iPro guide
Programmable solutions for HVAC/R

DIXELL™

EMERSON™

iProGENIUS

Programmable controllers

FEATURES	IPG108D	IPG108E	IPG115D	IPG208D	IPG208E	IPG215D
Format	4 DIN Rail	4 DIN Rail	10 DIN Rail	4 DIN Rail	4 DIN Rail	10 DIN Rail
Display		dual + icons			dual + icons	
Power supply	24Vac/dc from TF40D	24Vac/dc from TF40D	24Vac/dc from TF20D	24Vac/dc from TF40D	24Vac/dc from TF40D	24Vac/dc from TF20D
Probe inputs	6 config	6 config	10 config	6 config	6 config	10 config
Optoinsulated digital inputs	11 config	11 config	20 config	11 config	11 config	20 config
Configurable relay outputs	8x5A	8x5A	12x5A + 3x8A or 9x5A + 1x8A + 5xSSR	8x5A	8x5A	15x5A
Unipolar valve output						
Other outputs						
PWM or 0÷10V or 4÷20mA						
0÷10V or 4÷20mA	4 config	4 config	2 config	4 config	4 config	2 config
0÷10V			4			4
RS485	pres	pres	up to 4	pres	pres	up to 4
USB	1xhost	1xhost	up to 2xhost + 1 device	1xhost	1xhost	up to 2xhost + 1 device
RS232			opt			opt
LAN/RS485	pres	pres		pres	pres	
CANbus			pres			pres
Ethernet	via USB-ETH-CONV	via USB-ETH-CONV	pres	via USB-ETH-CONV	via USB-ETH-CONV	pres
Other						
Remote display output	pres	pres	pres	pres	pres	pres
Real time clock	pres	pres	pres	pres	pres	pres
Flash memory	128MB	128MB	512MB	128MB	128MB	512MB
Connections	disconnectable + screw	disconnectable + screw	disconnectable	bayonet + screw	bayonet + screw	bayonet + screw
Connection kit	DWS30-KIT, IP-FC108	DWS30-KIT, IP-FC108	DWB30-KIT	IP-FC208	IP-FC208	IP-FC215CP
BACnet® protocol	opt	opt	opt	opt	opt	opt

Interfaces

IPCH

- Programmable LED keyboard
- Compatible with IPG808D and 4 DIN format controllers
- 3 digits + icons
- Panel mounting

V2IPG

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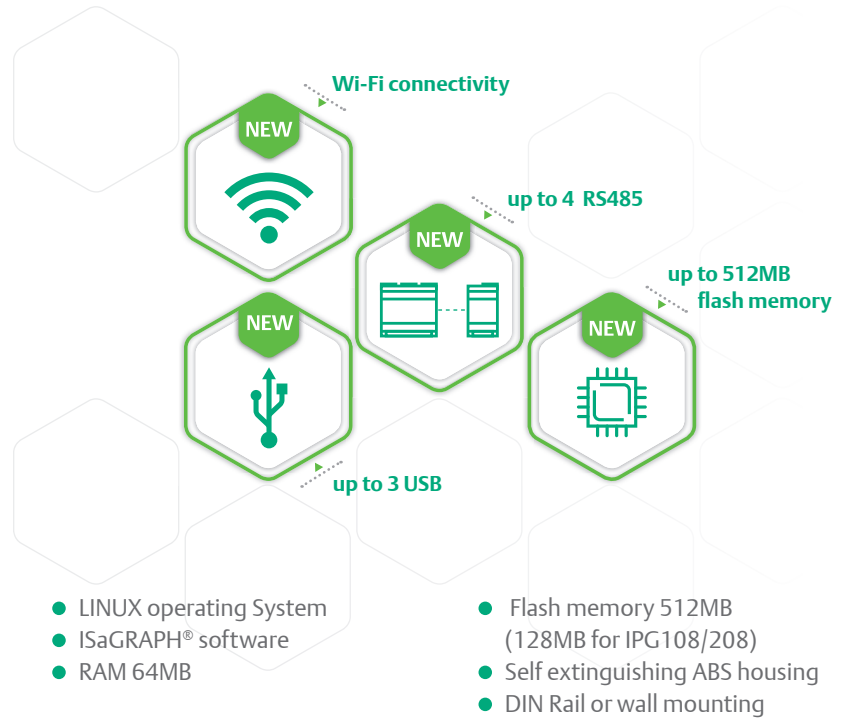- ASCII or UNICODE
- Wall or panel mounting

VTIPG

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

IPG315D	IPG808D	IPL500D
10 DIN Rail	10 DIN Rail	4 DIN Rail
24Vac/dc from TF20D	24Vac/dc from TF20D/TF40D	24Vac/dc from TF20D
10 config	7 config	
20 config	6 config	
15x5A or 10x5A + 5xSSR opt	5x16A + 3x8A	
	pres	
	1 config	
2 config	2 config	
4		
up to 4	pres	pres
up to 2xhost + 1 device	1xhost	1xhost
opt		
	pres	pres
pres		pres
pres	via USB-ETH-CONV	pres
pres	pres	pres
pres	pres	pres
512MB	128MB	512MB
disconnectable + screw	screw	screw
DWB315, IP-FC315	IP-FCXB800	IP-FC500
opt	opt	opt

Wi-Fi connectivity

up to 4 RS485

up to 512MB flash memory

up to 3 USB

NEW

- LINUX operating System
- ISaGRAPH® software
- RAM 64MB
- Flash memory 512MB (128MB for IPG108/208)
- Self extinguishing ABS housing
- DIN Rail or wall mounting

Adapters

USB-ETH-CONV

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

XJ485USB-KIT

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

NANO-Wi-Fi

USB-Wi-Fi adapter for Wi-Fi network connection (only for 10 DIN format)

Accessories

UNIVERSAL KIT SIMULATOR

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

PROBES and ACCESSORIES

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

Expansion modules

FEATURES	IPX106D	IPX115D	IPX125D	IPX206D	IPX215D	IPX225D
Format	4 DIN Rail	10 DIN Rail	10 DIN Rail	4 DIN Rail	10 DIN Rail	10 DIN Rail
Power supply	24Vac/dc from TF10D	24Vac/dc from TF20D	24Vac/dc from TF20D	24Vac/dc from TF10D	24Vac/dc from TF20D	24Vac/dc from TF20D
Probe inputs	7 config	10 config	10 config	7 config	10 config	10 config
Optoinsulated digital inputs	3 config	20 config	20 config	3 config	20 config	20 config
Configurable relay outputs	6x5A	12x5A + 3x8A	18x5A + 3x8A + 4xSSR	5x5A + 1x8A or 4x5A + 1x8A + 1xSSR	15x5A	21x5A + 4xSSR
Other outputs						
0÷10V or 4÷20mA		2 config	2 config		2 config	2 config
0÷10V	3	4	4	3	4	4
LAN	pres	pres	pres	pres	pres	pres
CANbus						
Other						
Dip switch for address set	pres	pres	pres	pres	pres	pres
Connections	disconnectable	disconnectable	disconnectable	bayonet + screw	bayonet + screw	bayonet + screw
Connection kit	DWEX60-30KIT	DWX115-30KIT	DWEX70-30KIT	IP-FCEX60	IP-FCX215	IP-FCEX70

# iProAcademy World: the smart approach to develop applications

THE iProAcademy TEAM

The iProAcademy is a Center of Excellence that combines INNOVATION REQUESTS received from the market with TECHNOLOGICAL OPPORTUNITIES, guaranteeing a continuous growth of the iPro Platform.
The iPro Academy team CREATES, TRAINS, COORDINATES and SUPPORTS the developers.

FUNCTION BLOCKS

- New function block structure designed to create fast and easy final applications
- Multiple templates available to develop applications with preset configurations and fast time-to-market
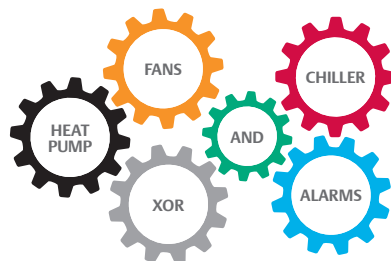
NEW FUNCTION BLOCK STRUCTURE ❯❯❯❯❯

❯❯❯❯❯ **EASIER WAY TO MODIFY OR ADAPT AN APPLICATION**
All applications can be developed starting from the same template, then we can use different libraries depending on the kind of application.

❯❯❯❯❯ **FASTER AND EASIER DEVELOPMENT**
For example, the HVAC application already developed can be used for simple chiller units, or it can be modified to create a more complex application.

EEV drivers

XEV20D

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

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

XEC

XEC is the supercap module that allows the closing of the valve in case of power failure.

- Format: 4 DIN Rail
- Power supply: 24 Vac/dc (from TF20D)

IPX306D	IPX315D
4 DIN Rail	10 DIN Rail
24Vac/dc from TF10D	24Vac/dc from TF20D
7 config	10 config
3 config	20 config
5x5A + 1x8A or 4x5A - 1x8A + 1xSSR	15x5A or 10x5A + 5xSSR
	2 config
3	4
pres	pres
pres	pres
disconnectable + screw	disconnectable + screw
DWEX306-30KIT, IP-FCX306	DWX315-30KIT, IP-FCX315

Programming tools

LIB BUILDER

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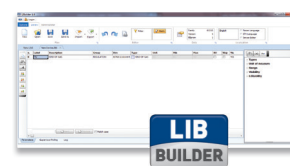
VISOPROG

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.
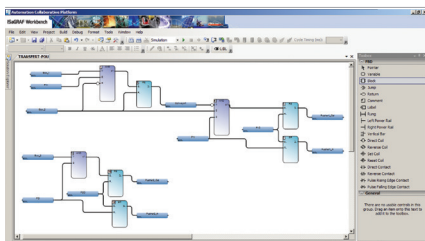
WIZMATE PROG-TOOL KIT

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

iPro-TOOL

It is a complete and easy to use tool that allows the user to work independently to create applications for iPro controllers, taking advantage of all the programmable series potential. The package includes manuals and the ISaGRAF®, WIZMATE and VISOPROG (optional) software.

In particular the ISaGRAF 6 tool contains a modern philosophy of an open-environment, based on the concept that each element is a plug-in.

- Modular architecture that allows the highest level of customization
- Possibility to work on different projects at the same time
- Reduced writing-time of the code thanks to:
  - automatic creation of the block instance
  - auto-completion of the code in ST editor
  - block coloration, regions creation, manually setting of execution order, and document overview

TRAININGS

We organize focused trainings depending on different levels and needs using advanced training methods: On-site (classroom), E-learning (via WebEx meeting), Self-training (video) and now also Interactive on-line training. All iPro users can attend specific online trainings directly from their desk, reducing significantly the related costs of time and travel.

- 2 hours session time
- Advanced method to check the progress using interactive software
- Tailored efficiency trainings

High connectivity

EXPANSION MODULES

EEV DRIVER

EEV

CANbus / LAN

SMS/E-MAIL

- Alarm messages

ROUTER

- Remote connection

HTTP/FTP

- Data transfer

ETHERNET

BACnet™ / ModBUS® / TCP/IP

XWEB SYSTEM

- Supervision, analysis and alarm management

SMARTPHONE/PC/TABLET

- Configuration, supervision, data/parameter download and more
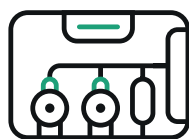
3rd PARTY DEVICES

- Easy management of 3rd party devices

ETHERNET

Available applications

RACK APP

- Controllers:
  IPR208D & **IPR215D**/**IPRC215D**
- Expansions:
  IPX206D & **IPX215D**
- Inferfaces:
  V2IPR & **VTIPR**

The compressor RACK application is designed for the management of racks with standard refrigerants, CO_2 subcritical applications and transcritical CO_2 booster systems controlling heat recovery system and parallel compression. It manages compressor racks with up to 2 circuits and 12 compressors per circuit.

CHILLER & HEAT PUMP APP

- Controllers:
  IPC108D/**IPC108E**
  & **IPC115D**/**IPC315D**
- Expansions:
  IPX106D & **IPX306D**
- Inferfaces:
  V2IPC & **VTIPC**

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 condesing.

TOUCH
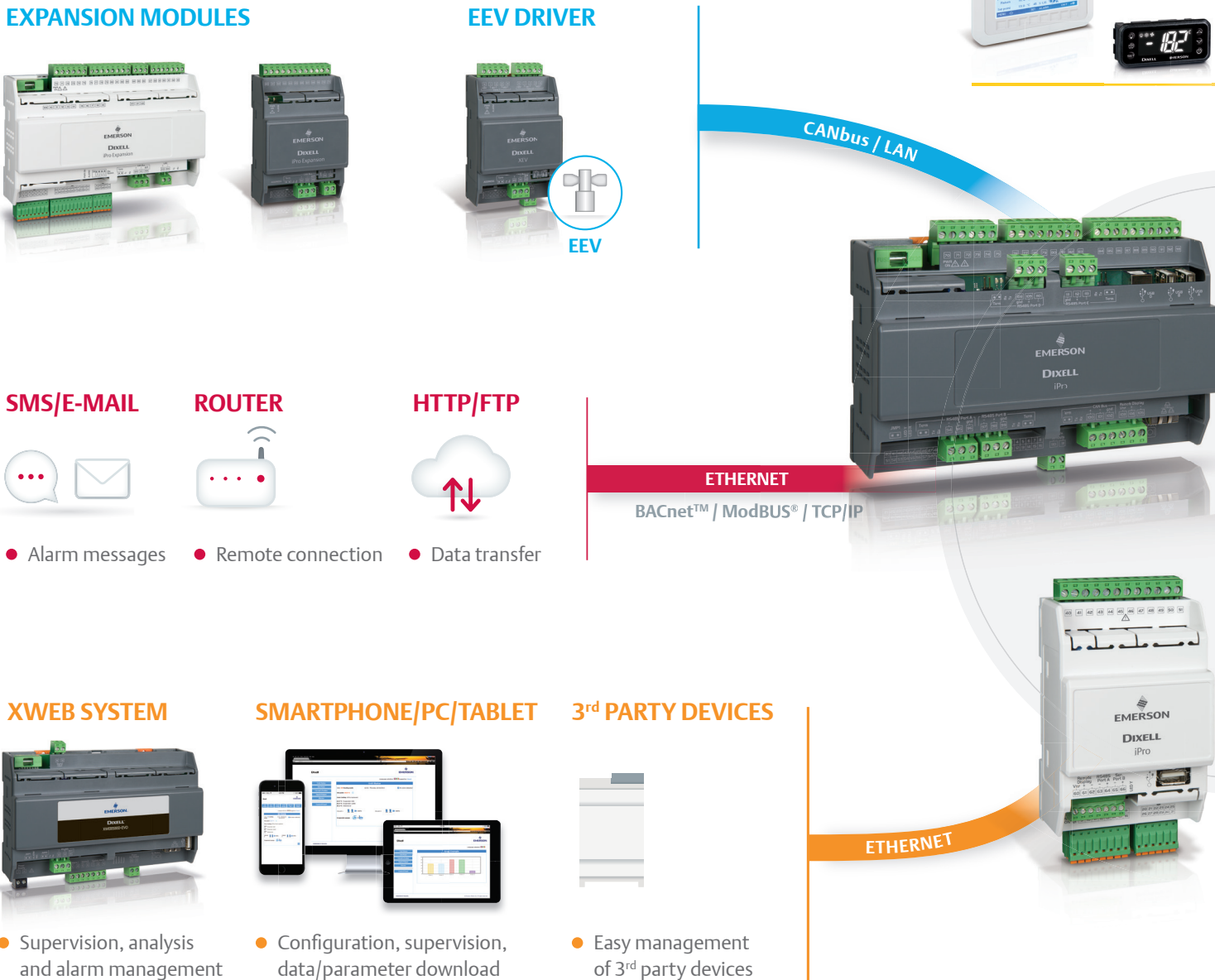
USB

- Data download
- Upgrade
- Storage memory
- Nano Wi-Fi connection
  (only for 10 DIN format)
  - SMS/e-mail
  - Connection to Wi-Fi network

INTERNAL WEB SITE

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

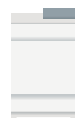**CHARTS**

RS485 / RS232

BACnet™ / ModBUS®

ENERGY METER

- Consumption data/analysis
- Electrical data

3rd PARTY DEVICES

- Easy management
  of 3rd party devices

GATEWAYS

- LON

MASTER/SLAVE

- Up to 10 slave units

MODEM

- Internet connection
- SMS/e-mail

AHU APP

- Controllers:
  IPG208D A01 & **IPG215D A01**
- Expansions:
  IPX206D & **IPX215D**
- Inferfaces:
  V2IPG & **VTIPG**
- Probes: **AP**
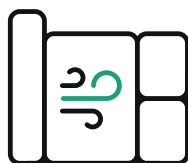
The application for AHU ensures optimal control of the temperature, humidity, pressure, air quality and flow, for accurate regulation both in conditioning and in process.
The complete management of the most advanced construction technologies (heat exchanger, variable flow rate, and more...) ensures high energy efficiency performance.

DRY COOLER APP

- Controllers:
  IPG208D A02
  & **IPG215D A02**
- Expansions:
  IPX206D & **IPX215D**
- Inferfaces:
  V2IPG & **VTIPG**
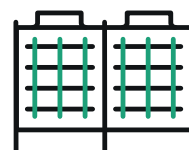
The application for the control of DRY COOLER units add to the regulation of ventilation a high-performing management of pump stations, adiabatic cooler and heat exchanger.
The flexibility of the application allows to use it in several application combinations.

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