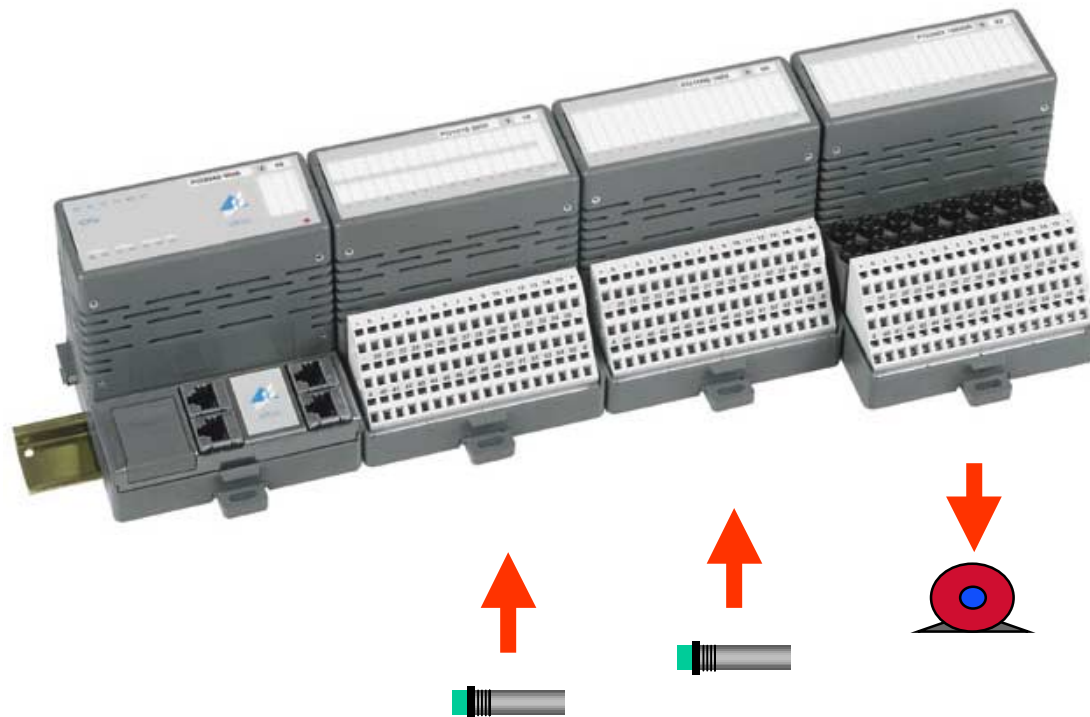


Ponto® Series  
A new concept for automation



# Ponto<sup>®</sup> Series •

- Programmable Controller
- Remote I/O for Field Buses
- Special models of I/O modules
- Web connection





# Programmable Controller •

- High connectivity CPUs
- Direct connection by property bus of 12 Mbauds - GBL
- Capacity: 4096 digital plus 512 analog
- User program memory: 512kb





# Programmable Controller •

- Ethernet and internet connection using WebPLC technology with Http, FTP and SMTP protocols

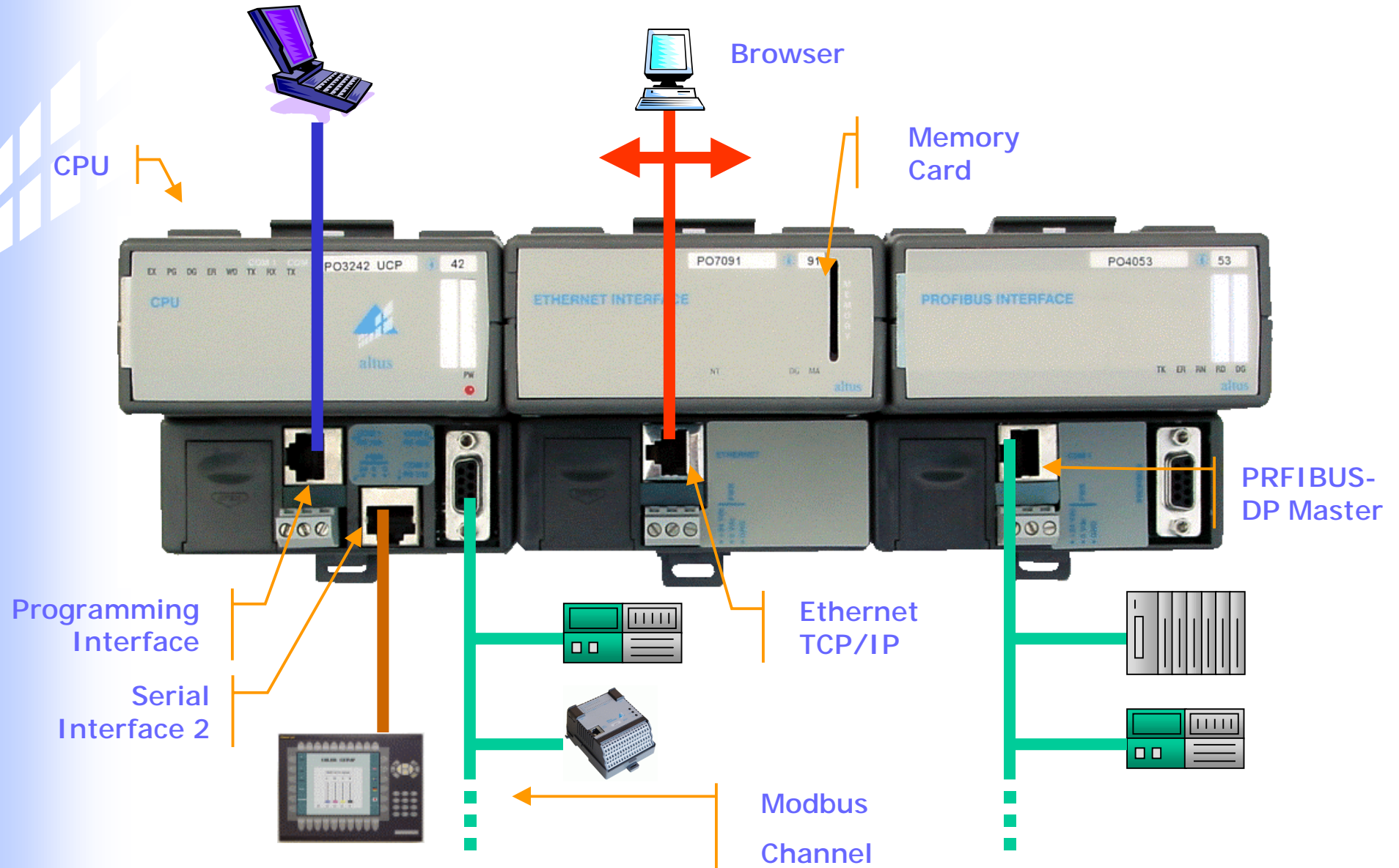


- Fieldbus connection, for example PROFIBUS-Master



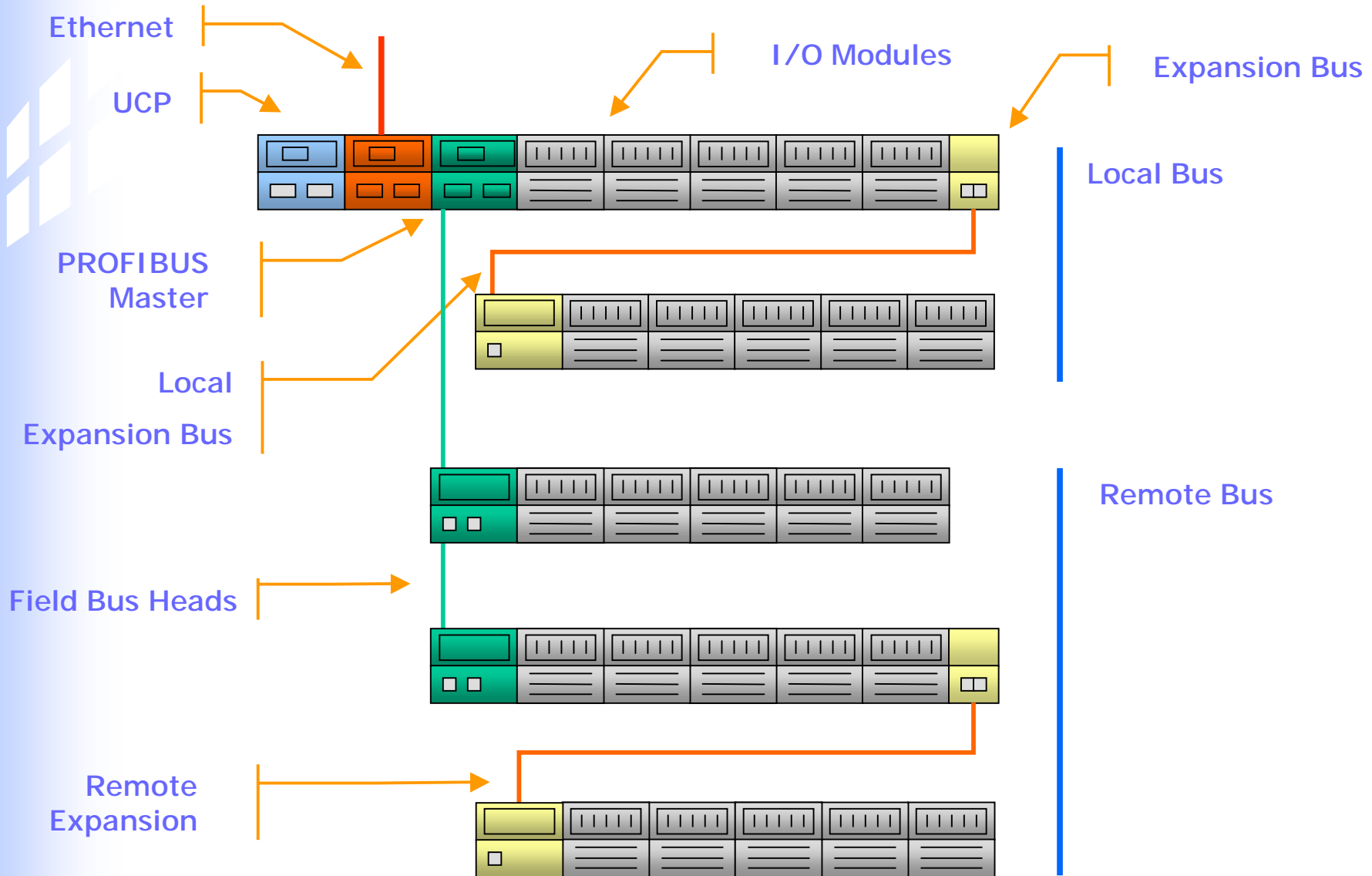


# Ponto<sup>®</sup> CPUs



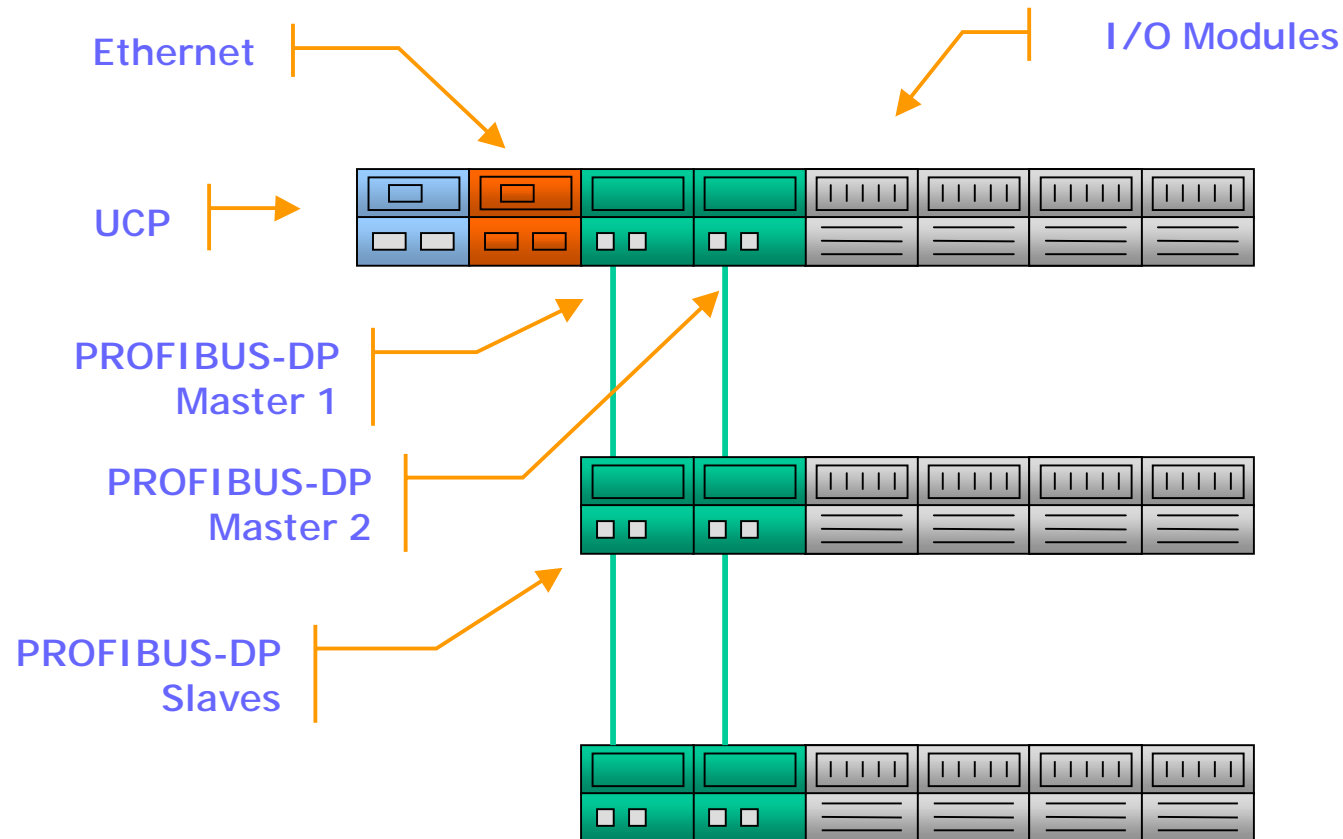


# PC Architecture



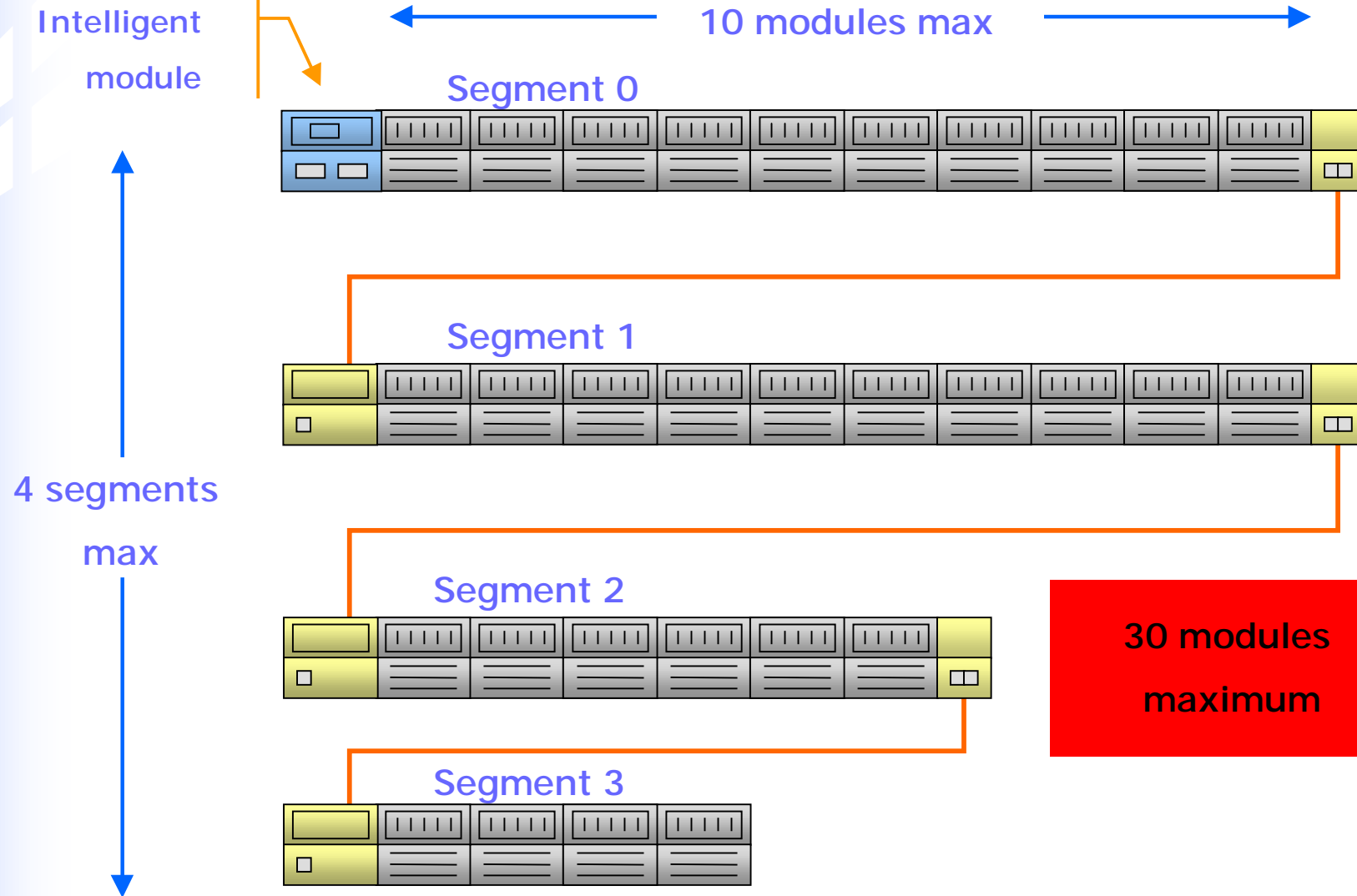


# PROFIBUS-DP Redundant





# Bus Capacities

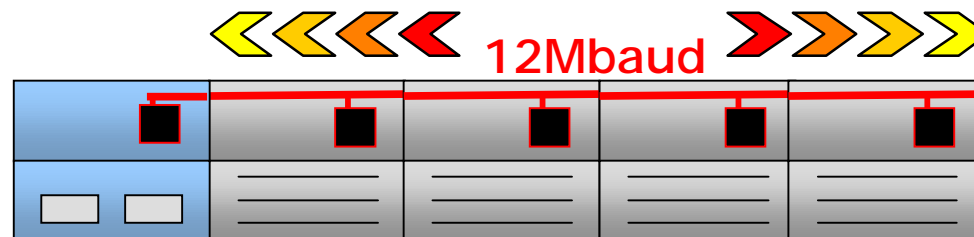






# Internal GBL Bus •

- 12Mbaud serial bus, I/O scan 0,45 ms for 480 points
- Patented by Altus
- Intelligent Modules with automatic identification and addressing
- Modules with hot-swap including PROFIBUS-DP heads
- Connection till 30 modules x 16 points = 480 points
- Full hardware implemented protocol with dedicated processor





# Ponto<sup>®</sup> Remote I/O ●



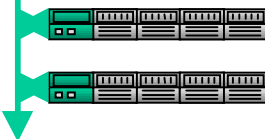
Altus



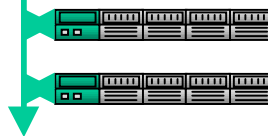
- Remote connection to many brands of PLCs using field bus standard networks as PROFIBUS-DP, Devicenet, Ethernet or Modbus-RTU
- Connection to microcomputers to implement SOFTPLC



AB



PC



Siemens



GE





# Remote I/O to Altus CPUs



Remote I/O to  
AL-2000 Series



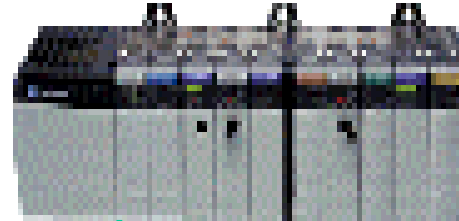
Remote I/O to  
Quark Series



# General Remote I/O ●



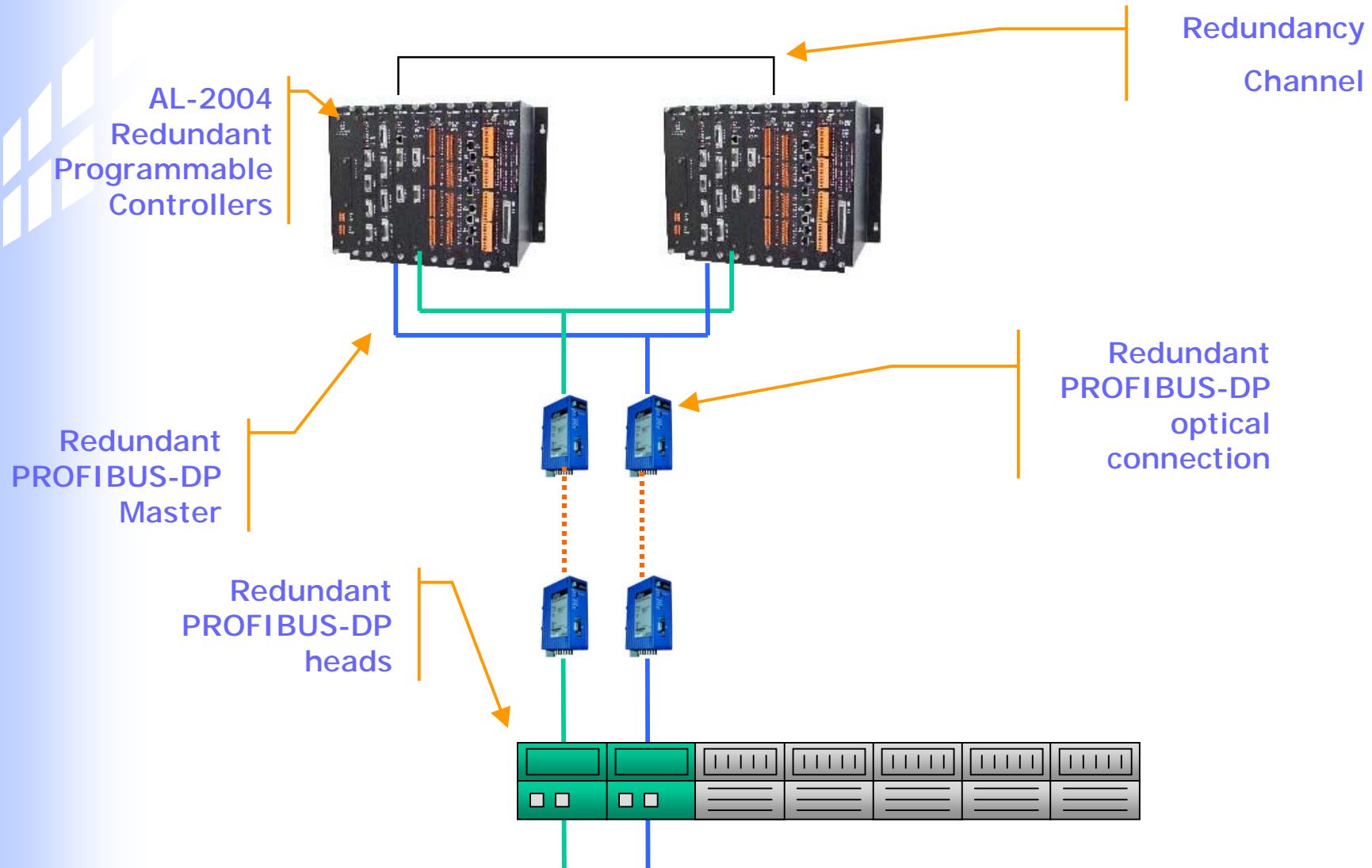
S7 300 - Siemens CPUs



Rockwell Control Logix

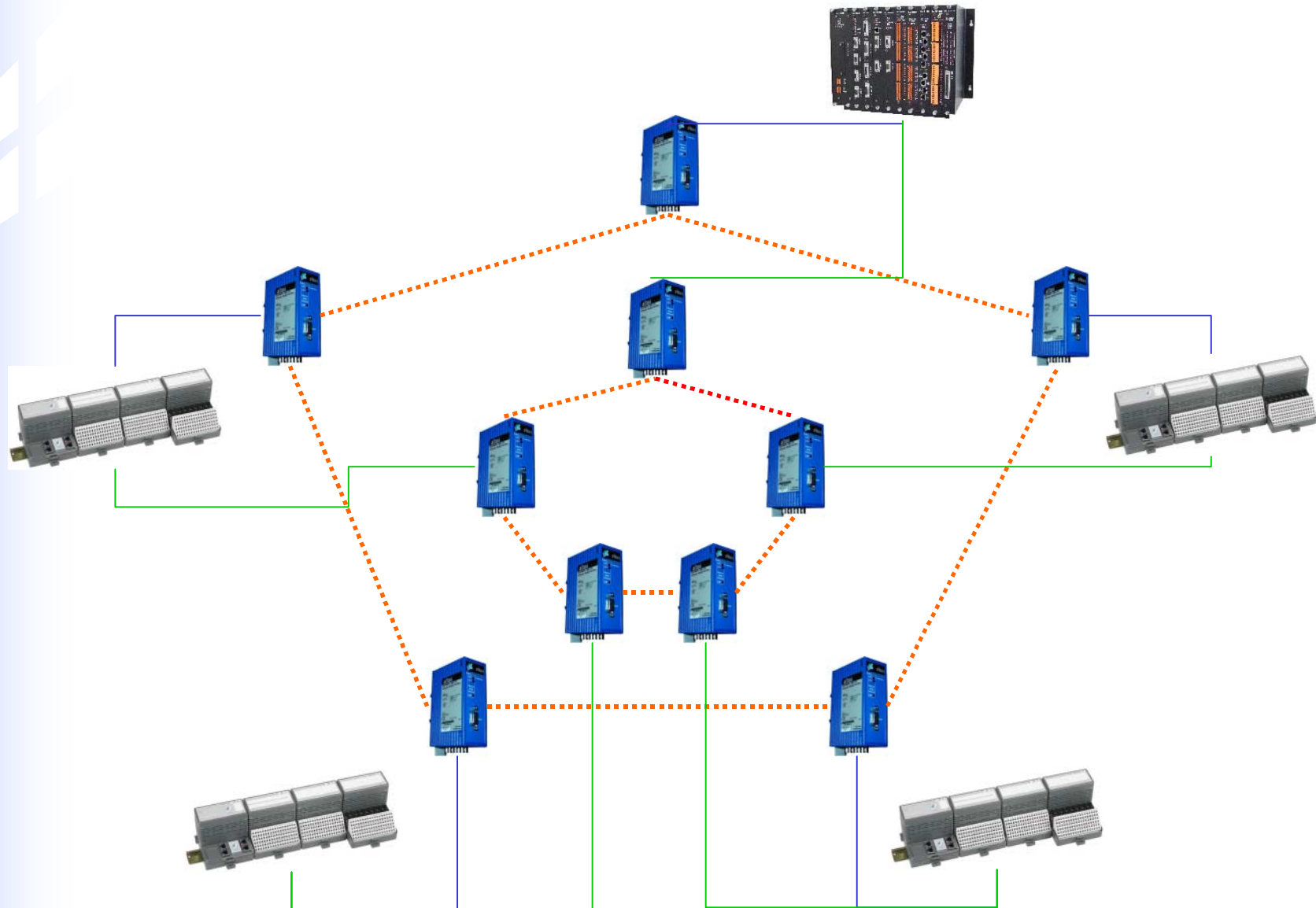


# Complete Redundant Solution





# Optical Redundant Network ●



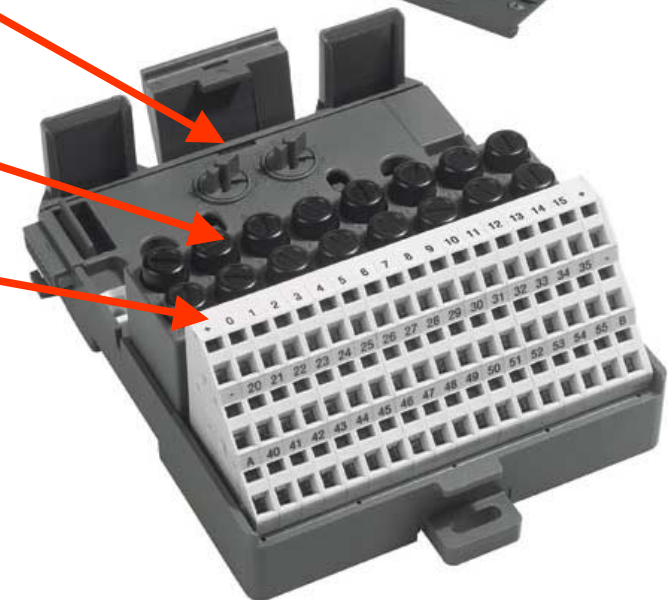




# Module Features



- Hot-swap modules without disturbing field wiring
- Mechanical Key-switch with one code for each module type
- Fuse option for any kind of module
- Spring style terminals
- High connection density: 32 points in 10 cm
- Analog universal modules





# Mechanic assembly

Module

Label

Binding between the bases

Rail

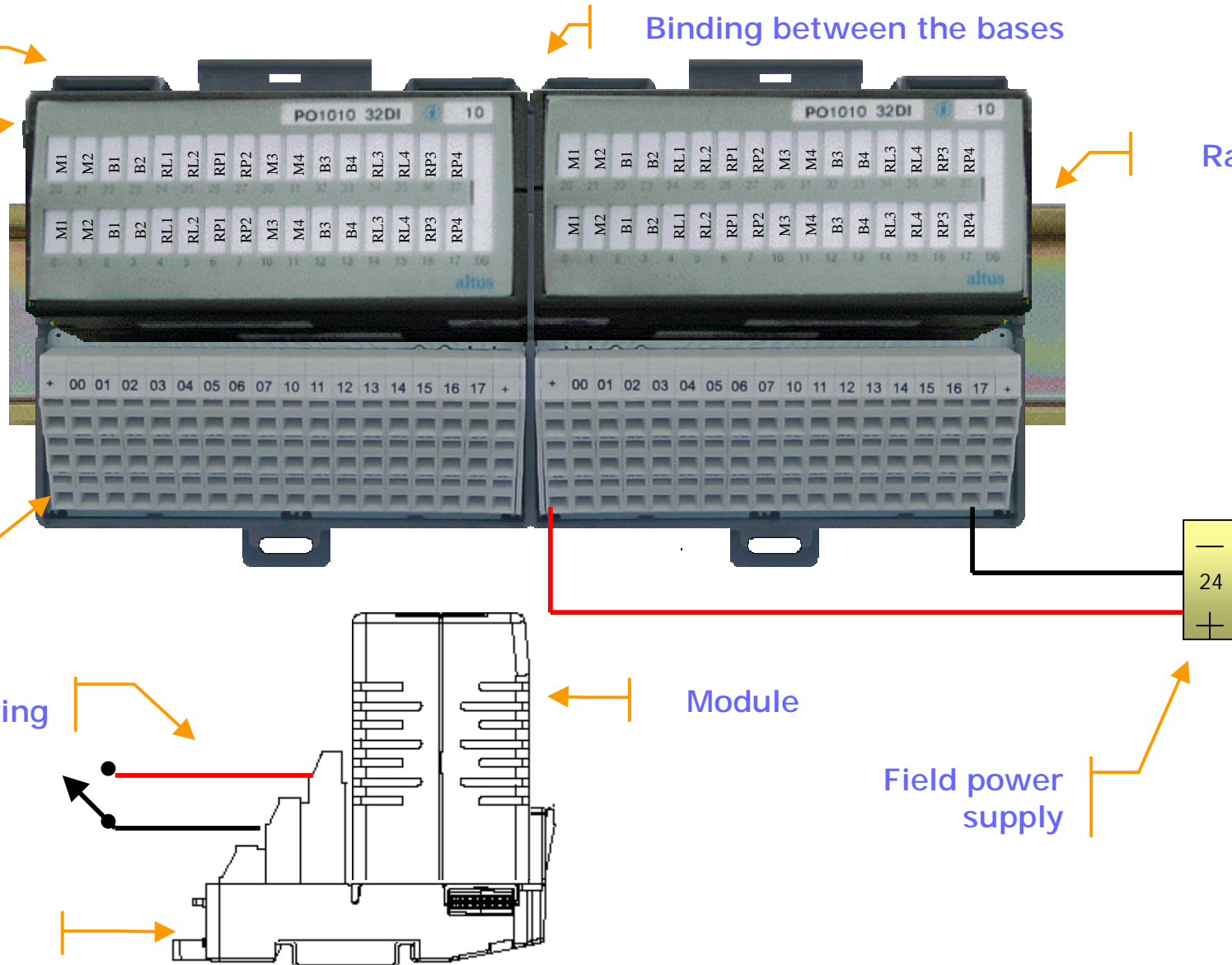
Base

Field wiring

Module

Field power supply

Base

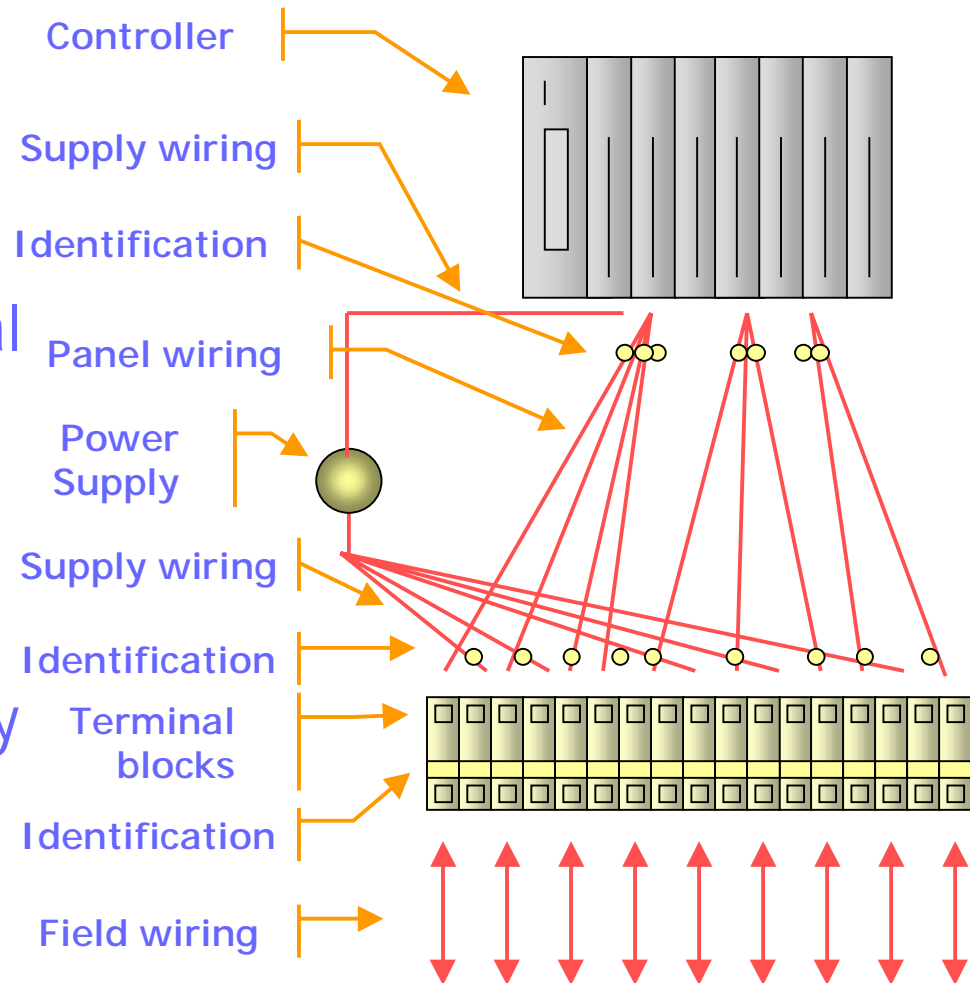




# Easy and Cheap to Mount ●

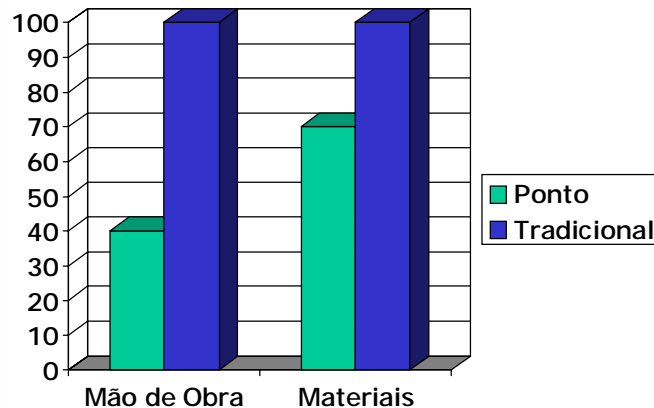
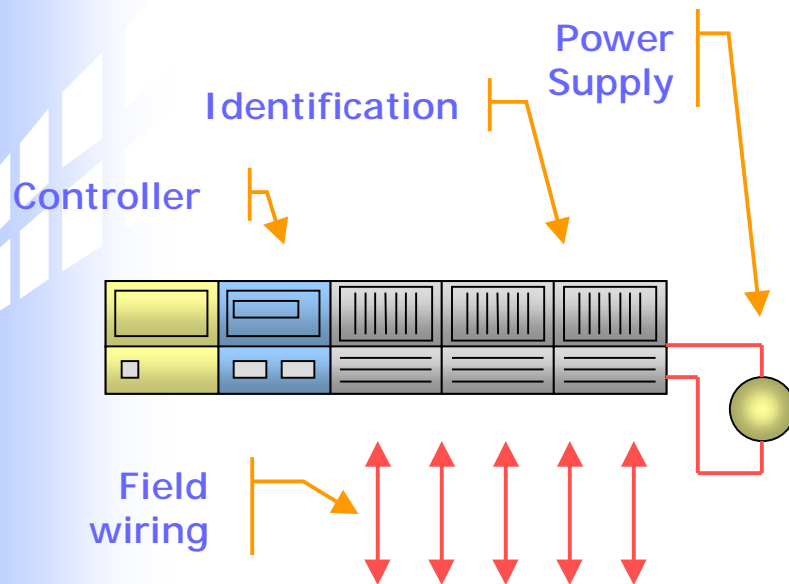
## A Common PLC Panel

- Large quantities of wires between controller and terminal blocks
- Costly identification
- To many blocks per point
- Complex power supply wiring
- Using of gutters for internal wiring
- Bulky electrical project





# Easy and Cheap to Mount

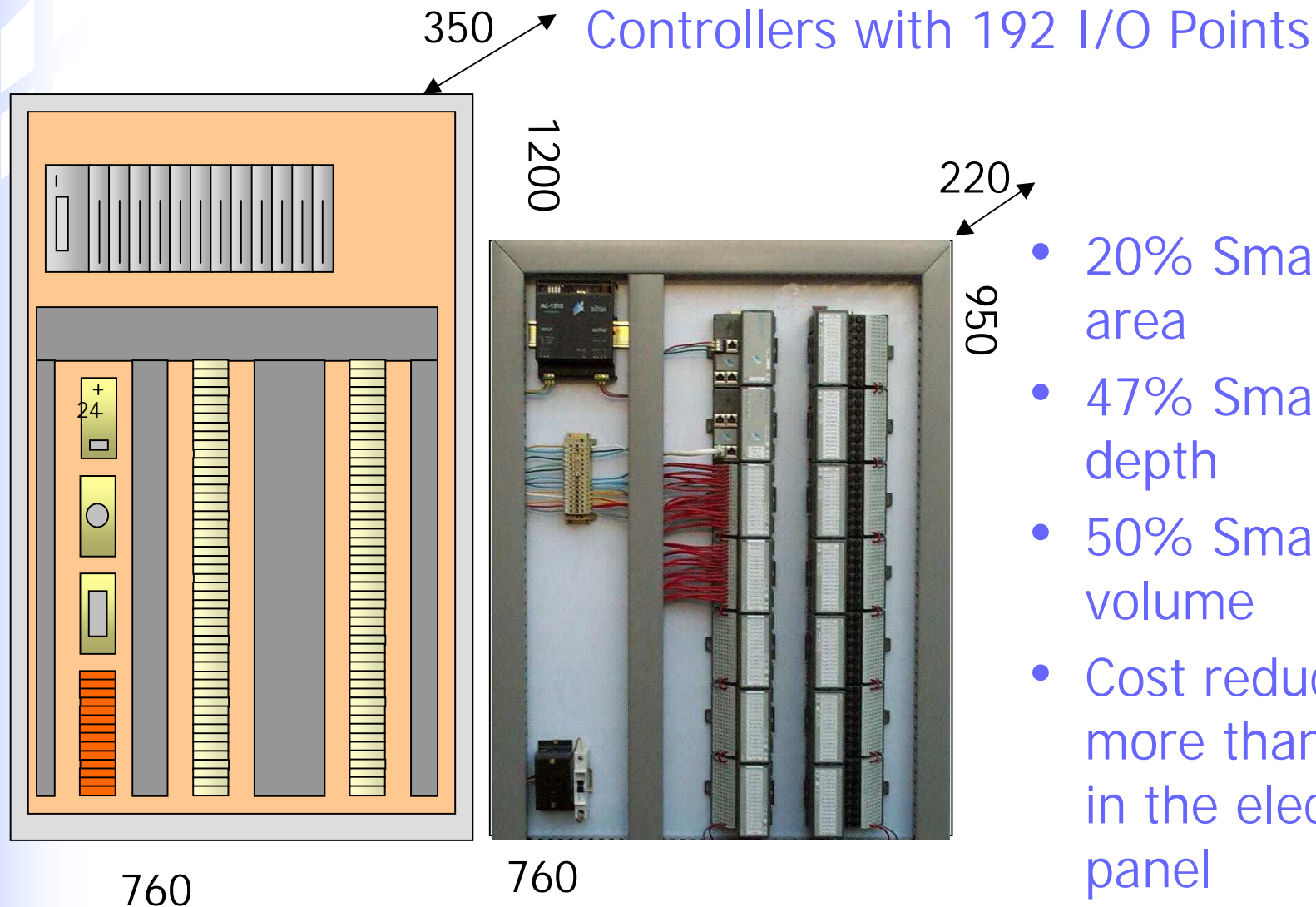


- No I/O terminal blocks and associated panel wiring
- Cost Reduction of: workmanship, project and assembly.
- Panel size and cost reduction
- Time reduction in electric panel mounting
- Electric project simplified and standardized





# Easy and Cheap to Mount ●

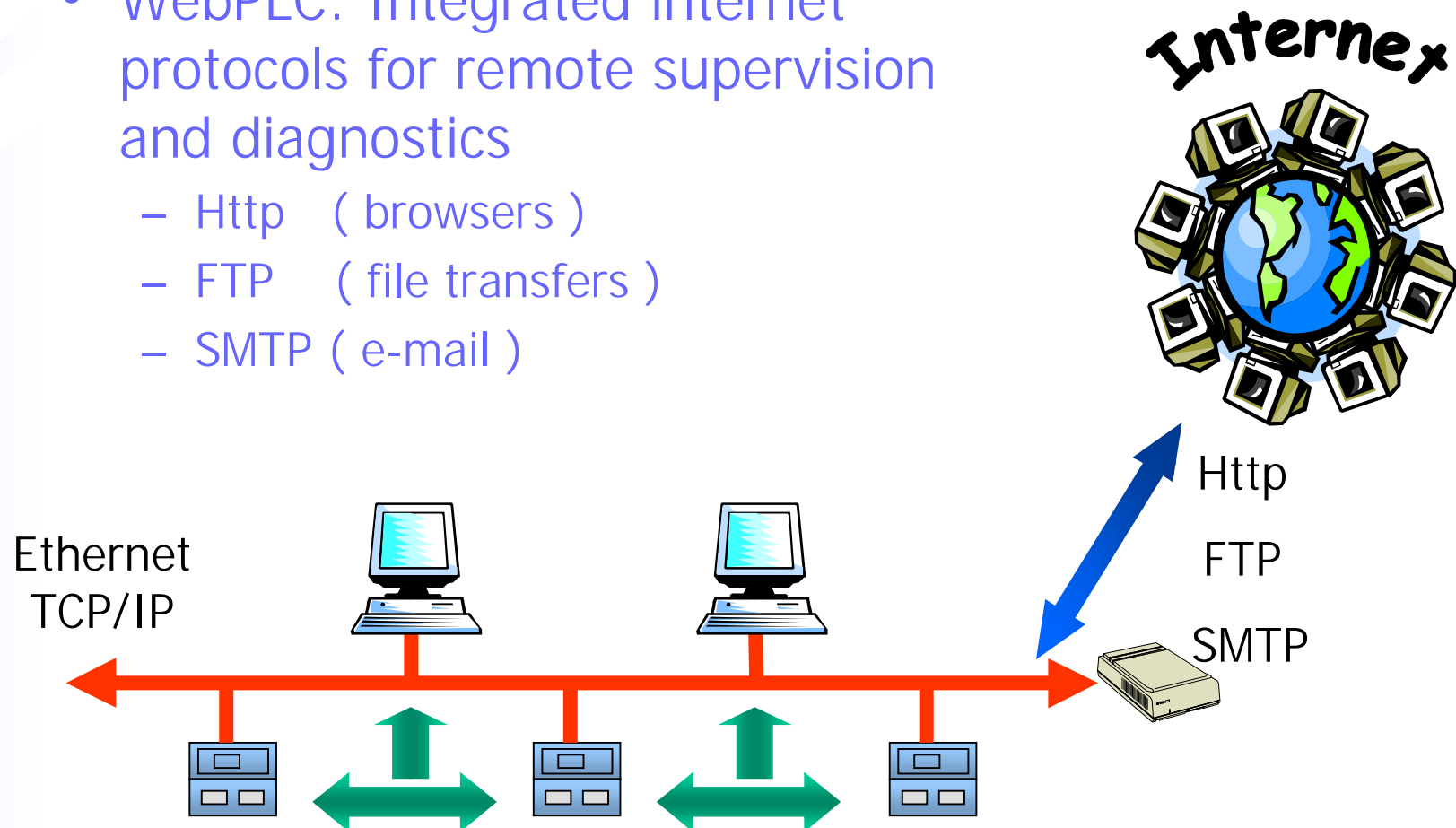




# Ponto<sup>®</sup> and Internet



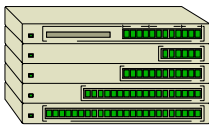
- WebPLC: Integrated internet protocols for remote supervision and diagnostics
  - Http ( browsers )
  - FTP ( file transfers )
  - SMTP ( e-mail )







# Ponto<sup>®</sup> and Internet ●



- CPUs pages Browser access
- Complete remote diagnostics
- E-mail to events and alarms
- Use in Pager and Mobile applications
- "C" language and JAVA programming for special applications
- Use in Gateway applications to other equipment



# Ponto<sup>®</sup> CPUs Models

	PO3042	PO3142	PO3242	PO3342
Ethernet network	No	No	Yes	Yes
Web protocols	No	No	No	Yes
Serial port RS232 1	Yes	Yes	Yes	Yes
Serial port RS232 2	No	Yes	No	No
Serial port RS485	Yes	Yes	Yes	Yes
Real Time Clock	Yes	Yes	Yes	Yes
Flash memory	128K	256K	256K	256K
Ram memory	256K	256K	256K	256K
I/O modules	16	30	30	30
Modbus Master/Slave	No	Yes	Yes	Yes
PROFIBUS	No	No	Yes	Yes
Floating point operation	Yes	Yes	Yes	Yes



# Ethernet Interface - PO7091



- Web server with HTML and XML format
- Supervisory system with Flash, Java, JavaScript and VBScript
- Ethernet and internet Connection using ALNET I protocol
- Interlock between PLC´s as master operation mode
- Remote programming and monitoring
- Transport protocols: TCP / IP
- Controlled access by passwords in HTML pages





# Webgate Plus - PO9901



- To any kind of Altus CPU
- Web server with HTML e XML format
- Supervisory system with Flash, Java, JavaScript e VBScript
- Ethernet and internet connection for ALNET I
- Interlock between PLC´s as master operation mode
- Remote programming and monitoring
- Transport protocols: TCP / IP
- Controlled access by passwords in HTML page





# Profibus-DP Master - PO4053



- All standard Profibus-DP Master functions
- Capacity of 3584 input bytes and 3584 output bytes
- Allows to implement redundant network architectures using PO5063-V4 Head
- Full PROFIBUS-DP diagnostic
- RS-232 channel to I/O configuration, supervision and local diagnostic





# Profibus-DP Slave Head ●

- All standard Profibus-DP Slave functions
- Connection up to 20 I/O modules
- Allows the use of a local Operator Panel to diagnostics
- Supply diagnostic to PROFIBUS-DP Master







# PO7079 - High Speed Counter •

- Two counter inputs that can work with up/down mode or quadrature
- One configurable digital input with instantaneous reading, nulling or habilitation
- One configurable digital output to indicate upper limit, lower limit or no limit
- Configurable counting range – up to 32 bits binary with signal
- Measurement mode for frequency, period and angular frequency

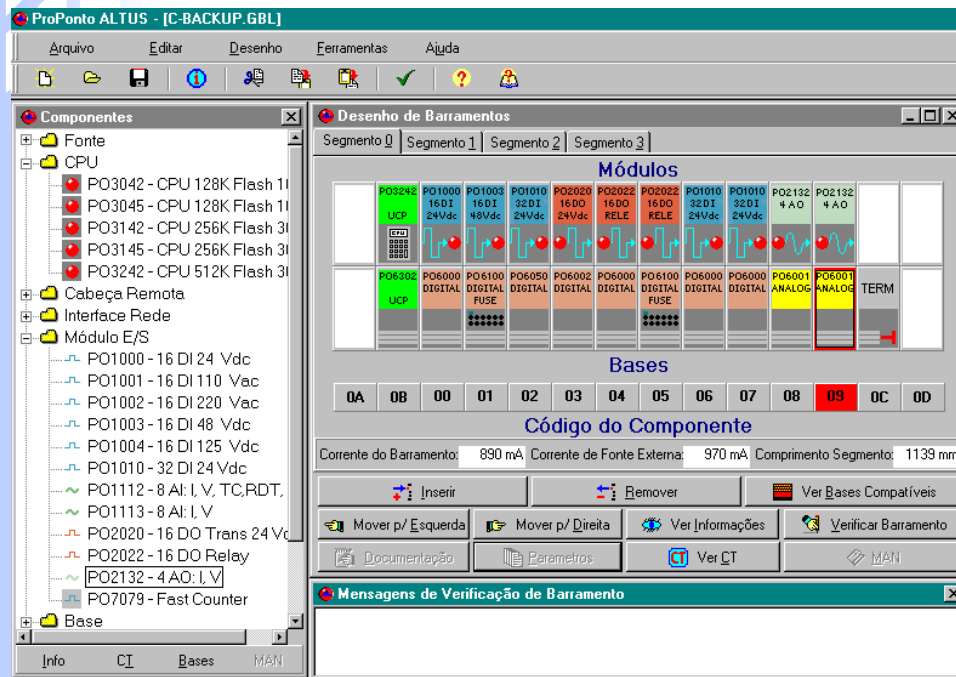




# Pro-Ponto Configuration SW

















- Easy to Configure PROFIBUS-DP Ponto Series systems
- Verification of the validity of configuration
- Complementary tool of the software of programming Mastertool 3.0
- Tag allocation to I/O points
- Module parameterization
- Generation of labels and documentation





# Ponto<sup>®</sup> Series Products



	PO 1xcc	Input Modules	
	PO 2xcc	Output Modules	
	PO 3xcc	UCPs	
	PO 4xcc	Field bus interfaces	
	PO 5xcc	Field bus heads	
	PO 6xxx	Bases	
	PO 7xcc	Special modules	
	PO 8xcc	Power supplies and accessories	
	PO 9xxx	Software for UCPs	





# Input modules ●

Code	Module
PO 1000	16 ED 24 Vdc opto
PO 1001	16 ED 110 Vac opto
PO 1002	16 ED 220Vac opto
PO 1003	16 ED 48 Vdc opto
PO 1004	16 ED 125 Vdc opto
PO 1010	32 ED 24 Vdc opto
PO 1112	8 EA isolated universal
PO 1113	8 EA I/V isolated





# Bases for input modules



Code	Module
PO 6000	I/O Digital Spring Base
PO 6001	I/O Analog Spring Base
PO 6050	I/O Digital Screw Base
PO 6051	I/O Analog Screw Base
PO 6100	I/O Digital Spring Base with Fuse
PO 6101	I/O Analog Spring Base with Fuse
PO 6150	I/O Digital Screw Base with Fuse
PO 6151	I/O Analog Screw Base with Fuse





# Bases for special modules



Code	Module
PO 6302	UCP PO3x42 Base
PO 6400	MODBUS and PROFIBUS field bus interface base
PO 6402	DEVICENET field bus interface base
PO 6404	AS-I field bus interface base
PO 6500	MODBUS and PROFIBUS field bus head base
PO 6501	ETHERNET field bus head base
PO 6502	DEVICENET field bus head base
PO 6800	Power supply base





# Output modules



Code	Module
PO 2020	16 SD 24 Vdc / 2 A transistor opto
PO 2021	16 SD 110/220 Vac / 2 A triac opto
PO 2022	16 SD Relé 2 A NA contato seco
PO 2023	16 SD 48 Vdc transistor opto
PO 2024	16 SD 125 Vdc transistor opto
PO 2028	24 SD 24 Vdc/0,5 A transistor
PO 2132	4 SA universal isolado





# Field bus interface ●

Code	Module
PO 4050	MODBUS field bus interface
PO 4053	PROFIBUS-DP field bus interface
PO 4054	DEVICENET field bus interface
PO 4056	Rede AS-I interface





# Field bus heads ●

Code	Module
PO 5060	MODBUS field bus head
PO 5061	Ethernet field bus head
PO 5063	PROFIBUS-DP field bus head
PO 5064	DEVICENET field bus head

