated safety

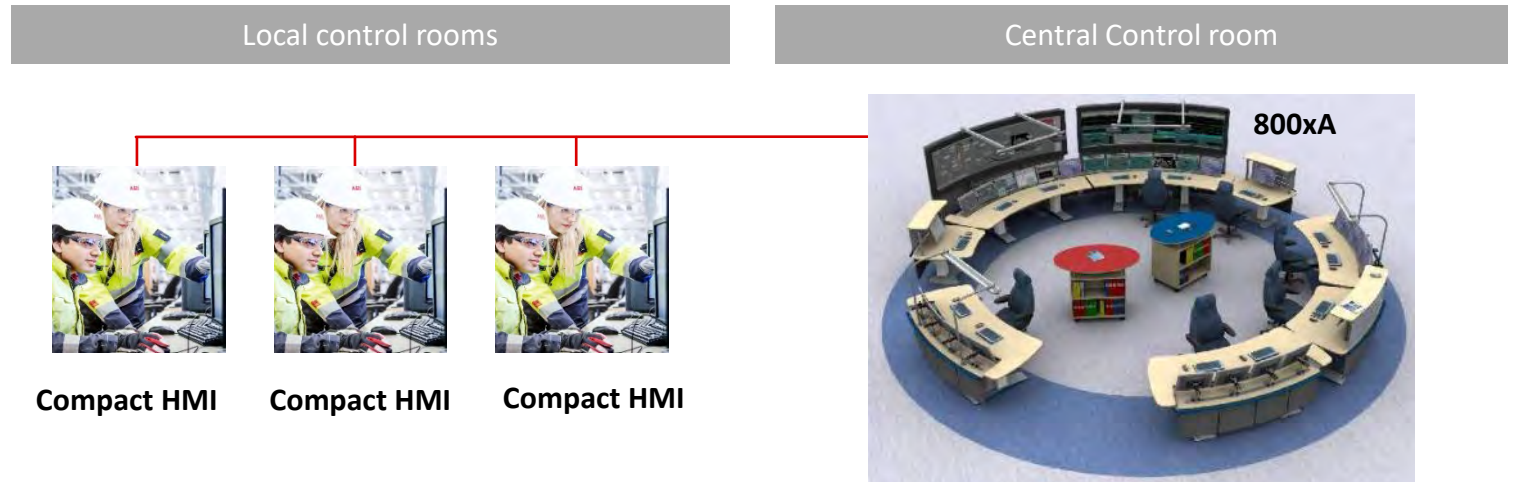


Evolve by simply switching license.

# Compact HMI scalability

Link local operations to a central System 800xA

- Allows geographically separate Compact HMI systems in local control rooms to be controlled from a common 800xA based central control room
- Provides sectioning of multiple line processes to increase integrity and simplify maintenance
- Allows staged commissioning without interfering with running processes



---

# Compact HMI

When intuitive operation matters

**Based on and compatible with ABB Ability™ System 800xA technology**

- Object-based architecture
  - Enabling efficient configuration and operation.
- DCS functionality in an HMI
  - The most feature rich HMI/SCADA in the market?
- Scalability
  - Going from an HMI with a few signals to embedded electrical control, asset management and safety.





---

# Compact Product Suite

The right products to make your next process automation project a success.

## Compact Control Builder

Powerful engineering tool for creating control solutions and reusable control libraries for AC 800M controllers.

*When engineering efficiency matters.*



## Compact HMI

The perfect HMI/SCADA solution for sustainable operations.

*When intuitive operation matters.*



## Controller, I/O, Panels, Network equipment

Scalable and robust hardware from field connection, to control towards visualization.

*When equipment reliability matters.*



## Independent High Integrity

TÜV certified safety system for safety applications up to SIL3.

*When protecting people, environment, equipment and business matters.*



---

# Panel 800

Compact Product Suite

**ABB Products Proudly Distributed by Gross Automation.**  
Please call +1 (262) 252-1600 or email [sales@grossautomation.com](mailto:sales@grossautomation.com).

# Panel 800

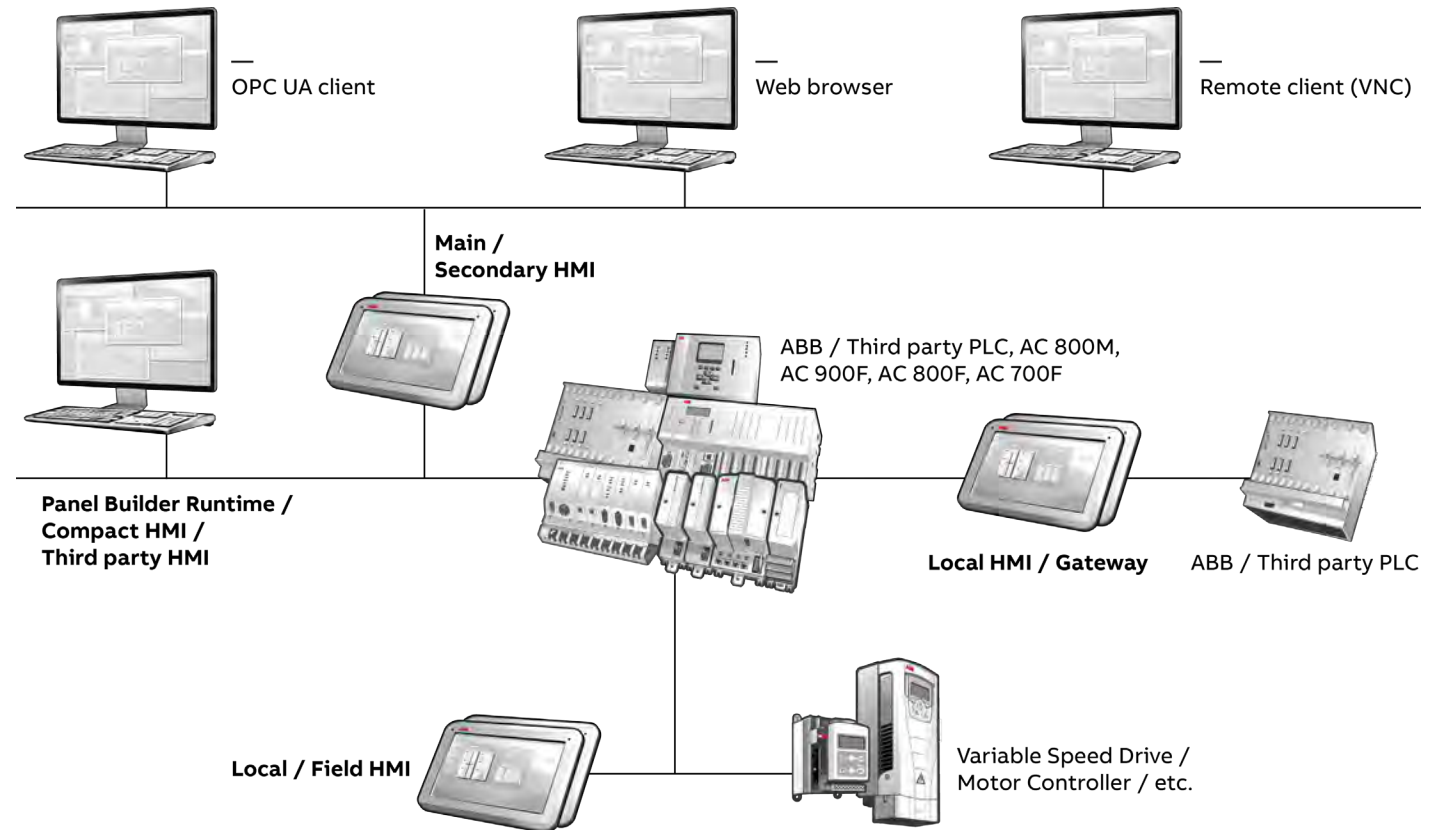
## Use cases

### Panel 800 as main HMI:

- Process panel
- Panel 800 Runtime (for running on Windows PC)

### Panel 800 as gateway between PLCs from different vendors.

### Panel 800 as local/field HMI.



# Panel 800

## State of the art panels

- Easy to use
  - Comprehensive, built-in HMI functionalities
- Robust and reliable technology
  - Strong yet lightweight
- Truly open platform
  - Built on open architecture

(One new PP887H-CFC panel;  
with conformal coated circuit board)

### Standard panels



### Black panels



### Rugged panels

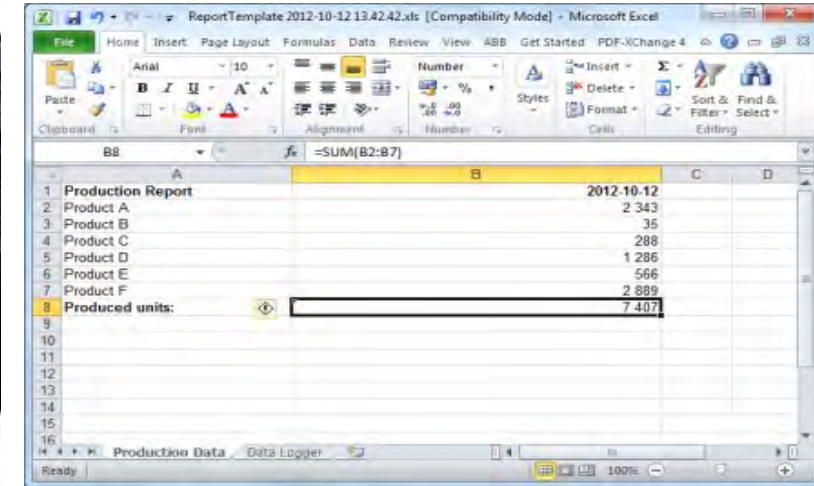




# Panel 800
















## Ease of use

- Use the built-in styles or create your own to achieve a consistent look.
  - Change one or all objects with one click to save on engineering time.
- Panel receive alarm information directly from controller. (only AC 800M)
- Automatic generation of reports, including graphics, calculations, and charts in Excel® format.
- In the Panel Builder 800 engineering tool: Up to eight (8) languages supported.



# Panel 800

Robust and reliable technology

	7"	10.4"	12.1"	15.4"	21.5"	Performance	Brightness	Operating temperature	Industrial Certification	Marine Certification	Hazardous Certification
Standard panels	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	☆☆	☀ ☀	-10 to +60°C	CE IP65 508/61010-2-201 		
Black panels	<input checked="" type="checkbox"/>			<input checked="" type="checkbox"/> 2		☆☆☆	☀ ☀ ☀ ☀	-10 to +60°C	CE IP65 508/61010-2-201 	   	
Rugged panels				<input checked="" type="checkbox"/> 4		☆☆☆☆	☀ ☀ ☀ ☀	-30 to +70°C	CE IP66 508/61010-2-201UL50E Type 4X, Type 12 	   	  

(One new rugged panel, PP887H-CFC, with conformal coated circuit board)

# Panel 800

## Truly open: Multi-brand controller connectivity

Panel 800 Version 6 Communication Drivers	Type <sup>[1]</sup>
ABB COMLI Master Protocol	Master
ABB COMLI Slave Protocol	Slave
ABB Control Network MMS for AC 800M	Master
ABB Freelance	Master
ABB Modbus AC31	Master
ABB Modbus AC500	Master
ABB TotalFlow	Master
Allen-Bradley Ethernet/IP	Master
Allen-Bradley DF1	Point to Point
Allen-Bradley DH485	Token slave
Allen-Bradley MicroLogix Ethernet	Master
Allen-Bradley SLC/PLC5 Ethernet	Master
Altus Alnet I	Point to Point
Animatics Smart Motor	Master
Beckhoff ADS	Master
Bernecker+Rainer Driver	Point to Point
Bosch Rexroth IndraDrive	Master
CACTUS ASCII	Point to Point
CAN Can Open (Built-in) <sup>[2]</sup>	Master/Slave
CAN Free CAN (Built-in) <sup>[2]</sup>	Master
CoDeSys ARTI	Master
Control Techniques Unidrive	Master/Slave
CTC Serial Binary	Point to Point
Delta PLC Modbus ASCII	Master
Delta Tau PMAC/UMAC	Point to Point
EMERSON Modbus Master RTU/ASCII	Master
Fatek Facon	Master
Galil DMC	Master
GE TCP/IP via SRTP	Master
GE Fanuc SNPX	Master
G&L Motion Control	Master
Grundfos GENibus	Master

Panel 800 Version 6 Communication Drivers	Type <sup>[1]</sup>
Hitachi H-series HCOMM	Point to Point
Idec Computer Link	Point to Point
J Control	Master
KEB COMBIVERT	Master
KEYENCE KV-Series	Master
Koyo DirectNET	Master
Koyo ECOM	Master
Koyo K-Sequence	Point to Point
Lenze LECOM A/B	Master
LS Glofa	Master
LS Master-K	Master
Matsushita Mewtocol-COM	Master
Melsec MC protocol	Master
MODBUS Master ASCII/RTU/TCP	Master
MODBUS Slave RTU/TCP	Slave
Omron FINS	Master
Omron Host Link	Master
Profibus, Generic Profibus DP <sup>[3]</sup>	Slave
Saia Serial/Ethernet	Master
Schneider Electric TSX Uni-Telway	Token Slave
SIMATIC S5 PG / AS 511	Point to Point
SIMATIC S7 200 PPI	Master
SIMATIC S7 ISO over TCP/IP	Master
SIMATIC S7 MPI (requires HMI Adapter)	Point to Point
SIMATIC TI500	Point to Point
Vigor M/VB-Series	Master
Vigor VS Series	Point to Point
WAGO Modbus TCP	Master
Yamaha VIP	Master
Yaskawa Memobus Master	Master
Yokogawa	Master

[1] Type of communication:

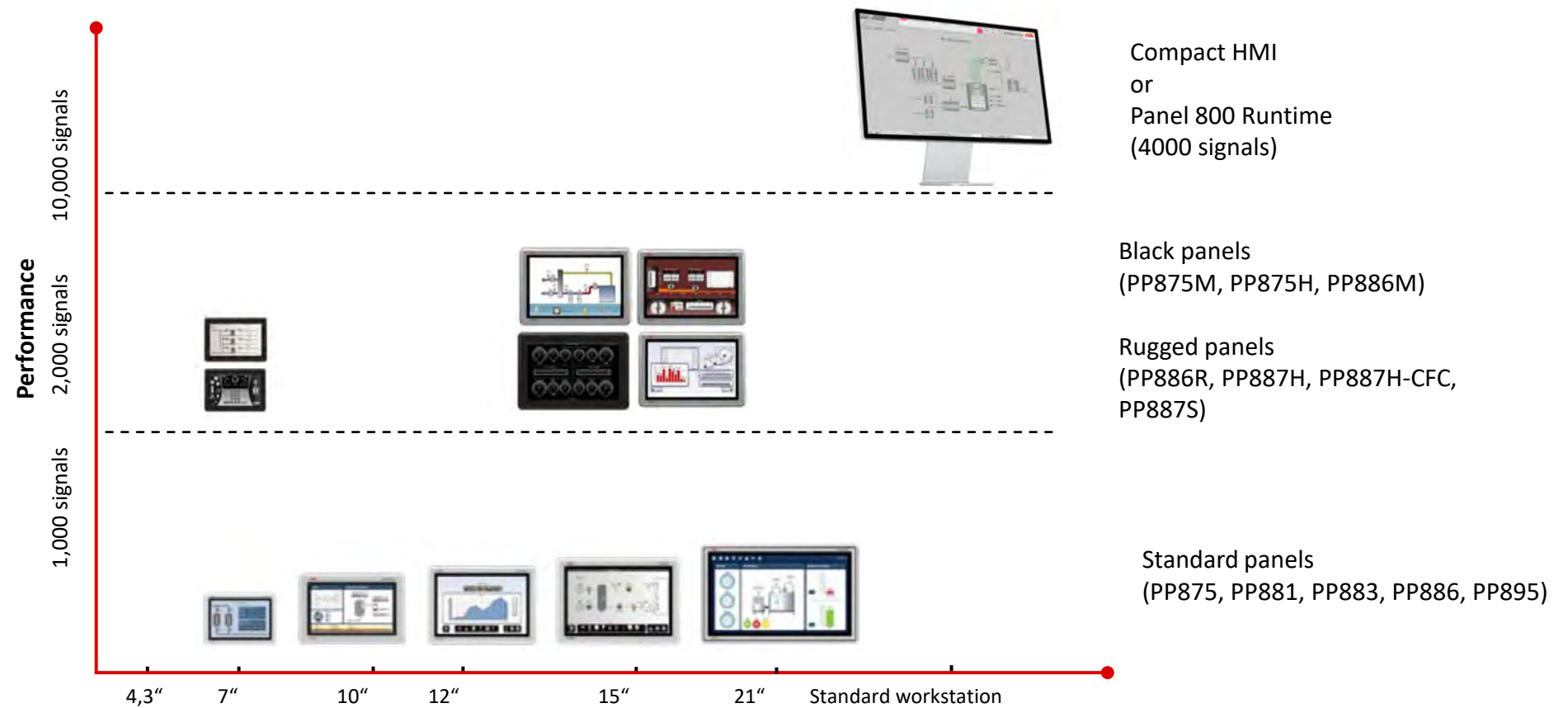
- Master: The panel is a master/client and asks one or many slave/servers. (Also Ethernet drivers)
- Slave: The panel is a slave/server and answers.
- Point to Point: The panel asks only one slave; there is no support for multi-drop.
- Token slave: A token network with the possibility for many panels to one PLC, the PLC is considered a slave.
- Token: Supports many panels and many PLCs at the same time on the network.

[2] Not possible to use for PP875 and PP875M.

[3] Not possible to use for PP886R, PP887H and PP887S.

# Panel 800 & Compact HMI

Positioning and portfolio overview





# Process Panel

Version 6.2

- Increased performance by enhanced firmware
- Life Cycle Management
  - Windows 7 & Windows 10 Support

Standard panels: 7, 10, 12.1, 15.4 and 21.5"



Black panels: 7, 7 and 15.4"



Rugged panels: 4 x 15.4"



(One new rugged panel, PP887H-CFC, with conformal coated circuit board)

---

# AC 800M controllers, S800 I/O and Select I/O HI

Compact Product Suite

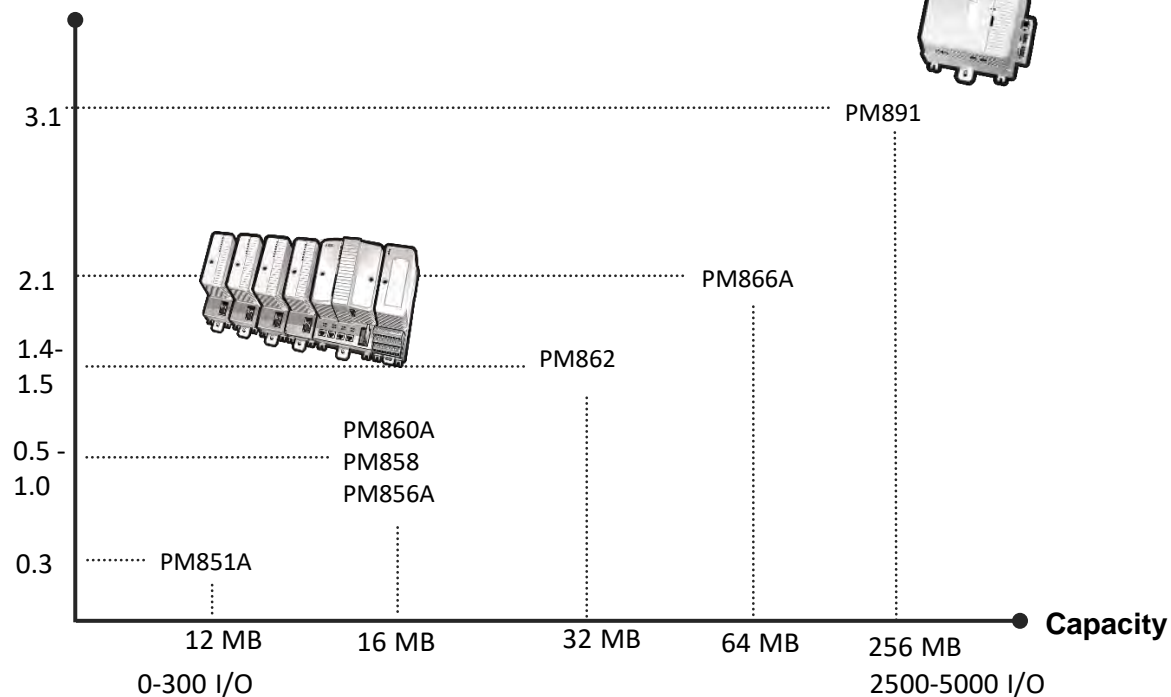
ABB Products Proudly Distributed by Gross Automation.  
Please call +1 (262) 252-1600 or email [sales@grossautomation.com](mailto:sales@grossautomation.com).

# AC 800M controller & S800 I/O

Wide range of BPCS controllers, communication interfaces & I/Os

## Controller range

### Performance



## Communication Interfaces

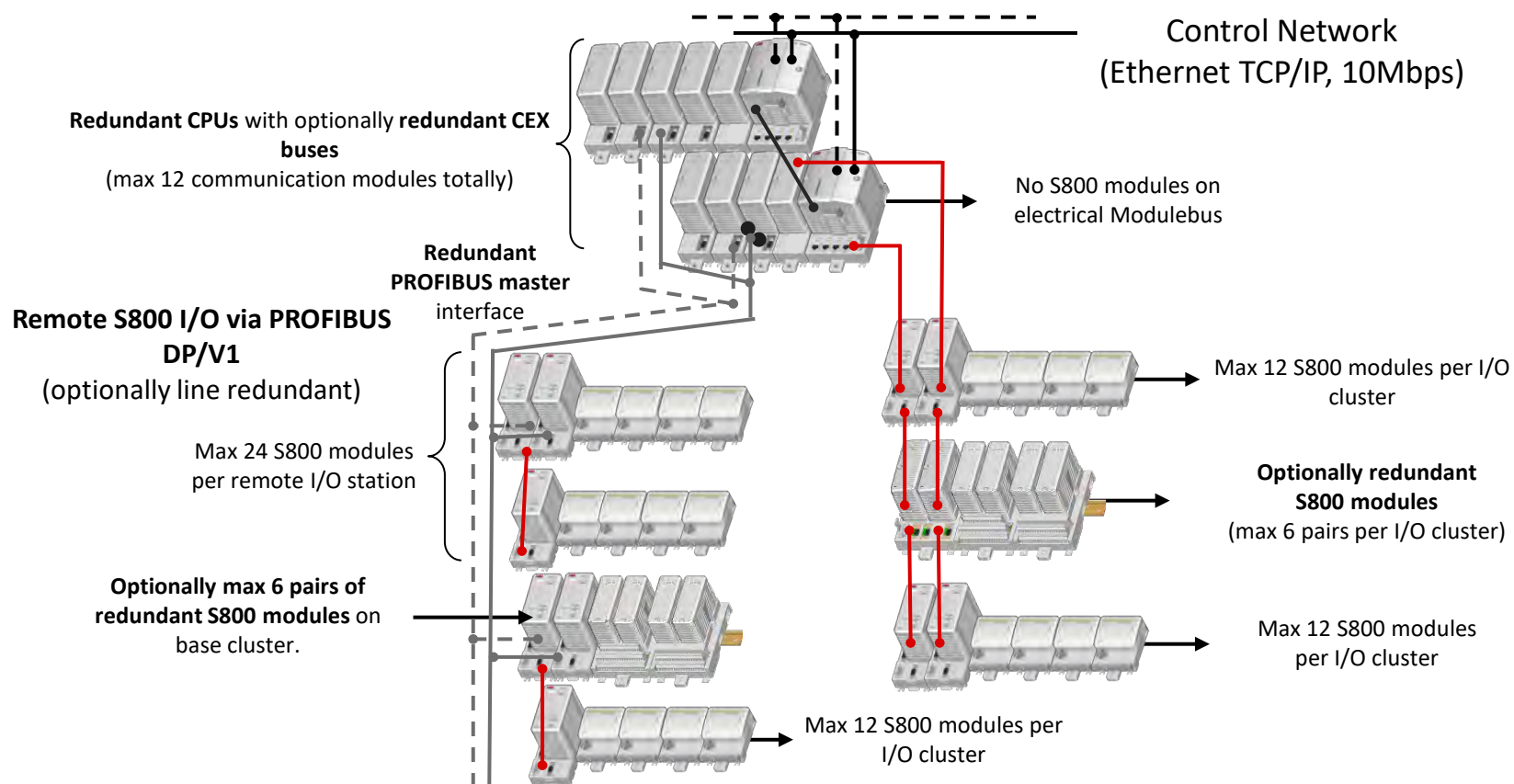
- PROFIBUS DP
- PROFINET IO
- MODBUS TCP
- EtherNet / IP
- DeviceNET
- RS232C
- MasterBus 300
- INSUM Switchgear
- ABB I/O systems
- Drivebus
- IEC 61850
- OPC UA

## S800 I/O, S800L I/O

- Extensive range of signal types
- Mix and match S800 IO family
- Hot-swap
- Mounting in and interfacing Ex environments

# AC 800M controller & S800 I/O

Selectable levels of redundancy





# AC 800M Controller & S800 I/O

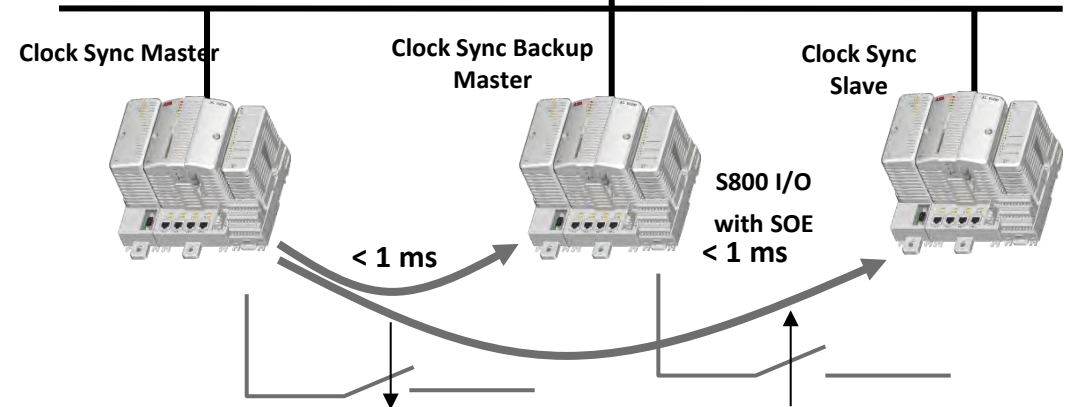
## High Time Accuracy on Events and Synchronization

If used with Compact HMI or Panel 800:

- Clock synchronization of controllers:  
< 1ms accuracy between controllers
- Time stamping on local S800 I/O  
DI830/831:< 0.5 ms accuracy DI825/840/880/885: < 1.0 ms accuracy

### Event List

Ack	Event Time	Ack Time	Object Name	Object Description	Condition	Sub Condition
<input checked="" type="checkbox"/>	9/2 09:35:16	xxxxxxxxxx	TEST_AOL6	description for TEST_AOL6	MOD MEASURE HIHI	
<input checked="" type="checkbox"/>	9/2 09:35:16	xxxxxxxxxx	TEST_AOS9	description for TEST_AOS9	MOD SETPOINT LO	
<input checked="" type="checkbox"/>	9/2 09:35:16	xxxxxxxxxx	TEST_DI1	description for TEST_DI1	MOD MEASURE HIHI	
<input checked="" type="checkbox"/>	9/2 09:35:16	xxxxxxxxxx	TEST_DAT_AO1	description for TEST_DAT_AO1	MOD MEASURE HIHI	
<input checked="" type="checkbox"/>	9/2 09:35:16	xxxxxxxxxx	TEST_DI15	description for TEST_DI15	MOD SETPOINT RATE OF CHAN	
<input checked="" type="checkbox"/>	9/2 09:35:16	xxxxxxxxxx	TEST_AOR3	description for TEST_AOR3	MOD MEASURE RATE OF CHAN	
<input checked="" type="checkbox"/>	9/2 09:35:16	xxxxxxxxxx	TEST_AOL7	description for TEST_AOL7	MOD OUTPUT LO	
<input checked="" type="checkbox"/>	9/2 09:35:16	xxxxxxxxxx	TEST_DO13	description for TEST_DO13	MOD MEASURE LOLO	



# AC 800M Controller & S800 I/O

## Built-in firewalls

- Network filter in Controllers and Communication Modules.
  - Blocks unsupported traffic
  - Network Storm protection
- Tested using a wide range of third-party tools.



# Compact Product Suite Select I/O Overview

## Single Channel I/O – Architecture Details

### Specifications

#### Ethernet FCI

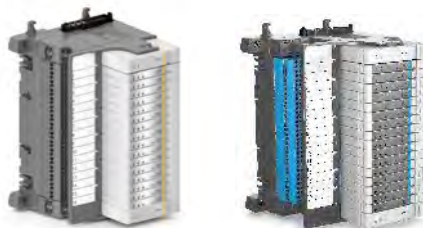
- Connects S800 (TU860) modules or Select I/O (TU865) MTUs to AC 800M controllers
- Hosts up to 12 Select I/O MTU's (192 channels) or 12 single or 12 redundant non-SIL S800 I/O
- Each FCI can connect with up to 10 controllers



Ethernet FCIs shown with copper and fiber Ethernet adapters

#### Select I/O HI

- Each MTU base includes single or redundant Generic I/O modules – process or safety
- 16 channels (SCMs) per MTU
- Any Select I/O channel can be soft marshalled to any controller



Select I/O bases w/ non-IS FTBs, IS FTBs

#### S800 on Ethernet

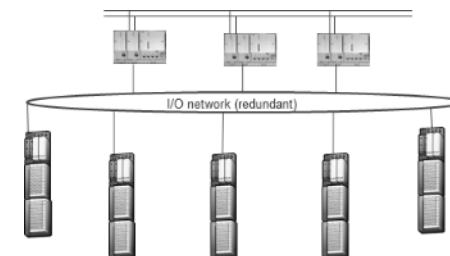
- Up to 12 single or 12 redundant non-SIL S800 I/O modules
- Any S800 module can be soft marshalled to any controller
- S800 on Ethernet and Select I/O can be used in the same system



Ethernet FCI (TU860) with redundant S800 modules connected.

#### Ethernet I/O Network

- Common or separate networks for process and safety
- All main topologies supported: Daisy Chain, Star, Ring...
- Single or redundant
- FRNT, MRP protocols



# Compact Product Suite

The right products to make your next process automation project a success.

## Compact Control Builder

Powerful engineering tool for creating control solutions and reusable control libraries for AC 800M controllers.

*When engineering efficiency matters.*



## Compact HMI

The perfect HMI/SCADA solution for sustainable operations.

*When intuitive operation matters.*



## Controller, I/O, Panels, Network equipment

Scalable and robust hardware from field connection, to control towards visualization.

*When equipment reliability matters.*



## Independent High Integrity

TÜV certified safety system for safety applications up to SIL3.

*When protecting people, environment, equipment and business matters.*





# AC 800M Controller & S800 I/O

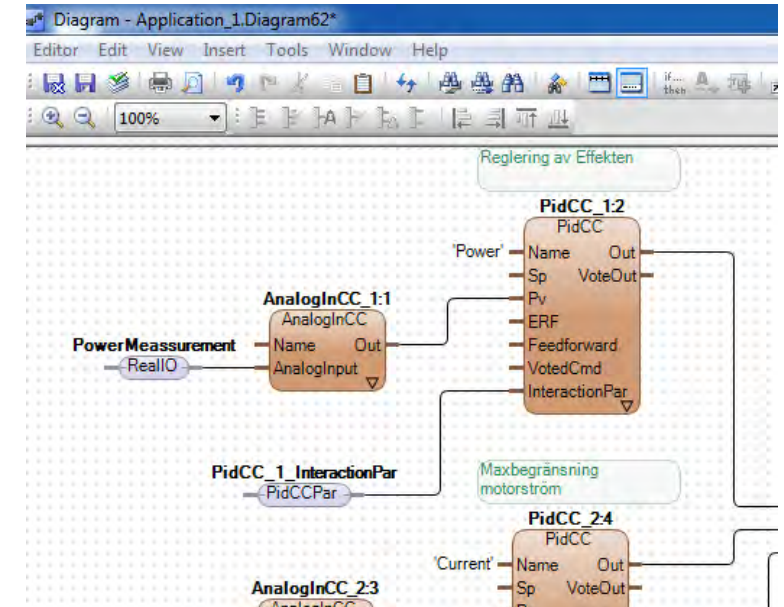
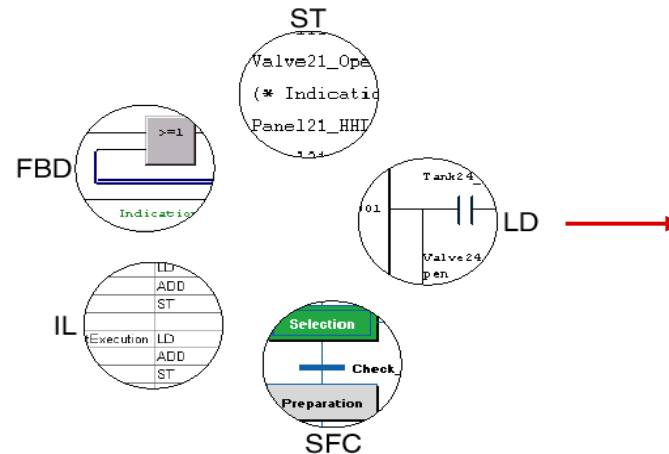
## Compact Control Builder

– Based on IEC 61131-3, supported languages:

- Structured Text (ST)
- Instruction List (IL)
- Ladder Diagram (LD)
- Function Block Diagram (FBD)
- Sequential Function Chart (SFC)

– Control Diagram Editor is a next generation block-based language that combines:

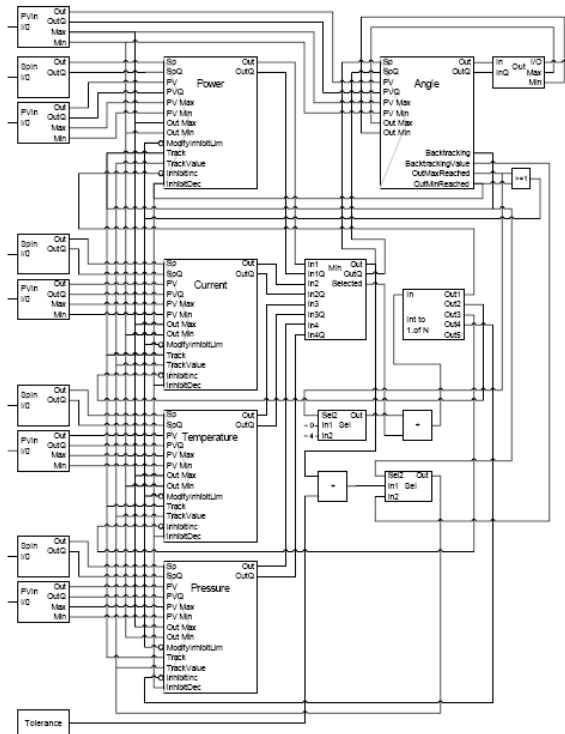
- Function Blocks
- Functions
- ST
- SFC
- ABB Control Modules



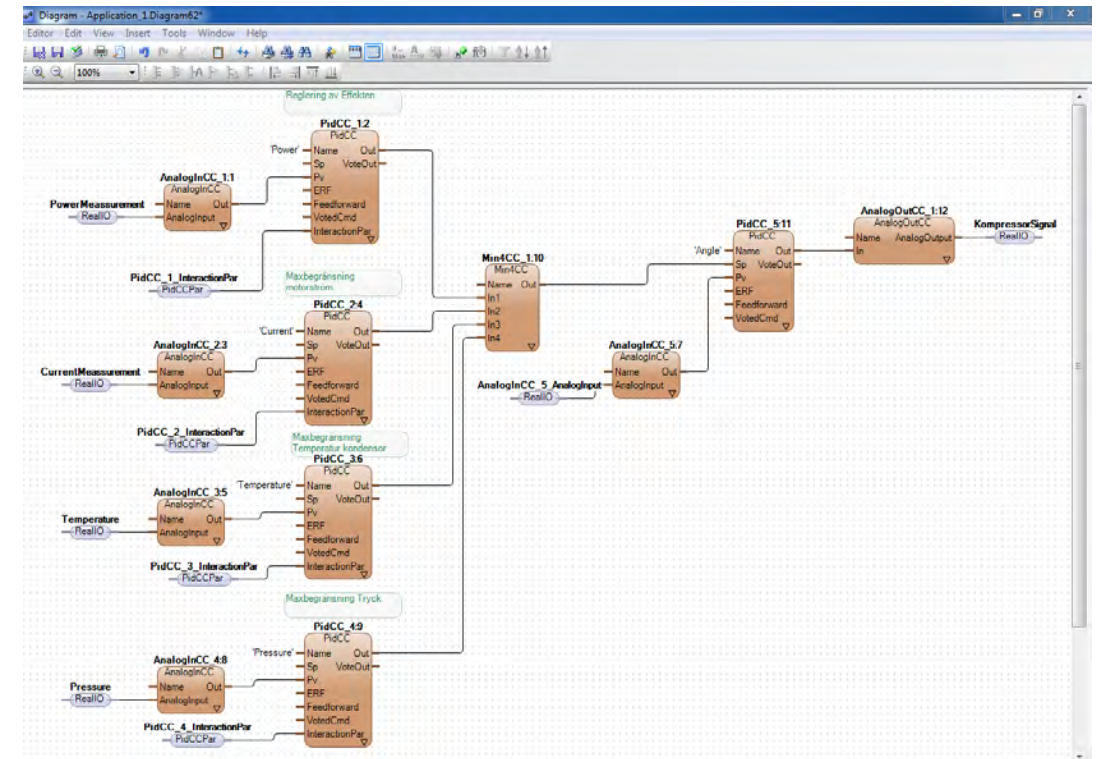
# AC 800M Controller & S800 I/O

Improved engineering using the Control Diagram Editor – Example showing a district heating pump

## Function Block Wiring



## Control Diagram Editor



# Compact Product Suite

The right products to make your next process automation project a success.

## Compact Control Builder

Powerful engineering tool for creating control solutions and reusable control libraries for AC 800M controllers.

*When engineering efficiency matters.*



## Compact HMI

The perfect HMI/SCADA solution for sustainable operations.

*When intuitive operation matters.*



## Controller, I/O, Panels, Network equipment

Scalable and robust hardware from field connection, to control towards visualization.

*When equipment reliability matters.*



## Independent High Integrity

TÜV certified safety system for safety applications up to SIL3.

*When protecting people, environment, equipment and business matters.*



# Independent High Integrity

Offering

## Stand-alone safety system

### Control Builder Safe – Engineering and Maintenance Tool

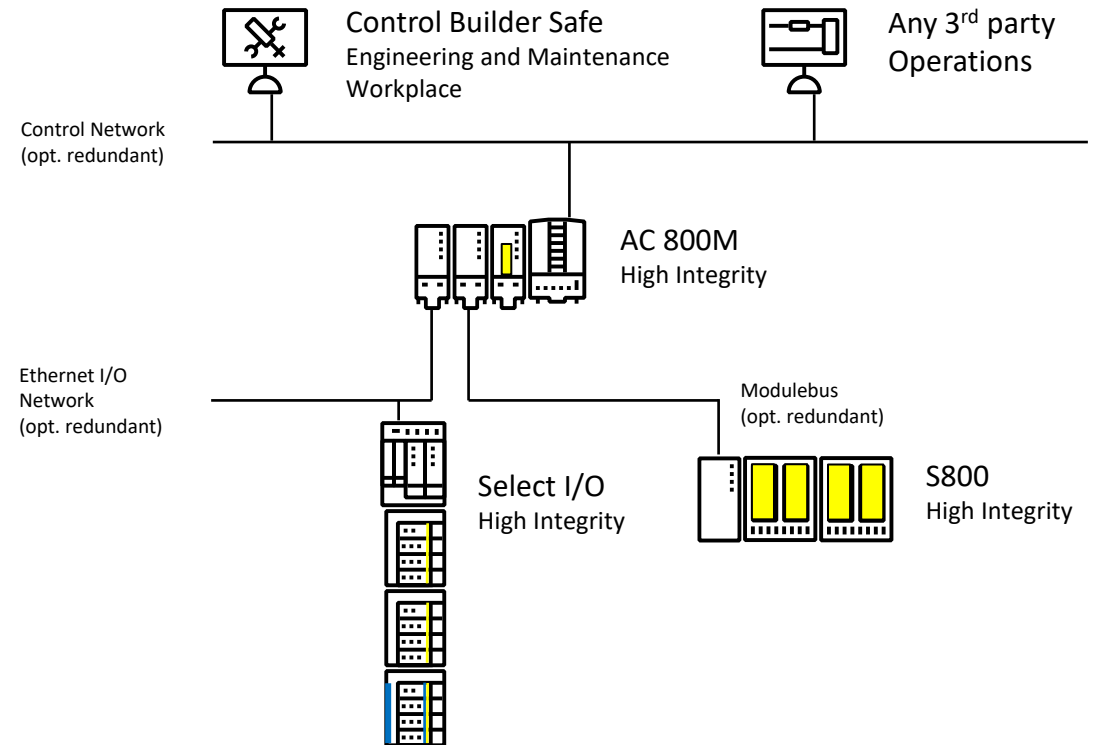
- IEC 61131-3 languages
- TÜV Certified Libraries
- Time stamped Audit Trail
- Force control and inhibit

### High Integrity Controller and I/O Hardware, certified for SIL 3

- AC 800M High Integrity (PM857, PM863, PM867 and SM812) with support for access control and override control
- Select I/O High Integrity SCMs (Ethernet based single channel I/O)
- S800 High Integrity (Multichannel I/O)

### Connectivity and interfacing

- ABB Control Systems or 3<sup>rd</sup> Party DCS for Operations



# Independent High Integrity TÜV Certification

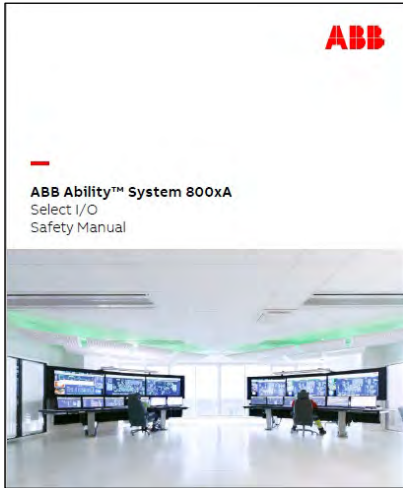
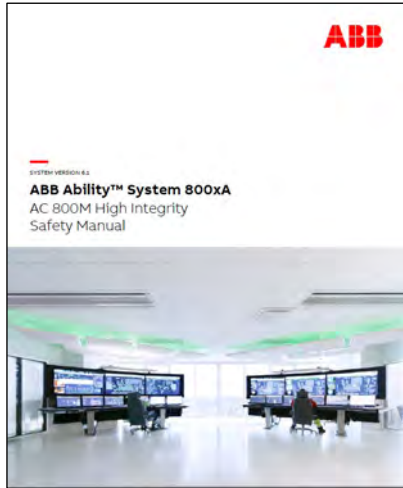
## Development Department



## Product



## Safety Manuals



TÜV Product Service certified all product components in the Independent High Integrity offering



# Summary

## Independent High Integrity



### **ABB your partner of choice**

40 years of experience in process safety, a global footprint and our outstanding life cycle commitment.

### **Safe, secure and cost-effective engineering and maintenance**

Full-blown engineering and maintenance using Control Builder Safe, fast application development thanks to certified libraries.

### **High Integrity Controller and I/O portfolio**

Embedded diversity controllers and I/Os, scalable from small to large safety applications in single and redundant configuration.

### **Seamless connectivity to HMIs**

Connect to any DCS, 3<sup>rd</sup> party HMI or rely on Compact Product Suite Panels or Compact HMI for visualization.

# Compact Product Suite

The right products to make your next process automation project a success.

## Compact Control Builder

Powerful engineering tool for creating control solutions and reusable control libraries for AC 800M controllers.

*When engineering efficiency matters.*



## Compact HMI

The perfect HMI/SCADA solution for sustainable operations.

*When intuitive operation matters.*



## Controller, I/O, Panels, Network equipment

Scalable and robust hardware from field connection, to control towards visualization.

*When equipment reliability matters.*



## Independent High Integrity

TÜV certified safety system for safety applications up to SIL3.

*When protecting people, environment, equipment and business matters.*



# Compact Product Suite

## Windows Support Overview

### Compact HMI 6.1.1-1

Windows 10 LTSC 2021/Server 2022 in addition to Windows 10 2016 LTSC

Windows Server 2016, Windows 10 2019 LTSC and Windows Server 2019.

### Control Builder 6.2.0-0

Windows 11 Pro and Windows 10 Pro, 64-bit

Windows 10 LTSC 2021 and LTSC 2019 Enterprise and IOT versions

Windows Server 2022 and 2019 Standard/Datacenter

### Control Builder Safe 3.0

Windows 10 and Windows Server 2019 operating systems.

### Panel Builder 6.2-1

Windows 10 and Windows 7 SP1 are supported



**ABB Products Proudly Distributed by Gross Automation.**  
**Please call +1 (262) 252-1600 or email [sales@grossautomation.com](mailto:sales@grossautomation.com).**