

Programmable Solutions

*Programmable controllers and development
tools for HVAC/R applications*



Programmable controllers and development tools for HVAC/R applications

The iPro platform of programmable controllers offers complete solutions for the management of HVAC/R applications. These controllers are suited for compressor racks, chillers, heat pump units, AHU, all applications in PLC word including shopping centers, hospitals, airports, and more. This range consists of programmable controllers, expansion modules, user interfaces, enhanced development tools, and cloud management.

The **iProGENIUS** series is designed for all retail and food service needs, as well as for HVAC applications. This renewed family stands out for its powerful hardware platform and ease of external connectivity and programmability, while offering local or remote monitoring control. A smart approach to develop applications is a key point for this range of products; to allow this, we provide: a powerful Platform, advanced Programming Tools, a responsive Control Panel and the Cloud Management.

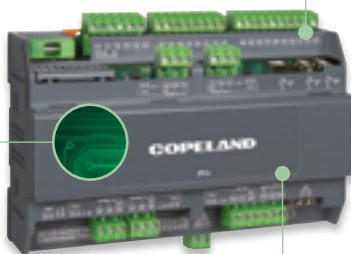
CONTROL PANEL

- Customizable dashboard
- Improved security
- Great responsivity
- High interactivity



PLATFORM

- Powerful hardware
- Great versatility
- Easy maintenance
- Full control



PROGRAMMING TOOLS

- Advanced debugging and simulation systems
- Direct access to documentation (tutorials and videos on the website)
- Possibility of working on multiple projects simultaneously
- Customised tools with dedicated features for faster time to market



CLOUD MANAGEMENT

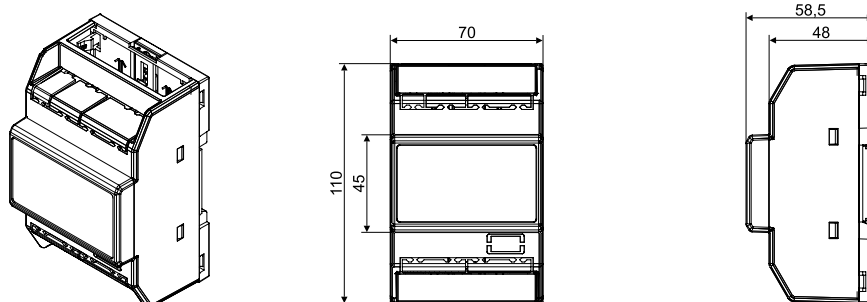
- Optimised data collection
- Efficient data analysis
- Integrated MQTT protocol

Programmable controllers in 4 DIN Rail format and connectivity module



	IPG108D	IPG108E	IPG208D	IPG208E	IPL500D
Format	4 DIN Rail	4 DIN Rail	4 DIN Rail	4 DIN Rail	4 DIN Rail
Display		dual + icons		dual + icons	
Power supply	24Vac/dc from TF40D	24Vac/dc from TF40D	24Vac/dc from TF40D	24Vac/dc from TF40D	24Vac/dc from TF20D
Probe inputs	6 config	6 config	6 config	6 config	
Optoinsulated digital inputs	11 config	11 config	11 config	11 config	
Configurable relay outputs	8x5A	8x5A	8x5A	8x5A	
Other outputs					
0÷10V or 4÷20mA	4 config	4 config	4 config	4 config	
RS485	pres	pres	pres	pres	pres
USB	pres	pres	pres	pres	pres
LAN/RS485	pres	pres	pres	pres	pres
CANbus					pres
Ethernet	via USB-ETH-CONV	via USB-ETH-CONV	via USB-ETH-CONV	via USB-ETH-CONV	pres
Other					
Remote display output	pres	pres	pres	pres	pres
Real time clock	pres	pres	pres	pres	pres
Flash memory	512MB	512MB	512MB	512MB	512MB
Connections	disconnectable + screw	disconnectable + screw	bayonet + screw	bayonet + screw	screw
Connection kit	DWS30-KIT, IP-FC108	DWS30-KIT, IP-FC108	IP-FC208	IP-FC208	IP-FC500
BACnet® protocol	opt	opt	opt	opt	opt

4 DIN Rail dimensions

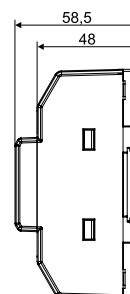
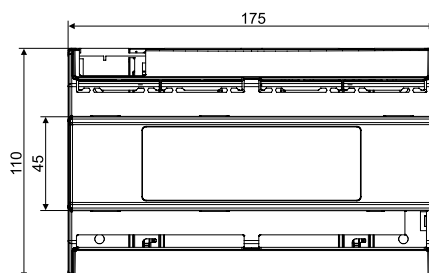
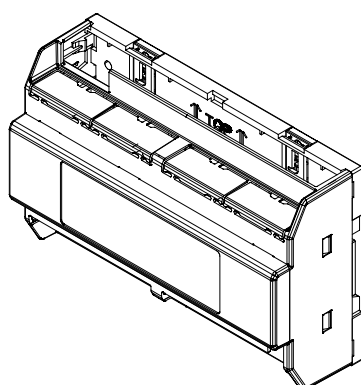


Enhanced programmable controllers in 10 DIN Rail format



	IPG115D	IPG215D	IPG315D	IPG808D
Format	10 DIN Rail	10 DIN Rail	10 DIN Rail	10 DIN Rail
Power supply	24Vac/dc from TF20D	24Vac/dc from TF20D	24Vac/dc from TF20D	24Vac/dc from TF20D/TF40D
Probe inputs	10 config	10 config	10 config	7 config
Optoinsulated digital inputs	20 config	20 config	20 config	6 config
Configurable relay outputs	12x5A + 3x8A or 9x5A + 1x8A + 5xSSR opt	15x5A	15x5A or 10x5A + 5xSSR opt	5x16A + 3x8A
Other outputs				
PWM/0÷10V/4÷20mA				1 config
0÷10V or 4÷20mA	2 config	2 config	2 config	2 config
0÷10V	4	4	4	
RS485	2	2	2	pres
USB	1 host	1 host	1 host	1 host
RS232	opt	opt	opt	
LAN/RS485				pres
CANbus	pres	pres	pres	
Ethernet	pres	pres	pres	via USB-ETH-CONV
Other				
Remote display output	pres	pres	pres	pres
Unipolar valve output				pres
Real time clock	pres	pres	pres	pres
Flash memory	512MB	512MB	512MB	512MB
Connections	disconnectable	bayonet + screw	disconnectable + screw	screw
Connection kit	DWB30-KIT	IP-FC215CP	DWB315-KIT, IP-FC315	IP-FCXB800
BACnet® protocol	opt	opt	opt	opt

10 DIN Rail dimensions



Full Programmable controllers in 10 DIN Rail format



	IPG115D	IPG215D	IPG315D
Format	10 DIN Rail	10 DIN Rail	10 DIN Rail
Power supply	24Vac/dc from TF20D	24Vac/dc from TF20D	24Vac/dc from TF20D
Probe inputs	10 config	10 config	10 config
Optoinsulated digital inputs	20 config	20 config	20 config
Configurable relay outputs	12x5A + 3x8A or 9x5A + 1x8A + 5xSSR opt	15x5A	15x5A or 10x5A + 5xSSR opt
Other outputs			
PWM/0÷10V/4÷20mA			
0÷10V or 4÷20mA	2 config	2 config	2 config
0÷10V	4	4	4
RS485	4	4	4
USB	2 host + 1 device	2 host + 1 device	2 host + 1 device
RS232	opt	opt	opt
LAN/RS485			
CANbus	pres	pres	pres
Ethernet	pres	pres	pres
Other			
Remote display output	pres	pres	pres
Unipolar valve output			
Real time clock	pres	pres	pres
Flash memory	512MB	512MB	512MB
Connections	disconnectable	bayonet + screw	disconnectable + screw
Connection kit	DWB30-KIT	IP-FC215CP	DWB315-KIT, IP-FC315
BACnet® protocol	opt	opt	opt



Expansion modules



	IPX106D	IPX115D	IPX125D	IPX206D
Format	4 DIN Rail	10 DIN Rail	10 DIN Rail	4 DIN Rail
Power supply	24Vac/dc from TF10D	24Vac/dc from TF20D	24Vac/dc from TF20D	24Vac/dc from TF10D
Probe inputs	7 config	10 config	10 config	7 config
Optoinsulated digital inputs	3 config	20 config	20 config	3 config
Configurable relay outputs	6x5A	12x5A + 3x8A	18x5A + 3x8A + 4xSSR	5x5A + 1x8A or 4x5A + 1x8A + 1xSSR
Other outputs				
0÷10V or 4÷20mA		2 config	2 config	
0÷10V	3	4	4	3
LAN	pres	pres	pres	pres
CANbus	pres	pres	pres	pres
Other				
Dip switch for address set	pres	pres	pres	pres
Connections	disconnectable	disconnectable	disconnectable	bayonet + screw
Connection kit	DWEX60-30KIT	DWX115-30KIT	DWEX70-30KIT	IP-FCEX60

Interfaces

IPCH



- Programmable LED keyboard
- 3 digits + icons
- Panel mounting

V2IPG



- LCD with 240x96 pixels
- Power supply: from controller
- On board temperature/humidity probe (optional)
- Visokey output
- Buzzer (optional)
- ASCII or UNICODE
- Wall or panel mounting

VTIPG



- Programmable TFT touch screen displays
- 4.3" display - 480x272 pixels
- 256 (8 bit) colors
- Power supply: 12-24Vac/dc
- RS485 output (optional)
- LAN port
- USB output
- Buzzer
- Wall or panel mounting

Also available in enhanced version with remote update and double memory capacity.

Expansion modules



	IPX215D	IPX225D	IPX306D	IPX315D	IPX325D
Format	10 DIN Rail	10 DIN Rail	4 DIN Rail	10 DIN Rail	10 DIN Rail
Power supply	24Vac/dc from TF20D	24Vac/dc from TF20D	24Vac/dc from TF10D	24Vac/dc from TF20D	24Vac/dc from TF20D
Probe inputs	10 config	10 config	7 config	10 config	10 config
Optoinsulated digital inputs	20 config	20 config	3 config	20 config	20 config
Configurable relay outputs	15x5A	21x5A + 4xSSR	5x5A + 1x8A or 4x5A + 1x8A + 1xSSR opt	15x5A or 10x5A + 5xSSR opt	21x5A + 4xSSR or 16x5A + 4xSSR + 5xSSR opt
Other outputs					
0÷10V or 4÷20mA	2 config	2 config		2 config	2 config
0÷10V	4	4	3	4	4
LAN	pres	pres	pres	pres	pres
CANbus	pres	pres	pres	pres	pres
Other					
Dip switch for address set	pres	pres	pres	pres	pres
Connections	bayonet + screw	bayonet + screw	disconnectable + screw	disconnectable + screw	disconnectable + screw
Connection kit	IP-FCX215	IP-FCX70	DWEX60-30KIT, IP-FCX306	DWX315-30KIT, IP-FCX315	DWX325-30KIT, IP-FCX325

Driver EEV

XEV20D



Driver for 1 or 2 unipolar and bipolar stepper electronic expansion valves.

- Format: 4 DIN Rail
- Power supply: 24Vac/dc (from TF20D/TF40D)
- Probe inputs: 4 config
- LAN output
- CANbus output
- Dip switch address selection
- DWXEV30 connection kit

XEC



XEC EVO and XEC PRO are the backup modules for valve closing and for the power supply of iPro controllers in case of blackout.

- Format: 4 DIN Rail
- Power supply: 24Vac/dc (XEC EVO), 24Vac (XEC PRO)

IEV MDB



Driver for 1 or 2 unipolar and bipolar stepper electronic expansion valves.

- Format: 4 DIN Rail
- Power supply: 24Vac/dc (from TF20D/TF40D)
- Probe inputs: 4 config
- RS485 output
- Dip switch address selection
- DWXEV30 connection kit

The iProAcademy team

The iProAcademy is a Center of Excellence that combines INNOVATION REQUESTS received from the market with TECHNOLOGICAL OPPORTUNITIES, guaranteeing continuous growth of the iPro Platform.

The iProAcademy team CREATES, TRAINS, COORDINATES, and SUPPORTS developers.

This constant support is given by the Team through several instruments that allow iPro users to develop their applications from the beginning to the market release.

Advanced programming tools



Copeland's programming tools allow users to work independently and create applications for iPro controllers quickly and easily. The programming tool for programmable controllers (iPro TOOL) is a modern, open environment characterised by a modular architecture; the version offers:

- Integrated templates with I/O management, alarms and preconfigured parameters
- Comprehensive online manuals (tutorials, Bios functionalities guide, FAQ quick guide, and more)
- Possibility of working on multiple projects at the same time
- Reduced writing-time of the code
- Instant creation of executable files for the production line
- Optimised integration with instruments via Modbus
- Advanced functions for simulation and debugging



VISOPROG

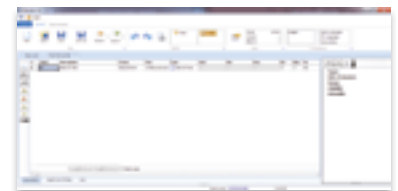
Programming tool designed to develop user interfaces for VISOGRAPH and VISOTOUCH. Thanks to the many available functions it is possible to create very simple and intuitive user interfaces based on customer's needs.

- Possibility of creating **Styles** and **Templates** to reduce development time and facilitate greater adaptability according to requirements
- Addition of **Script** and **Global Event** to make application management smarter
- New ways of creating graphics, such as compressor envelope management



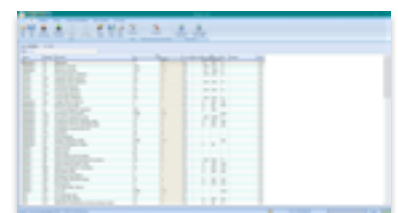
LIB BUILDER

Programming tool designed to create parameter maps in an easy and fast way for third-party devices for XWEB PRO and WIZMATE.



WIZMATE PROG-TOOL KIT

Tool developed to modify programming parameters of the instrument in an easy and fast way by WIZMATE software.





Tailored efficiency trainings

We organize focused trainings depending on different levels and needs using advanced training methods: Online, Classroom, On demand trainings. All iPro users can attend specific trainings concerning Template, Platform, Function Blocks and Applications, directly from their desk, significantly reducing related costs of time and travel.

- Access to recorded session so no details are missed
- Live sessions to attend in real-time
- Training material always available online

Dedicated section on iProAcademy website

The importance of gathering all information together is a key element to maintain constant connection with all developers. This need has been translated in a fully dedicated section on the iProAcademy website, that allows users to be always up-to-date, choose the right training, and easily enroll and download the required material.



Control panel with a customizable dashboard

iPro users can decide how to show relevant values of their application by customizing the first page of the control panel, without having to develop an HTML interface.

Available applications

RACK APP

The compressor RACK application is designed for the management of racks with standard refrigerants, CO₂ subcritical applications and transcritical CO₂ booster systems controlling heat recovery system and parallel compression. It manages compressor racks with up to 2 circuits and 12 compressors per circuit.

Controllers: IPR208D/IPRC208D,
IPR215D/IPRC215D/IPRC315D

Expansions: IPX206D and IPX215D

Interfaces: V2IPR and VTIPR



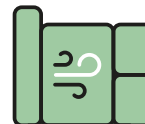
AHU APP

The application for AHU ensures optimal control of the temperature, humidity, pressure, air quality and flow, for accurate regulation both in conditioning and in process. The complete management of the most advanced construction technologies (heat exchanger, variable flow rate, and more...) ensures high energy efficiency performance.

Controllers: IPG208D A01 and IPG215D A01

Expansions: IPX206D and IPX215D

Interfaces: V2IPG and VTIPG



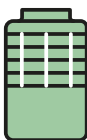
CHILLER & HEAT PUMP APP

The CHILL application for all chiller and heat pump units up to 4 circuits and 16 compressors, is the ideal solution also for the most complex units and can manage system such as: air/air, air/water and motor condensing.

Controllers: IPC108D/IPC108E and IPC115D/IPC315D

Expansions: IPX106D and IPX306D

Interfaces: V2IPC and VTIPC



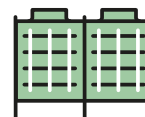
DRY COOLER APP

The application for the control of DRY COOLER units add to the regulation of ventilation a high-performing management of pump stations, adiabatic cooler and heat exchanger. The flexibility of the application allows to use it in several application combinations.

Controllers: IPG208D W01 and IPG215D W01

Expansions: IPX206D and IPX215D

Interfaces: V2IPG and VTIPG



High connectivity

CANbus / LAN

Expansion modules



Driver EEV



EEV

IEV Modbus



INTERFACES



TOUCH

ETHERNET

XWEB system



- Supervision, analysis and alarm management

Smartphone/PC/Tablet



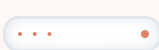
- Configuration, supervision, data/parameter download and more

3rd party devices



- Easy management of 3rd party devices

Modem



- Internet connection
- SMS/e-mail

Router Wi-Fi



- Data download
- Controller update

Accessories

UNIVERSAL KIT SIMULATOR



Universal simulator for inputs and outputs designed to test the applications developed in the HVAC/R world. Thanks to this device and to its wide range of available wirings, it is possible to test several boards changing only the wiring that is connected to the simulator. 110 or 230Vac power supply.

USB-ETH-CONV



USB-Ethernet adapter for iPro controllers in 4 DIN format (not for IPL500D).

USB



- Data download
- Application update

ETHERNET | BACnet™ / Modbus® / TCP/IP

E-mail



- Alarm messages

http/https/sftp



- Data transfer

Internal web site

- Customizable web pages
- HTML and Javascript supported
- CGI available for variables management



GRAPHICS

RS485 | BACnet™ / Modbus®

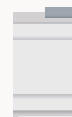
Energy meter

- Consumption data/analysis
- Electrical data



3rd party devices

- Easy management of 3rd party devices



Client/Server

- Up to 10 server units



XJ485USB-KIT



USB-RS485 converter (2 wires) which allows to monitor one or more controllers networked to a computer.

PROBES AND ACCESSORIES



A complete family of probes, transducers, leak detectors and accessories (transformers, connectors and more) ensures for every need the right solution.

