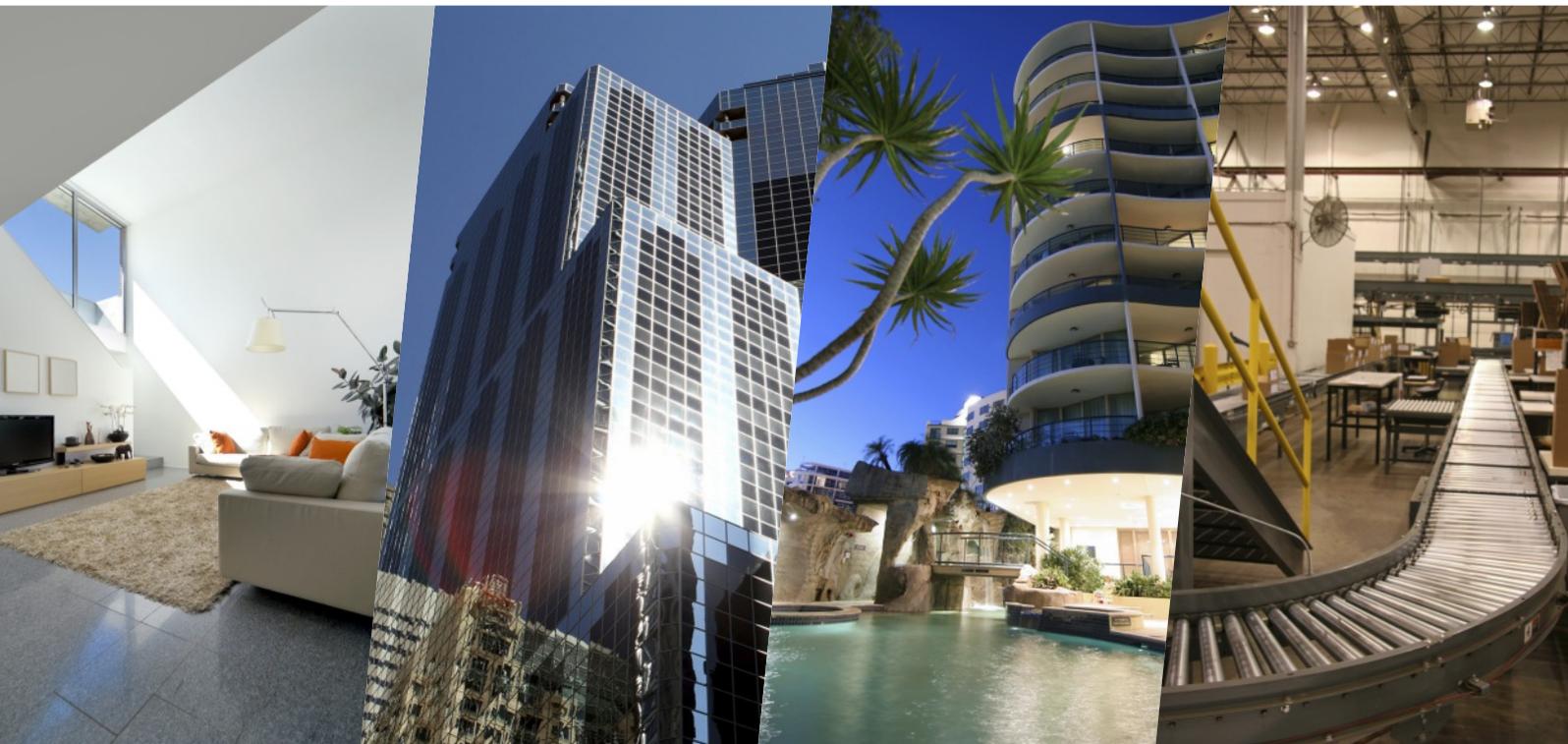


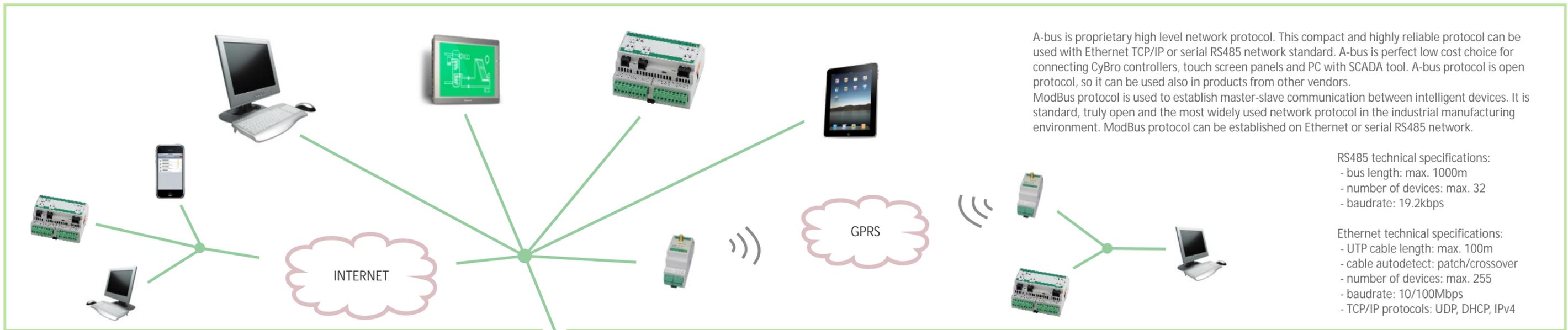
PRODUCTS OVERVIEW

CYBROTECH COMPONENTS



For industrial, infrastructure,
building and home automation

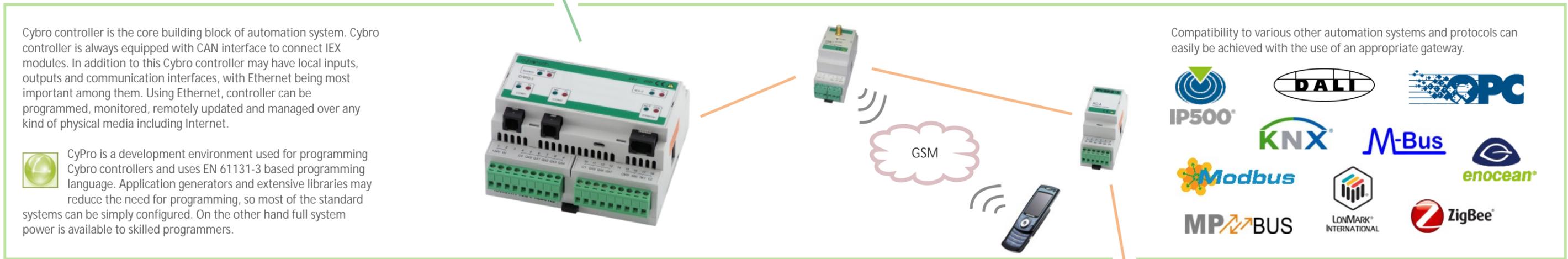




A-bus is proprietary high level network protocol. This compact and highly reliable protocol can be used with Ethernet TCP/IP or serial RS485 network standard. A-bus is perfect low cost choice for connecting CyBro controllers, touch screen panels and PC with SCADA tool. A-bus protocol is open protocol, so it can be used also in products from other vendors. ModBus protocol is used to establish master-slave communication between intelligent devices. It is standard, truly open and the most widely used network protocol in the industrial manufacturing environment. ModBus protocol can be established on Ethernet or serial RS485 network.

RS485 technical specifications:
 - bus length: max. 1000m
 - number of devices: max. 32
 - baudrate: 19.2kbps

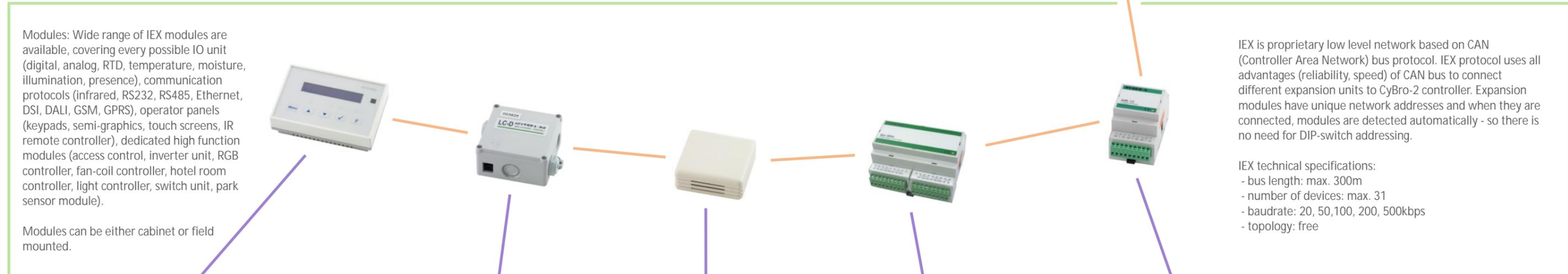
Ethernet technical specifications:
 - UTP cable length: max. 100m
 - cable autodetect: patch/crossover
 - number of devices: max. 255
 - baudrate: 10/100Mbps
 - TCP/IP protocols: UDP, DHCP, IPv4



Cybro controller is the core building block of automation system. Cybro controller is always equipped with CAN interface to connect IEX modules. In addition to this Cybro controller may have local inputs, outputs and communication interfaces, with Ethernet being most important among them. Using Ethernet, controller can be programmed, monitored, remotely updated and managed over any kind of physical media including Internet.

 CyPro is a development environment used for programming Cybro controllers and uses EN 61131-3 based programming language. Application generators and extensive libraries may reduce the need for programming, so most of the standard systems can be simply configured. On the other hand full system power is available to skilled programmers.

Compatibility to various other automation systems and protocols can easily be achieved with the use of an appropriate gateway.

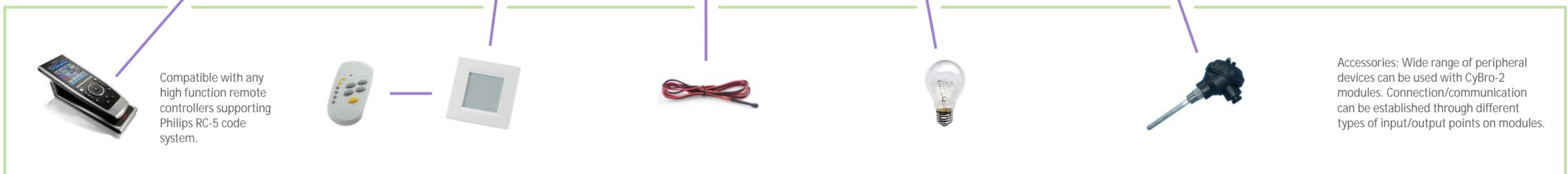


Modules: Wide range of IEX modules are available, covering every possible IO unit (digital, analog, RTD, temperature, moisture, illumination, presence), communication protocols (infrared, RS232, RS485, Ethernet, DSI, DALI, GSM, GPRS), operator panels (keypads, semi-graphics, touch screens, IR remote controller), dedicated high function modules (access control, inverter unit, RGB controller, fan-coil controller, hotel room controller, light controller, switch unit, park sensor module).

Modules can be either cabinet or field mounted.

IEX is proprietary low level network based on CAN (Controller Area Network) bus protocol. IEX protocol uses all advantages (reliability, speed) of CAN bus to connect different expansion units to CyBro-2 controller. Expansion modules have unique network addresses and when they are connected, modules are detected automatically - so there is no need for DIP-switch addressing.

IEX technical specifications:
 - bus length: max. 300m
 - number of devices: max. 31
 - baudrate: 20, 50, 100, 200, 500kbps
 - topology: free



Compatible with any high function remote controllers supporting Philips RC-5 code system.

Accessories: Wide range of peripheral devices can be used with CyBro-2 modules. Connection/communication can be established through different types of input/output points on modules.

Controllers



Programmable logic controllers

CYBRO-3-24

24V DC, 3.5W

Inputs	Outputs	Features	Communication	Mechanical
12 x opto-coupler 4 x universal input/output (dig in, dig out, 0..10V in or 0..20mA in, temper. in or 0..10V out)	8 x relay, 8A, SPST	ARMv7E-M 100MHz cpu 1Mb flash 64Kb RAM 32Kb EEPROM RTC	Ethernet USB 2 x RS232 IEX	106 x 108 x 58mm DIN rail (35mm) IP20

IEX operator panels

Product	OP-1	OP-2	OP-3-T OP-3-TH	OP-4	OP-5-T OP-5-TH	OP-6
Description	in-wall panel	industrial panel	on-wall panel	on-wall panel	on-wall panel	in-wall panel
Power	24V DC 50mA	24V DC 40mA	24V DC 50mA	24V DC 50mA	24V DC 50mA	24V DC 40mA
Inputs			1 x switch/pot 1 x temperature	4 x switch/pot 2 x temperature	1 x switch/pot 1 x temperature	
Features	LCD 2 x 16, 5 x key temperature IR receiver, beeper	LCD 2 x 16, 5 x key	LCD 2 x 20, 5 x key 4 x LED temperature, humidity* IR receiver, beeper	LCD 2 x 20, encoder 4 x LED light sensor IR receiver, beeper	LCD 2 x 20, 5 x key temperature, humidity* IR receiver, beeper	4 x 7seg, 4 x key temperature, light sensor IR receiver, beeper
Mechanical	140 x 80 x 48mm flush box M4 IP44	106 x 62 x 24mm panel IP54	120 x 80 x 48mm on-wall IP20	142 x 115 x 25mm on-wall IP20	136 x 96 x 25mm on-wall IP20	140 x 80 x 48mm flush box M4 IP44

* TH model only

IEX I/O modules

Product	BI-24	BIO-24R	BIO-24T	BIO-8R4-L	BIO-8R4-N	BIO-20R
Description	digital I/O	digital I/O	digital I/O	power digital I/O for lights and blinds	power digital I/O for general purpose	power digital I/O for lights and blinds
Power	24V DC 60mA	24V DC 160mA	24V DC 90mA	24V DC 150mA	24V DC 150mA	24V DC 120mA
Inputs	12 x switch 6 x switch/pot	8 x opto-coupler 4 x opto-coupler/HSC (A)	8 x opto-coupler 4 x opto-coupler/HSC (A)	4 x mains	4 x mains	10 x switch
Outputs	6 x MOSFET/input switch	12 x relay, 5A, SPST	12 x PNP trans., 24V, 2A	8 x relay, 16A, SPDT	8 x relay, 16A, SPST	10 x relay, 8A, SPST
Mechanical	106 x 108 x 58mm DIN rail (35mm) IP20	106 x 108 x 58mm DIN rail (35mm) IP20	106 x 108 x 58mm DIN rail (35mm) IP20	106 x 108 x 58mm DIN rail (35mm) IP20	106 x 108 x 58mm DIN rail (35mm) IP20	106 x 108 x 58mm DIN rail (35mm) IP20

Product	HR	AIC-12	AIR-12	AIV-12	AOV-12
					
Description	hotel room module	analog current inputs	analog resistive inputs	analog voltage inputs	analog voltage outputs
Power	24V DC 200mA	24V DC 50mA	24V DC 50mA	24V DC 50mA	24V DC 150mA
Inputs	12 x switch 2 x temperature	12 x 0..20mA, 0.1%	12 x resistive, 0.1%	12 x 0..10V, 0.1%	
Outputs	10 x relay, 5A, SPST				12 x 0..10V, 1%
Mechanical	106 x 108 x 58mm DIN rail (35mm) IP20	53 x 108 x 58mm DIN rail (35mm) IP20	53 x 108 x 58mm DIN rail (35mm) IP20	53 x 108 x 58mm DIN rail (35mm) IP20	53 x 108 x 58mm DIN rail (35mm) IP20

Product	RC-A	CR-W2	LC-DC	LD-P4
				
Description	recuperator control	access control	DALI control	dimnable light control
Power	24V DC 1000mA	24V DC 220mA	24V DC 140mA	24V DC 35mA
Inputs	2 x switch/pot 2 x temperature	4 x switch/pot	2 x switch/pot motion, light, IR receiver	4 x switch/pot
Outputs	1 x 0..24V, 2A 4 x open collector 24V, 1A	2 x relay, 5A, SPST	DALI	4 x light driver (Eltako LUD12-230V)
Features		2 x card reader interface (Wiegand protocol)		
Mechanical	36 x 108 x 58mm DIN rail (35mm) IP20	53 x 108 x 58mm DIN rail (35mm) IP20	36 x 108 x 58mm DIN rail (35mm) IP20	36 x 108 x 58mm DIN rail (35mm) IP20

Product	LD-V4	LC-D	LC-S	FC	8C
					
Description	dimnable LED stripe control	digital light control	analog light control	fan-coil control	digital I/O
Power	24V DC 25mA	24V DC 160mA	24V DC 100mA	24V DC 110mA	24V DC 100mA
Inputs	4 x switch/pot	2 x switch 3 x pot motion, light, IR receiver	2 x switch 3 x pot motion, light, IR receiver	1 x switch 2 x temperature	4 x switch
Outputs	4 x LED stripe	DALI 4 x DSI	4 x 0..10V	5 x relay, 5A, SPST	4 x relay, 5A, SPST
Mechanical	108 x 86 x 46mm field mountable IP42	108 x 86 x 46mm field mountable IP42			

Product	SW-W3	SW-W3-TIR	O2-L	TS TS-H	MPS-1
Description	switch module	in-wall multipurpose module	switching lights	temperature sensor	garage parking sensor
Power	24V DC 70mA	24V DC 40mA	24V DC 85mA	24V DC 15mA	24V DC 120mA
Inputs	4 x switch/pot	4 x switch/pot temperature IR receiver		1 x temperature	ultrasonic distance sensor
Outputs	4 x LED,10mA /4 x input switch		2 x relay, 16A, SPDT		
Features				temperature humidity*	LED driver 3 x 1W
Mechanical	50 x 50 x 15mm flush box	50 x 50 x 15mm flush box	55 x 60 x 22mm flush box	71 x 71 x 27mm on-wall IP30	130 x 50 x 20mm inside trunking

*TS-H only

IEX Interfaces

Product	COM-	COM-232-	COM-485-	COM-CAN
Description	serial ports module*	serial port module*	serial port module*	additional CAN port module
Power	24V DC 50mA	24V DC 50mA	24V DC 50mA	24V DC 50mA
Features	1 x RS232 1x RS485	1 x RS232	1 x RS485	1 x CAN
Mechanical	36 x 99 x 58mm DIN rail (35mm) IP20	36 x 108 x 58mm DIN rail (35mm) IP20	36 x 108 x 58mm DIN rail (35mm) IP20	36 x 108 x 58mm DIN rail (35mm) IP20

*Firmware for functionality:

 COM-ABUS remote A-bus port	 COM-KAC Kaco PV inverter	 COM-SAT Satcon PV inverter	 COM-NOK 4-noks ZigBee gateway	 COM-PMI Iskra and Eastron power meters gateway
 COM-PRN serial printer	 COM-SAN SanRex PV inverter	 COM-BCM A123 battery control	 COM-WXT Vaisala weather station	

Product	GW-MP	GW-ENO	GW-ZIG	GSM-1
Description	Belimo MP-bus gateway	enOcean wireless receiver	ZigBee wireless gateway	GSM/GPRS module
Power	24V DC 50mA	24V DC 50mA	24V DC 50mA	24V DC 100mA (stand by 75mA)
Inputs				4 x switch 4 x pot
Outputs				2 x relay, 1A, SPDT
Features	MP-bus gateway	enOcean receiver	ZigBee gateway	tri-band 900/1800/1900MHz
Mechanical	36 x 99 x 58mm DIN rail (35mm) IP20	36 x 90 x 58mm DIN rail (35mm) IP20	36 x 90 x 58mm DIN rail (35mm) IP20	36 x 108 x 70mm DIN rail (35mm) IP20

Accessories

Product	CAD-232-A2	CAD-BE	CAD-BC	CAD-SPL	RE-2
					
Description	A-bus converter	bus expander	bus coupler	bus splitter	remote control
Features	RS232 to RS485 conv.	2 x RJ9 IEX conn. 1 x wires IEX conn.	RJ9 to wires IEX conv.	3 x RJ9 IEX conn.	18 x keys IR range 5m
Mechanical	36 x 99 x 58mm DIN rail (35mm) IP20	36 x 99 x 58mm DIN rail (35mm) IP20	21 x 26 x 18mm	31 x 35 x 26mm	40 x 86 x 5mm

Sensors

Product	ES ES-A ES-W	MS-I MS-O	LRI8134	LRM8114	LRM8115 / 16 / 17
					
Description	temperature sensor	multisensor	multisensor	motion sensor	motion sensor
Power		12..24V DC	12..24V DC	12..24V DC	12..24V DC
Features	temperature	light measurement IR receiver	light measurement motion detection IR receiver	motion detection	motion detection
Mechanical	ES: on wire ES-A: AI housing on wire ES-W: 71 x 71 x 27mm, on-wall	80 x 80 x 35mm flush box in ceiling	72 x 72 x 28mm flush box in ceiling	72 x 72 x 28mm flush box in ceiling	70 x 66 x 73mm on-wall

C programmable controllers

Product	uCYPBRO-2R	uCYPBRO-2T	IPU
			
Description	micro controller	micro controller	inverter control unit
Power	24V DC 1.9W	24V DC 0.9W	from frequency inverter 100mA
Inputs	8 x opto-coupler 5 x pot 10k 2 x 0..10V, 0.1%	8 x opto-coupler 5 x pot 10k 2 x 0..10V, 0.1%	8 x opto-coupler 4 x 0..10V, 2%
Outputs	6 x relay, 5A, SPST 1 x PWM, 24V, 1A	6 x PNP trans., 24V, 2A 1 x PWM, 24V, 1A	8 x PNP trans., 24V, 2A 1 x 0..10V, 2%
Features	64Kb flash 2Kb RAM 2Kb EEPROM	64Kb flash 2Kb RAM 2Kb EEPROM	64Kb flash 2Kb RAM 2Kb EEPROM
Communication	RS485 IEX	RS485 IEX	IEX
Mechanical	106 x 108 x 58mm DIN rail (35mm) IP20	106 x 108 x 58mm DIN rail (35mm) IP20	104 x 53 x 24mm inside Hitachi frequency inverter

Software

Developer tools



CyPro

integrated development environment, editor, compiler and on-line monitor



CyBro IEX Loader

download firmware to IEX modules, primary for IEX module developers



CyBro Modbus Tester

MODBUS-TCP simulator and traffic logger

Communication



CyBro COM Server

simple command line interface



CyBro HTTP Server

smartphone to CyBro interface



CyBro OPC Server

high-performance industrial interface



CyBro OPC Sync

OPC client for exchanging data between CyBro controllers



CyBro Relay

access controllers on Internet, as they are connected locally



CyBro SCGI Server

communication server for reading and writing CyBro variables

Visualization



CyBro Mini Scada

simple graphical human machine interface



CyBro Web View

simple human-machine interface, written in PHP



CyBro Web Scada

visualization system and data logger, based on Apache/MySQL/Python



HIQ Commander for Android OS

visualization app for Android phones and tablets



HIQ Commander for iOS

visualization app for iPhone & iPad

Accessories



CyBro Access

key configurator for time-and-space management solutions



CyBro Scheduler

execute given task at predefined time



CyBro Backup

one-touch backup for multiple controllers



CyBro Data Tool

read/write variables from multiple controllers



CyBro Kiss Logger

simple data logger, data saved in text file



CyBro Bin Loader

set CyBro static IP, NAD alias, update kernel and plc program



CyBro IEX Manager

NAD change, firmware update, CAN bus quality monitor

cybrotech

robotina

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