

**Intesis**<sup>®</sup>  
BY HMS NETWORKS

Gateway solutions  
for building and home integration

Reduce energy waste in your  
automation projects with  
Intesis solutions



# Intesis – connecting buildings and homes

Intesis gateways for building and home automation covers all relevant standards and technologies, and includes the market's most comprehensive portfolio for HVAC integration with solutions for all major AC-brands.

Highly reliable, robust, easy to configure and install, the Intesis protocol translators, AC interfaces, and cloud solutions are widely used for system integration. Users benefit from efficient commissioning and uninterrupted operation.



## Intesis by HMS Networks

Intesis is a part of HMS Networks, market leader in solutions for industrial communication and the Industrial Internet of Things, IIoT. The Intesis brand is HMS central brand for Building Automation products and solutions. The other main markets for HMS are Manufacturing, Power, Energy, Transportation, Infrastructure and Logistics.

## About HMS Networks

With millions of installed products worldwide, HMS Networks is the leading supplier of solutions for Industrial ICT (Information & Communication Technology).

We enable valuable data and insights from industrial equipment, allowing our customers to increase productivity and sustainability.

- Employees: > 750
- Locations: in 17 countries
- Distributors: > 50 countries
- Brands: Anybus, Ewon, Intesis, Ixxat
- Customers: Device manufacturers, machine builders, system integrators, end users
- Year founded: 1988



## High quality standards

Intesis products are subject to extensive testing and certification processes to ensure the highest quality standards. Also, additional tests are implemented for specific markets.

### 100% tested

Every single product manufactured by Intesis is tested to ensure the highest quality standards.

### UL listed

Intesis products contain UL marked components and the production line is subject to periodic UL audits. It is with pride that we put the UL mark on all main Intesis products.

### Global coverage

In addition to rigorous internal quality tests, Intesis products are also certified by independent testing labs to fulfill national legal requirements on different markets.

### Protocol certifications

All implementations of standard protocols in Intesis products are performed rigorously according to each protocol specification. Full interoperability is then ensured thanks to testing and certification by external accredited laboratories.



No matter what building automation protocol or AC brand,

## Protocol translators

BACnet, KNX, Modbus, DALI, M-Bus, ASCII, PROFINET, LonWorks, OCPP, EtherNet/IP — all are supported by the Intesis protocol translators. With cutting edge technology built on a reliable platform, integration solutions are offered for all your needs.



## Air conditioning interfaces

Developed with and for all major air conditioning manufacturers, Intesis AC interfaces enable high quality integration of climate systems into BACnet, KNX, Modbus, and 2,4 GHz wireless installations.



## Cloud solutions

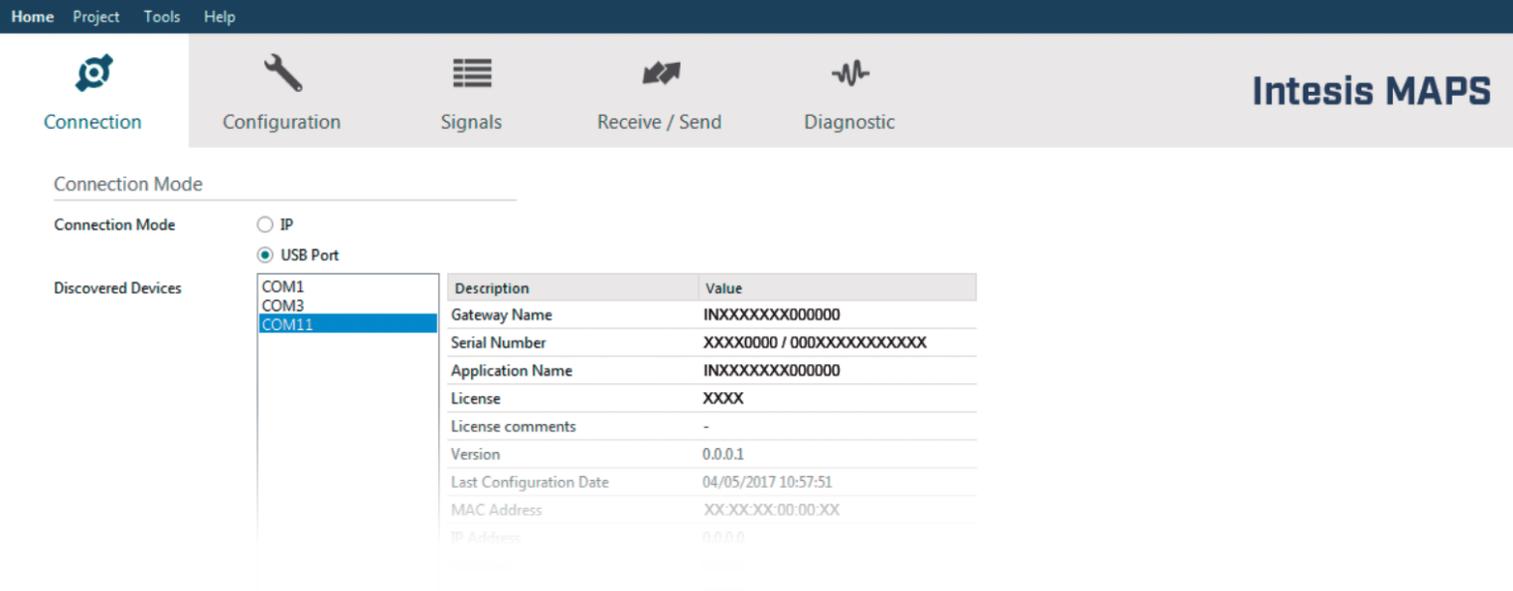
Intesis long experience of Building Automation protocols and communication solutions for HVAC integration brought to the cloud for straight-forward remote device management.



Intesis have the solutions for every project

# Intesis MAPS – a software tool for fast and easy configuration

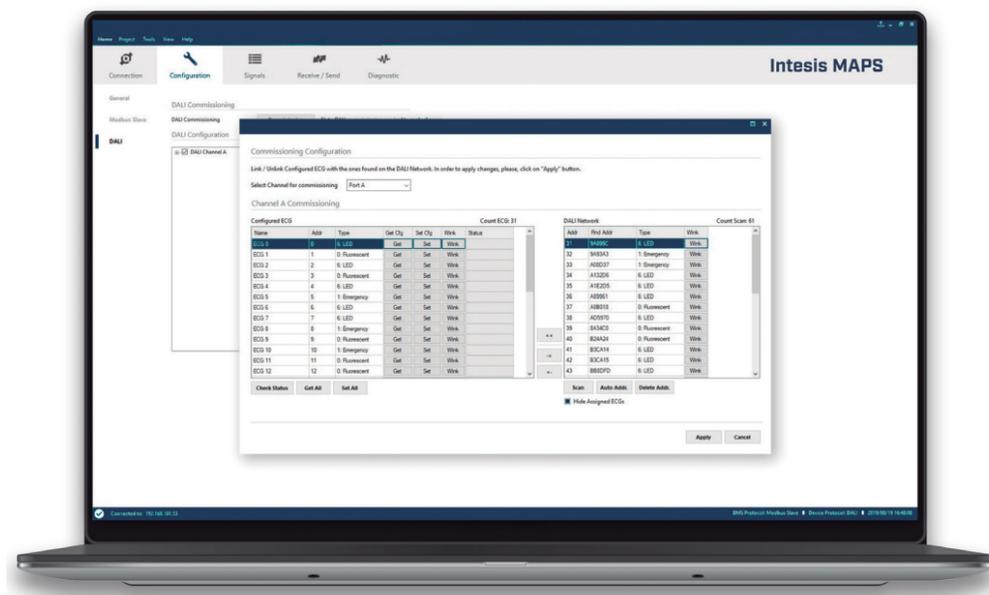
## Multi Addressing Point Solution



## Intesis MAPS

Powerful configuration of all Intesis protocol translators for fast and straight-forward commissioning.

Intesis MAPS enables easy configuration of all possible protocol combinations available in the Intesis protocol translator portfolio, offering a simple and consistent way to program all your devices, regardless of the protocols used. Upon launching MAPS, the user selects the right template for the protocol translator and the configuration procedure can start.



### Project templates

For every gateway there is a template providing a step by step setup guide for both protocols in the gateway.



### Product templates

Product templates are provided for automatic import of all device data, removing the need for manual work.



### Device scan

By using the scanning functionality, users can find devices in the field and import all their data automatically.



### Data conversion

Data can be transformed into the desired format, e.g. adjusting offset, scaling or converting from degrees Celsius into Fahrenheit.



### Diagnostics

Problems and errors can be detected and solved with Intesis MAPS diagnostics.



### Secure and safe configuration

MAPS configuration projects are protected by passwords to prevent unauthorized manipulation of projects and installations.



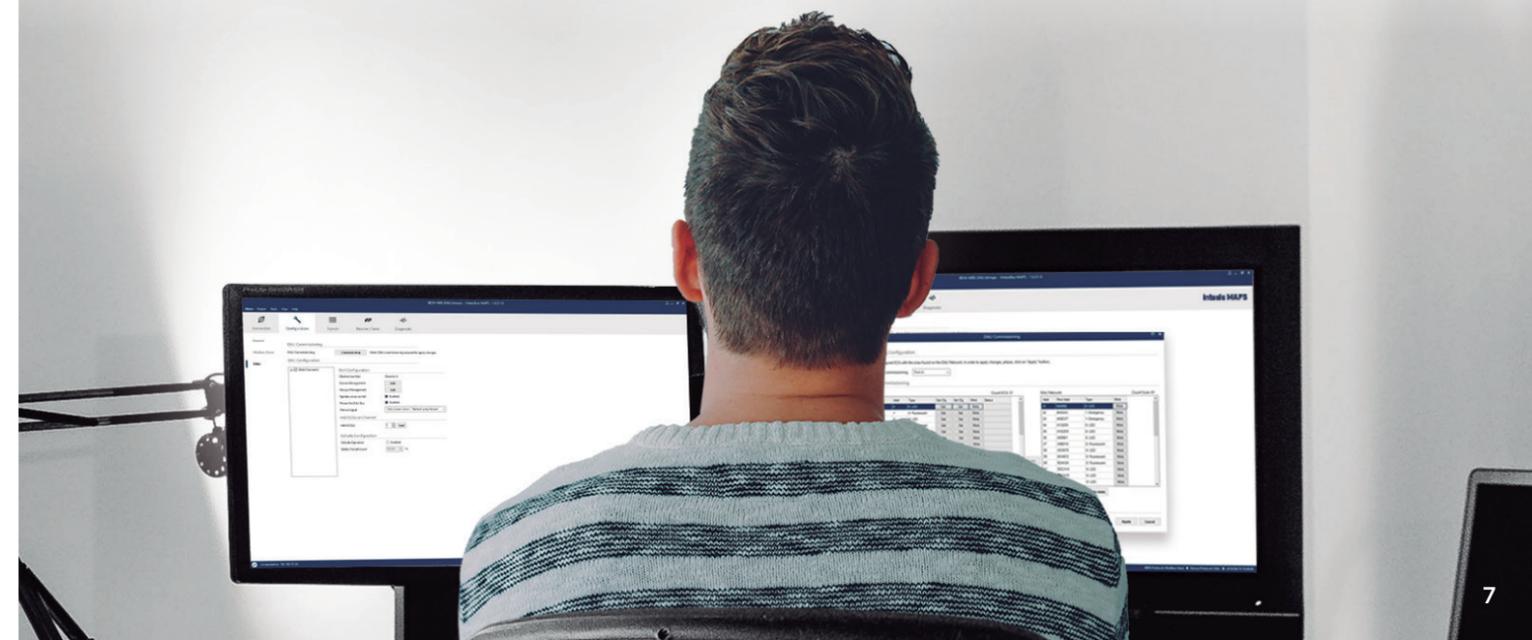
### Recovery

Users can save the gateway configuration project to file for e.g. recovery purposes or in case of gateway replacement.



### Update information

The tool informs whenever there is a new software version available for the gateway or MAPS itself.



# Taking care of your projects in advance

Get ready to start your project even if you are not on site

Intesis MAPS offers you the possibility of starting your projects even without the Intesis device. Simply start creating your configuration file from the device manufacturer manual and/or the BMS or SCADA engineer information.

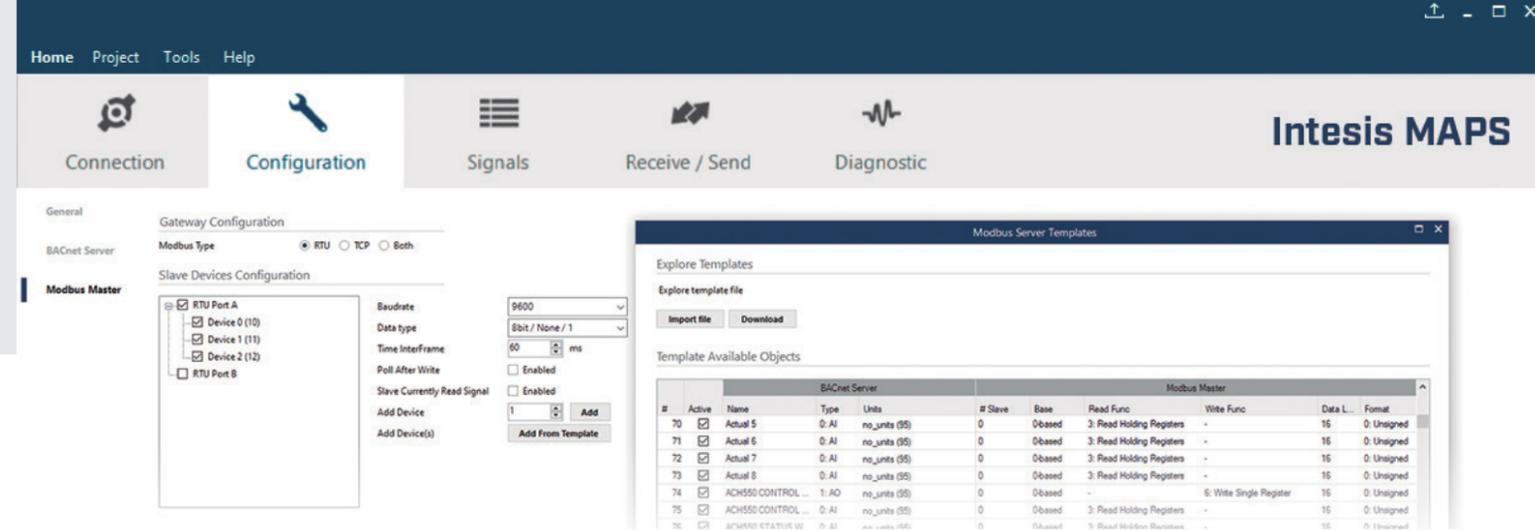
Get everything ready before commissioning

Check your configuration, simulate communications, use our templates, consult our manuals, attend our webinars and get the most of our team experience in a powerful tool. Everything in its right place for a smooth commissioning process.

Template functionality

Thanks to our template functionality you can import already existing templates from third party devices\* and include them in your project with a simple click of the mouse. Moreover, you can create your own templates and use them in any of your projects.

\* Requires Internet connection.



Fast, save and secure commissioning and troubleshooting

Even if you are not on site, remote connections are available to the gateway through IP\*, which ensures the possibility of testing the project during the commissioning stage. You can also troubleshoot any possible issue you may face from your office.

Save money and time with less travelling

A remote connection drastically reduces the need for travelling since commissioning or troubleshooting can be done from anywhere.

With four simple steps you will be ready to go:

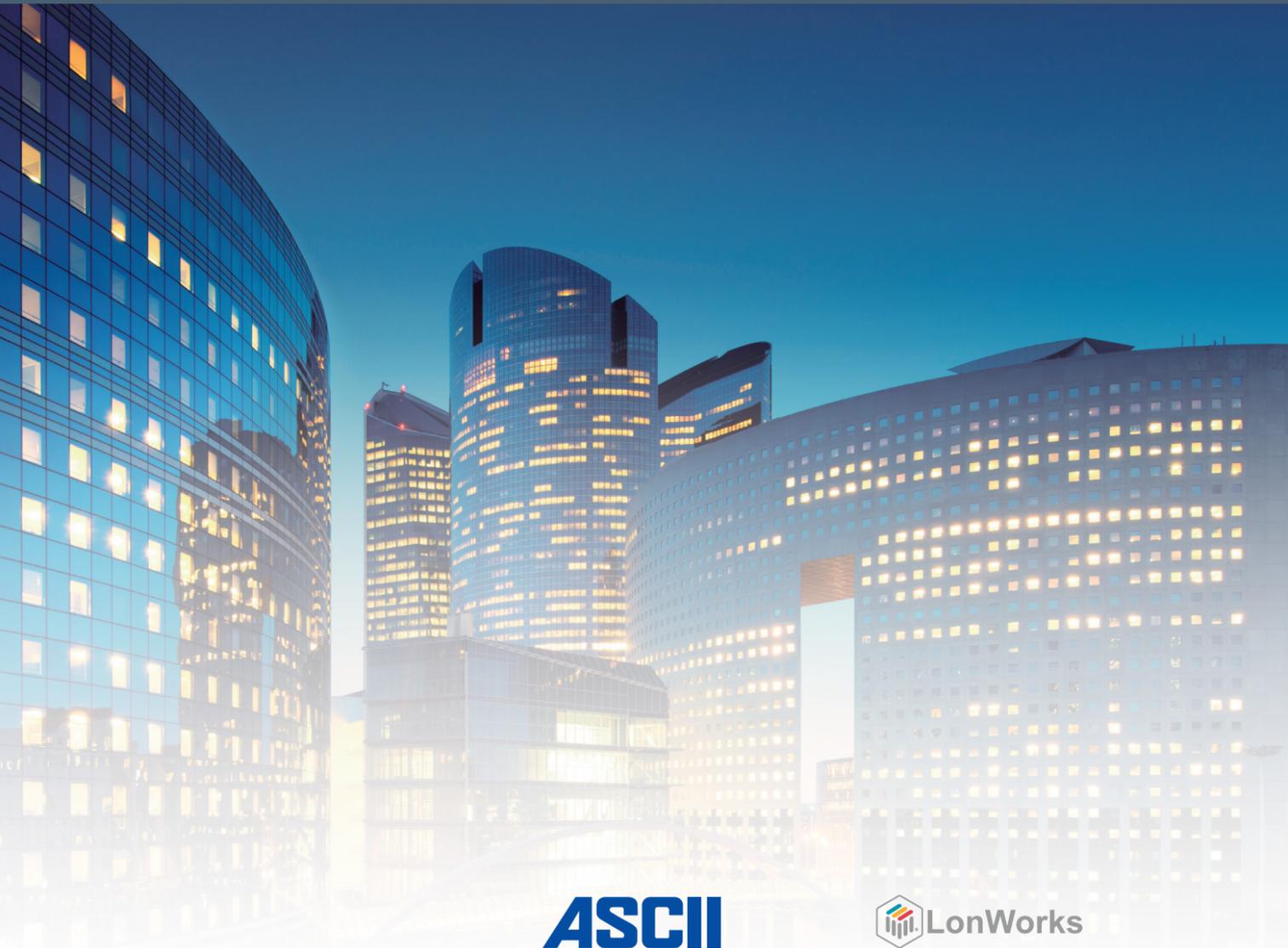
- 1** Create your configuration project
- 2** Enable communications
- 3** Download the configuration
- 4** Test and/or troubleshoot

\*Check with your IT department for more information about external communication configurations.

Now, everything is up and running and you can do commissioning and troubleshooting from anywhere

## Protocol translators

When choosing an Intesis protocol translator, you can be sure that you get a ready-to-use product which easily solves the complex task of integrating between building automation protocols.



**ASCII**

**BACnet™**

**DALI 2**

**EtherNet/IP™**

**KNX**

**LonWorks**

**M-Bus**

**Modbus**

**OCPP**

**PROFI NET®**

## Protocol translators with the latest technology

Intesis protocol translators include the most recent and modern technology, assembled in user-friendly products to facilitate installation, configuration and deployment.



### LED indicator matrix

Multiple LED indicators confirm that all protocols are communicating properly or indicate if there is a communication issue.



### IP/USB console

Direct and safe access to the configuration via USB or the Ethernet port.



### USB host

Configuration can be performed with the USB host port, from downloading projects or generating log files to updating the firmware.



### Multiple ports

With multiple ports for the different physical layers (cable/network types), all common connectivity requirements are met.



### Design for DIN-rail mounting

Using just five DIN-Rail modules, it is easy to fit Intesis protocol translators into cabinets.



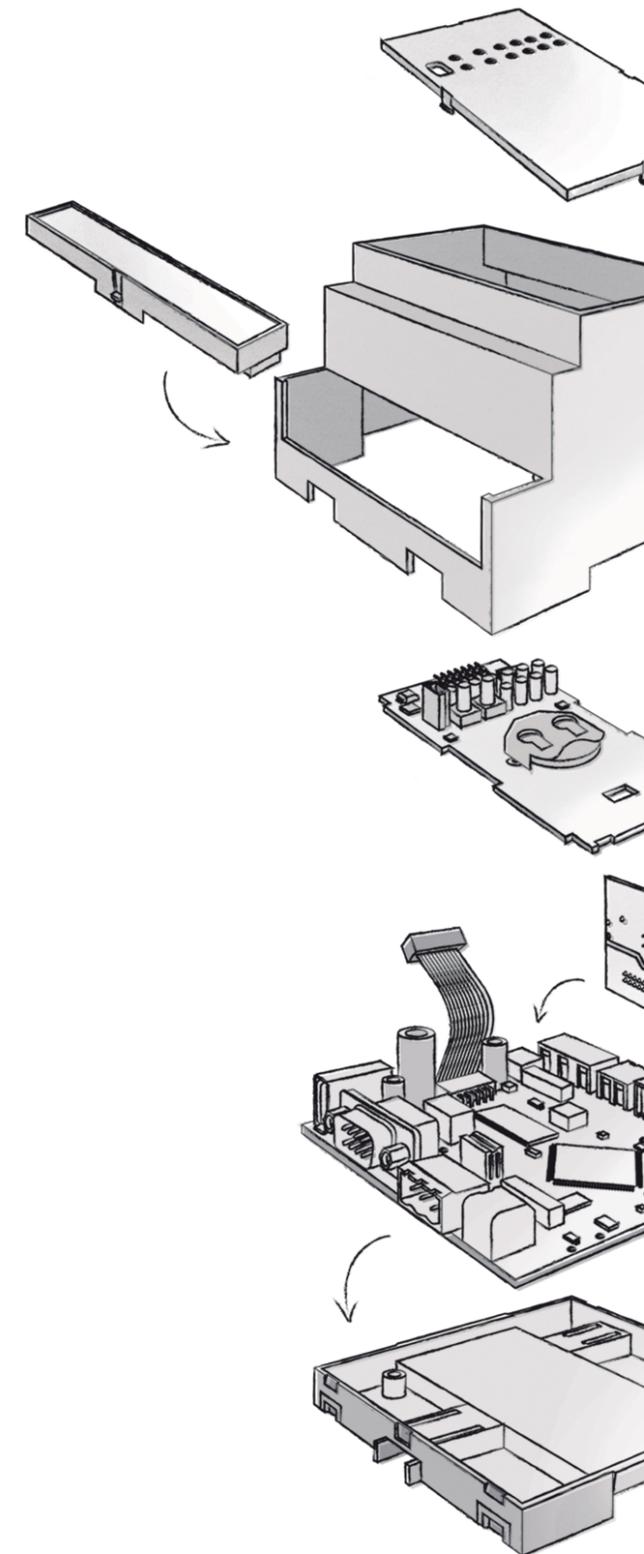
### Low power

The protocol translators are designed for low power consumption for energy efficient operation on site.



### MAPS Configuration

Powerful configuration of all Intesis protocol translators for a fast and straight-forward commissioning.



# Protocol conversion in Building Automation

## NEW 700series Intesis platforms for multi-protocol selection

700series is the new platform concept for Intesis protocol translators. This concept allows you to combine multiple protocols in one hardware platform and select the ideal application for your project using MAPS. The process is called late configuration.

### Benefits

- Reduced number of references to stock, optimizing distributor's lead times.
- Late configuration.
- Change applications quickly with our configuration tool Intesis MAPS.
- Diagnostics and troubleshooting tools available.
- Minimize technical service requests.

### Product features



#### Stock-Friendly

Multiple protocol combinations for each hardware.



#### Versatility

Flexible and agile protocol translation



#### User-friendly configuration

Easy to set up with Intesis MAPS, our user-friendly configuration tool.



#### High capacity

Up to 3000 data points of capacity to best match your needs.



#### Certification

Certificated for the main protocols in building automation.



# Applications definition

## Adapt your protocol translator to each project needs

Having different protocols available on the same hardware, enables multiple possibilities for integration. Each one of the combinations is defined as an application.

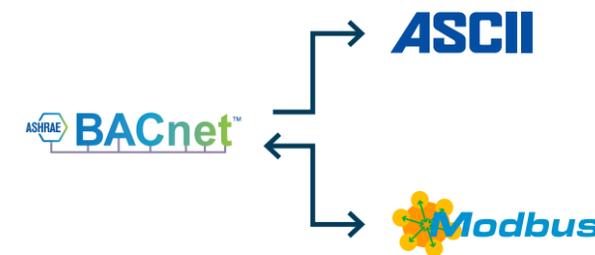
MAPS, Intesis configuration tool for Protocol Translators, is the instrument to select the correct application to match your project needs. Is an easy process you don't need to plan in advance.



### 700series for Protocol Translators

IN700485\*\*\*0000

Intesis Protocol Translator with Serial and IP support



IN701KNX\*\*\*0000

Intesis Protocol Translator with KNX, Serial and IP support



## ASCII protocol translators

### General features for ASCII

Supervision and control of BACnet or KNX devices can be done from an ASCII-based control system using simple ASCII messages over serial (EIA232, EIA485) or TCP/IP interfaces.

- Both ASCII Serial and IP supported
- Custom string signals
- Custom string commands
- Easy integration to any BMS

Application	Order Code	Point Versions
 BACnet Client to ASCII Server	IN700485***0000	100, 250, 600, 1200 & 3000 P.V. 
 KNX to ASCII Server	IN701KNX***0000	100, 250, 600, 1200 & 3000 P.V. 

## BACnet protocol translators

### General features for BACnet

An Intesis protocol translator for BACnet acts as a BACnet/IP Server or BACnet MSTP slave, allowing BACnet controllers to perform subscription requests (COV) and reads/writes to its internal points.

- BTL certified
- BACnet IP and MSTP
- BBMD and foreign Device
- Notification Classes

Application	Order Code	Point Versions
 KNX to BACnet Server	IN701KNX***0000	100, 250, 600, 1200 & 3000 P.V. 
 LonWorks to BACnet	INBACLON***0000	100, 250, 600, 1200 & 3000 P.V.
 Modbus Client to BACnet Server	IN700485***0000	100, 250, 600, 1200 & 3000 P.V. 
 DALI to BACnet	INBACDAL***0200	64 & 128 D.V.
 M-Bus to BACnet	INBACMEB***0000	10, 20, 60 & 120 D.V.
 BACnet MSTP to BACnet IP Router	INBACRTR0320000	32 D.V.
 BACnet - PROFINET	INBACPR1K20000	1200 P.V.
 BACnet - EtherNet/IP	INBACEIP1K20000	1200 P.V.

## KNX protocol translators

### General features for KNX

A protocol translator with KNX connects directly to the KNX TP-1 bus carrying the same configuration and operational characteristics as any other KNX device.

- Standard KNX Datapoint Types
- Extended group addresses
- Sending and listening addresses
- Ri flag: Read on initialization flag

Application	Order Code	Point Versions
 BACnet Client to KNX	IN701KNX***0000	100, 250, 600, 1200 & 3000 P.V. 
 Modbus Client to KNX Modbus RTU to KNX	IN701KNX***0000 INKNXMBM1000200	100, 250, 600, 1200 & 3000 P.V.  100 P.V. 
 DALI to KNX	INKNXDAL0640200	64 D.V.
 M-Bus to KNX	INKNXMEB***0000	10, 20, 60 & 120 D.V.

## Modbus protocol translators

### General features for Modbus

On Modbus, Intesis protocol translators act either as Modbus TCP Servers (Ethernet connection) and/or Modbus RTU slaves (serial EIA232, EIA485).

- Modbus TCP and RTU simultaneously
- Coils, holding registers and bitfields supported
- Multiple data formats
- Big-endian or Little-endian

Application	Order Code	Point Versions
 BACnet Client to Modbus Server	IN700485***0000	100, 250, 600, 1200 & 3000 P.V. 
 KNX to Modbus Server	IN701KNX***0000	100, 250, 600, 1200 & 3000 P.V. 
 DALI to Modbus	INMBSDAL***0200	64 & 128 D.V.
 M-Bus to Modbus	INMBSMEB***0000	10, 20, 60 & 120 D.V.
 Modbus RTU to Modbus TCP router	INMBSRTR0320000	32 D.V.
 OCPP to Modbus	INMBSOCP***0100	1 & 20 Chargers

## Air conditioning interfaces

The Intesis air conditioning interfaces form a portfolio of highly reliable solutions for air conditioning integration, developed in collaboration with all major AC manufacturers. Take a look at the world's most comprehensive portfolio of AC interfaces for integration into KNX, Modbus, BACnet and Home Automation.



## Intesis – The right choice for HVAC integration

In 2006, Intesis launched the first certified product able to directly integrate expansion air conditioning units into KNX. Today, after many years of experience gained and more than 700.000 AC units integrated all over the world, Intesis can offer a wide range of Intesis AC Interfaces is offered for integration of air conditioners from major brands into all commonly used building automation protocols.

### Energy efficient

HVAC systems account for a major part of the energy costs in a building. With the Intesis AC interfaces, these can be controlled for optimal energy usage, enabling significant savings.

### Reliable

All developments are based strictly on AC manufacturers' specifications, with subsequent validation and approval by the AC manufacturers to ensure the right compatibility with their AC units.

### Easy to use

Thanks to the smart scanning functionality, connected AC units can be detected automatically.

### Trusted

AC interfaces from Intesis are trusted by system integrators all over the world, covering all major protocols needed within building automation.

## Intesis AC interfaces – key features



### One to one

All the info from one indoor unit directly to one AC interface.



### Multi-unit

Control multiple indoor units from a single AC interface.



### Brand specific products

Specific solutions for all major air conditioning brands.



### Direct connection

Save costs by using AC interfaces that connect directly to the AC bus without any intermediate interface devices.



### Universal IR solution

Supports any AC brand on the market that uses infrared (IR) remotes.



### AC units scan

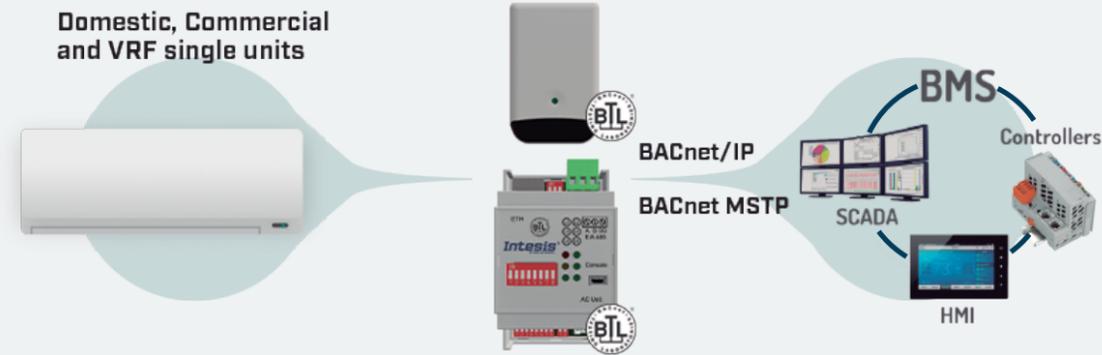
Save configuration time with the powerful scanning functionality.



Our expertise packaged in the best solution for you!

# BACnet interfaces for air conditioners

Intesis offers a large portfolio of BACnet interfaces for integration of specific AC brands, supporting both BACnet/IP and BACnet MS/TP integrations with BTL certified solutions.



## Specific features for one-to-one solutions

- Fast and easy configuration thanks to a dip switch on the product.
- External power supply is not required since it is powered by the AC unit itself.
- Two types of solutions: Brand specific solutions with direct connections supporting the unit's error code data, and a universal solution based on infrared (IR) communication.

## Specific features for multi-unit solutions

- Provides advanced BACnet functions such as notification class, trend logs or calendars.
- Controls all connected units from a single BACnet object.



Brand	System	Order Code	Indoor Units
<b>BOSCH</b>	Commercial and VRF systems to BACnet IP/MSTP	INBACACA004I000	4 I.U. <span style="float: right;">NEW</span>
<b>DAIKIN</b>	AC Domestic units to BACnet IP/MSTP	INBACDAI001I000	1 I.U.
	AC Domestic units to BACnet MSTP	INBACDAI001I100	1 I.U.
	VRV and Sky systems to BACnet MSTP	INBACDAI001R100	1 I.U.
	VRV and Sky systems to BACnet IP/MSTP	INBACDAI001R000	1 I.U.
<b>FUJITSU</b>	Fujitsu RAC and VRF to BACnet MSTP	INBACFGL001I100	1 I.U. (to CN connector)
<b>Hisense</b>	VRF systems to BACnet IP/MSTP	INBACHIS***O000	16 & 64 I.U.
<b>HITACHI</b>	VRF systems to BACnet IP/MSTP	INBACHIT***O000	16 & 64 I.U.
	Commercial and VRF systems to Bacnet IP/MSTP	INBACHIT001R000	1 I.U.
<b>Midea</b>	Midea Comm. & VRF to BACnet MSTP	INBACMID001I100	1 I.U.
	Commercial and VRF systems to BACnet IP/MSTP	INBACMID004I000	4 I.U.
<b>MITSUBISHI ELECTRIC</b>	Domestic, Mr.Slim and City Multi to BACnet IP/MSTP	INBACMIT001I000	1 I.U.
	Domestic, Mr.Slim and City Multi to BACnet MSTP	INBACMIT001I100	1 I.U.
<b>MITSUBISHI HEAVY INDUSTRIES</b>	FD and VRF systems to BACnet IP/MSTP	INBACMHI001R000	1 I.U.
	FD and VRF systems to BACnet MSTP	INBACMHI001R100	1 I.U.
<b>Panasonic</b>	Etherea AC units to BACnet IP/MSTP	INBACPAN001I000	1 I.U.
	Etherea AC units to BACnet MSTP	INBACPAN001I100	1 I.U.
	ECOi and PACi systems to BACnet IP/MSTP	INBACPAN001R000	1 I.U.
	ECOi and PACi systems to BACnet MSTP	INBACPAN001R100	1 I.U.
	ECOi, ECOg and PACi systems to BACnet IP/MSTP	INBACPAN***O000	16 & 64 I.U.
	ECOi, ECOg and PACi systems to BACnet IP	INBACPAN128O000	128 I.U.
<b>SAMSUNG</b>	NASA VRF systems to BACnet IP/MSTP	INBACSAM***O000	4, 8, 16 & 64 I.U. <span style="float: right;">NEW</span>
	NASA commercial units to BACnet MSTP	INBACSAM001R100	1 I.U.
<b>TOSHIBA</b>	VRF and Digital systems to BACnet IP/MSTP	INBACTOS001R000	1 I.U.
	VRF and Digital systems to BACnet MSTP	INBACTOS001R100	1 I.U.
<b>UNIVERSAL</b>	Universal IR air conditioner to BACnet MSTP	IN485UNI001I100	1 I.U. <span style="float: right;">NEW</span>

# KNX interfaces for air conditioners

For the last decade, Intesis AC interfaces for KNX have been the reference when it comes to integrating air conditioning systems into KNX projects. Specific solutions are offered for the most popular AC brands, including a universal solution based on infrared communication.



## Specific features for one to one solutions

- Supports all required DPT objects to be compatible with all KNX thermostats in the market.
- Binary inputs for window contacts or presence detectors available in most of the interfaces.
- Two types of solutions: Brand specific solutions with direct connections supporting the unit's error code data, and a universal solution based on infrared (IR) communication.

## Specific features for multi-unit solutions

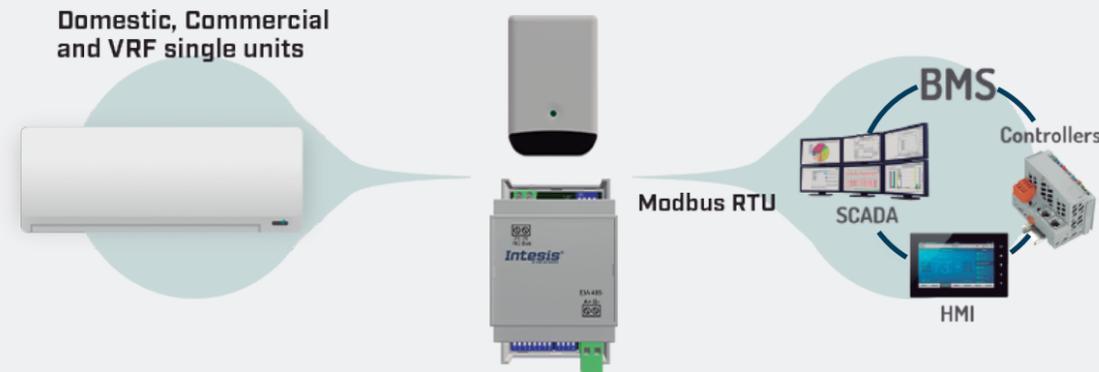
- Smooth integration of KNX thermostats thanks to the "virtual temperature" function.
- Covers a wide range of standard DPTs which ensures interoperability with other KNX devices.



Brand	Order Code	Indoor Units
<b>BOSCH</b> ▶ <b>KNX</b> <i>Commercial and VRF systems to KNX</i>	INKNXACA***I000	1, 16 & 64 I.U. <span style="float: right; font-size: small;">NEW</span>
<b>DAIKIN</b> ▶ <b>KNX</b> <i>AC Domestic units to KNX</i> <i>VRF and Sky systems to KNX</i>	INKNXDAI001I000 INKNXDAI001I100 INKNXDAI001R000 INKNXDAI001R100	1 I.U. 1 I.U. with Binary Inputs 1 I.U. 1 I.U. with Binary Inputs
<b>FUJITSU</b> ▶ <b>KNX</b> <i>Fujitsu RAC and VRF to KNX</i> <i>RAC and VRF systems to KNX</i> <i>VRF systems to KNX</i>	INKNXFGL001I000 INKNXFGL001R000 INKNXFGL016O000	1 I.U. with B.I. (to CN connector) 1 I.U. with B.I. (to remote controller) 16 I.U.
<b>Haier</b> ▶ <b>KNX</b> <i>Commercial and VRF systems to KNX</i>	INKNXHAI***C000	8, 16 & 64 I.U.
<b>Hisense</b> ▶ <b>KNX</b> <i>VRF systems to KNX</i> <i>VRF systems to KNX</i>	INKNXHIS001R000 INKNXHIS***O000	1 I.U. with Binary Inputs 16 & 64 I.U.
<b>HITACHI</b> ▶ <b>KNX</b> <i>Commercial and VRF systems to KNX</i> <i>VRF systems to KNX</i> <i>Air to Water to KNX</i>	INKNXHIT001R000 INKNXHIT***O000 INKNXHIT001A000	1 I.U. with Binary Inputs 16 & 64 I.U. 1 I.U.
<b>LG</b> ▶ <b>KNX</b> <i>VRF systems to KNX</i> <i>VRF systems to KNX</i>	INKNXLGE001R000 INKNXLGE***O000	1 I.U. with Binary Inputs 16 & 64 I.U.
<b>Midea</b> ▶ <b>KNX</b> <i>Commercial and VRF systems to KNX</i>	INKNXMID***I000	1, 16 & 64 I.U.
<b>MITSUBISHI ELECTRIC</b> ▶ <b>KNX</b> <i>Domestic, Mr.Slim and City Multi to KNX</i> <i>City Multi systems to KNX</i>	INKNXMIT001I000 INKNXMIT001I100 INKNXMIT***C000	1 I.U. 1 I.U. with Binary Inputs 15 & 100 I.U.
<b>MITSUBISHI HEAVY INDUSTRIES</b> ▶ <b>KNX</b> <i>FD and VRF systems to KNX</i> <i>VRF systems to KNX</i>	INKNXMHI001R000 INKNXMHI***O000	1 I.U. with Binary Inputs 48 & 128 I.U.
<b>Panasonic</b> ▶ <b>KNX</b> <i>Etherea AC units to KNXunit</i> <i>ECOi and PACi systems to KNX</i> <i>ECOi, ECOg and PACi systems to KNX</i> <i>Air to Water (Aquarea H) to KNX</i>	INKNXPAN001I000 INKNXPAN001R000 INKNXPAN***O000 INKNXPAN001A000	1 I.U. with Binary Inputs 1 I.U. with Binary Inputs 16 & 64 I.U. 1 I.U.
<b>SAMSUNG</b> ▶ <b>KNX</b> <i>NASA VRF systems to KNX</i>	INKNXSAM***O000	4, 8, 16 & 64 I.U.
<b>TOSHIBA</b> ▶ <b>KNX</b> <i>VRF and Digital systems to KNX</i> <i>VRF systems to KNX</i>	INKNXTOS001R000 INKNXTOS***O000	1 I.U. with Binary Inputs 16 & 64 I.U.
<b>UNIVERSAL</b> ▶ <b>KNX</b> <i>Universal IR air conditioner to KNX</i>	INKNXUNI001I000	1 I.U. with Binary Inputs

# Modbus interfaces for air conditioners

Intesis AC interfaces for Modbus form one of the largest portfolios on the market for integration of air conditioners into Modbus. The consistent Modbus register mapping used for all AC brands helps shortening the integration time in each project.



## Specific features for one-to-one solutions

- Consistent register mapping presents a common interface for all AC brands.
- Fast and easy configuration thanks to a dip switch on the product.
- Two types of solutions: Brand specific solutions with direct connections supporting the unit's error code data, and a universal solution based on infrared (IR) communication.

## Specific features for multi-unit solutions

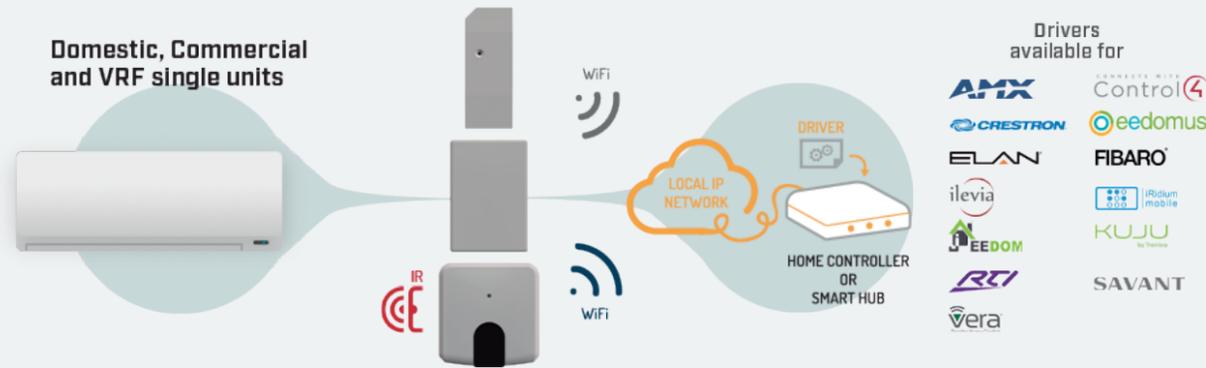
- Supports both Modbus RTU and TCP simultaneously.
- Control all connected AC units from a single Modbus register.



Brand	Modbus Interface	Order Code	Indoor Units
<b>BOSCH</b>	Commercial and VRF systems to Modbus RTU	INMBSACA***I000	1, 4, 8 & 32 I.U. <span style="float: right;">NEW</span>
<b>DAIKIN</b>	AC Domestic units to Modbus RTU VRF and Sky systems to Modbus RTU	INMBSDAI001I000 INMBSDAI001R000	1 I.U. 1 I.U.
<b>FUJITSU</b>	RAC and VRF systems to Modbus RTU VRF systems to Modbus TCP/RTU	INMBSFGL001R000 INMBSFGL001I000 INMBSFGL016O000	1 I.U. (to remote controller) 1 I.U. (to CN connector) 16 I.U.
<b>Hisense</b>	VRF systems to Modbus RTU VRF systems to Modbus TCP/RTU	INMBSHIS001R000 INMBSHIS***O000	1 I.U. 16 & 64 I.U.
<b>HITACHI</b>	Commercial and VRF systems to Modbus RTU VRF systems to Modbus TCP/RTU	INMBSHIT001R000 INMBSHIT***O000	1 I.U. 16 & 64 I.U.
<b>LG</b>	VRF systems to Modbus RTU	INMBSLGE001R000	1 I.U.
<b>Midea</b>	Commercial and VRF systems to Modbus RTU	INMBSMID***I000	1, 4, 8 & 32 I.U.
<b>MITSUBISHI ELECTRIC</b>	Domestic, Mr. Slim and City Multi lines to Modbus RTU City multi systems to Modbus TCP/RTU	INMBSMIT001I000 INMBSMIT***C000	1 I.U. 50 & 100 I.U.
<b>MITSUBISHI HEAVY INDUSTRIES</b>	FD and VRF systems to Modbus RTU VRF systems to Modbus TCP/RTU	INMBSMHI001R000 INMBSMHI***O000	1 I.U. 48 & 128 I.U.
<b>Panasonic</b>	Etherea AC units to Modbus RTU ECOi and PACi systems to Modbus RTU ECOi, ECOg and PACi systems to Modbus TCP/RTU ECOi, ECOg and PACi systems to Modbus TCP Air to Water (Aquarea H) to Modbus RTU	INMBSPAN001I100 INMBSPAN001R000 INMBSPAN***O000 INMBSPAN128O000 INMBSPAN001A000	1 I.U. 1 I.U. 16 & 64 I.U. 128 I.U. 1 I.U.
<b>SAMSUNG</b>	NASA units to Modbus RTU NASA VRF systems to Modbus TCP/RTU NON-NASA units to Modbus RTU	INMBSAM001R100 INMBSAM***O000 INMBSAM001R000	1 I.U. 4, 8, 16 & 64 I.U. 1 I.U.
<b>TOSHIBA</b>	VRF and Digital systems to Modbus RTU	INMBSTOS001R000	1 I.U.
<b>UNIVERSAL</b>	Universal IR air conditioner to Modbus RTU	IN485UNI001I100	1 I.U. <span style="float: right;">NEW</span>

# Home automation interfaces for air conditioners

Intesis home automation interfaces have been specifically designed for AC integration into home automation systems. The communication is based on a simple ASCII protocol that can be easily implemented as a driver in home controllers or smart hubs. With drivers already available from many home automation platforms on the market, air conditioning units can be easily integrated and controlled.



- ### Specific features for one-to-one solutions
- Wi-Fi configuration supporting both dynamic or static IPs.
  - Auto-discovering of Wi-Fi devices installed in the network.
  - Two types of solutions: Brand specific solutions with direct connections supporting the unit's error code data, and a universal solution based on infrared (IR) communication.

- ### Specific features for multi-unit solutions
- Integrate up to 128 AC units with a single interface.
  - Direct ethernet connection to the home's local IP network.
  - All the benefits of having MAPS as configuration and diagnostic tool.



DAIKIN	Home Automation	Order Code	Indoor Units
AC Domestic units to Home Automation		INWMPDAI001I000	1 I.U.
VRF and Sky systems to Home Automation		INWMPDAI001R000	1 I.U.
<b>FUJITSU</b>			
RAC and VRF systems to Home Automation		INWMPFGL001R000	1 I.U. (to remote controller)
VRF systems to Home Automation		INWMPFGL001I000	1 I.U. (to CN connector)
		INMBSFGL016O000	16 I.U.
<b>Hisense</b>			
VRF systems to Home Automation		INMBSHIS***O000	16 & 64 I.U.
<b>HITACHI</b>			
VRF systems to Home Automation		INMBSHIT***O000	16 & 64 I.U.
<b>LG</b>			
VRF systems to Home Automation		INWMPPLGE001R000	1 I.U.
<b>MITSUBISHI ELECTRIC</b>			
Domestic, Mr.Slim and City Multi to Home Automation		INWMPMIT001I000	1 I.U.
City multi systems to Home Automation		INMBSMIT***C000	50 & 100 I.U.
<b>MITSUBISHI HEAVY INDUSTRIES</b>			
FD and VRF systems to Home Automation		INWMPMHIO01R000	1 I.U.
Domestic units to Home Automation		INWMPMHIO01I000	1 I.U.
<b>Panasonic</b>			
Etherea AC units to Home Automation		INWMPPAN001I000	1 I.U.
ECOi and PACi systems to Home Automation		INWMPPAN001R000	1 I.U.
ECOi, ECOg and PACi systems to Home Automation		INMBSPAN***O000	16, 64 & 128 I.U.
<b>TOSHIBA</b>			
VRF and Digital systems to Home Automation		INWMPRTOS001R000	1 I.U.
<b>SAMSUNG</b>			
NASA VRF systems to Home Automation		INMBSAM***O000	4, 8, 16 & 64 I.U.
<b>UNIVERSAL</b>			
Universal IR air conditioner to Home Automation		INWMPUNIO01I000	1 I.U.

# Never before has it been so easy to check AC compatibilities

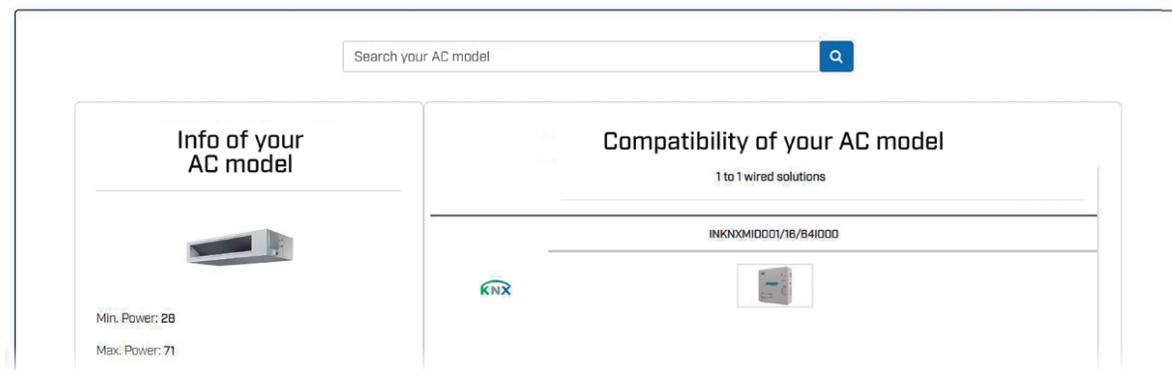


SELECT LANGUAGE

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## Intesis AC Compatibility tool

Find the appropriate solution for your HVAC integration in our database with more than 2,500 AC indoor unit models available



## AC Compatibility Tool

The new AC compatibility tool provides a fast and reliable way to check the compatibility of air conditioning units with Intesis interfaces.

Forget the time-consuming task of searching an AC unit's reference into the endless compatibility document. Thanks to the search engine of the new web-based tool, get the answer you are looking for with a click of the mouse.



### Search Engine

Type the first letters of your AC reference and get suggestions to make the search even easier.



### Updated information

We can ensure updated information thanks to the ease of maintenance of the tool.



### Compatible AC units

More than 2500 models already in our database. New units included every day!



### The support behind

Can't you find your AC unit in the database? Send us a request and we will indicate the best solution for your AC.



### Compatible interfaces

Get an overview of all the compatible one-to-one Intesis interfaces with the AC unit searched.

## Intesis helps you to reduce your carbon footprint

Intesis is committed to reduce the CO2 emission of air conditioning units by offering the best integration product portfolio.

For more than 10 years, we have provided gateways to control more than 1 million air conditioning units around the world. The estimated energy consumption from this units is more than 1,7 billion KWh/year. But thanks to our gateways, 509 million kWh are saved, that means 150 million Kg CO2 savings.

This figure is equivalent to the total CO2 that 652 million PCs generate during an hour, or the same than 6 million trees absorb in one year.



CO2 saved by...  
**6,000,000 trees**  
in one year



CO2 generated by...  
**23,438 European people**  
in a year



CO2 generated by...  
**652,173,913 PC working**  
during one hour



CO2 generated by...  
**340,909 flights**  
from London to New York

## Cloud solutions

Intesis has long experience of building automation protocols and communication solutions for HVAC integration brought to the cloud for straight-forward remote management. Control and monitor any building device, anywhere, anytime.



## Cloud Solutions

Driven by the fast adoption of internet technologies globally, demand is growing in the building and home automation markets for smart cloud-based device connectivity solutions.

With Intesis cloud solutions powered by HMS Hub™, customers are able to perform secure remote cloud-based monitoring and control of previously non-connected devices. Packaged as easy-to-deploy end-to-end solutions, Intesis cloud solutions include all needed elements to get you going!



### Native application

End-user-oriented Android and iOS app for mobile device management.



### Web dashboard

Professional web based device management tool developed for real-time control and monitoring of the installation.



### Flexible and adaptable

Adaptable cloud solutions for any project size, need and location, such as residential buildings, schools, bank offices, shops, public buildings and more.



### Distributed projects

Ideal for projects with distributed installations. Allows multiple sites to be controlled from the same dashboard.



### User and permission management

Grant access for other users and set permissions based on individual needs.

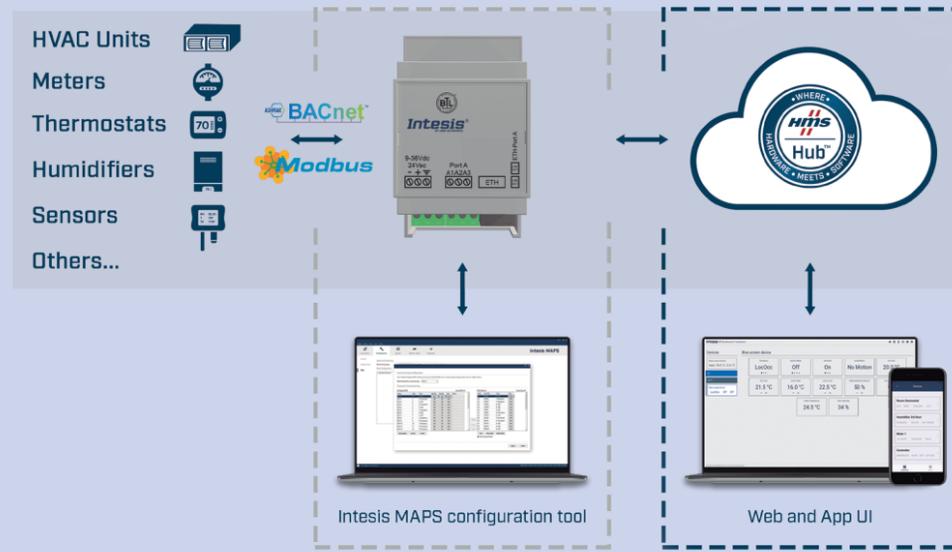


### Quick installation

Easy-to-install devices and intuitive configuration tools for fast project commissioning.

Cloud-based device management

# Intesis ST Cloud Control—remote management of BACnet and Modbus devices



Intesis ST Cloud Control is a cloud-based solution from HMS which enables easy monitoring and control of any BACnet or Modbus device from an end user oriented app and a web based dashboard.

Users simply install the ST Cloud Control gateway in the desired location and use Intesis MAPS for PC-based configuration. Here, the widgets can be created (e.g. Booleans, Operating Modes, Dimmers, Analog Values, Error Signals, etc.), mapping them with the BACnet objects or Modbus registers of choice.

Once the gateway is configured and assigned to a user, all devices and widgets will appear automatically in the app and web interfaces, presented in a dashboard. Each user is allowed to create their own, customized dashboards, in which devices and widgets can be renamed and reorganized according to personal preference.



# Manage and control any BACnet or Modbus device from an app or web interface

With ST Cloud Control you are able to connect all types of BACnet or Modbus devices to the cloud, for an intuitive and centralized remote device management through an app or a web interface using a common dashboard.



## Gateway features

- BACnet IP/MSTP or Modbus TCP/RTU connectivity.
- Up to 32 devices can be connected to each gateway.
- Up to 12 widgets per device.
- Easy device configuration using Intesis MAPS.



## Next level service

- Industrial grade connectivity now for Building Automation.
- Fast and scalable real time edge connectivity over HMS Hub™.
- Full data control and protection.
- Secure and remote updates during the application lifetime.



## System Features

- Monitor and control all devices in an intuitive way.
- Comes with a native iOS and Android app and a web interface.
- Create scenes and interact with multiple concurrent devices.
- Calendar that shows the daily planned installation commands.
- Notifications keep you updated about system status.
- Device sharing and user permissions management.
- Multiple site management from a common dashboard.



BACnet or Modbus

ST Cloud Control

Order Code

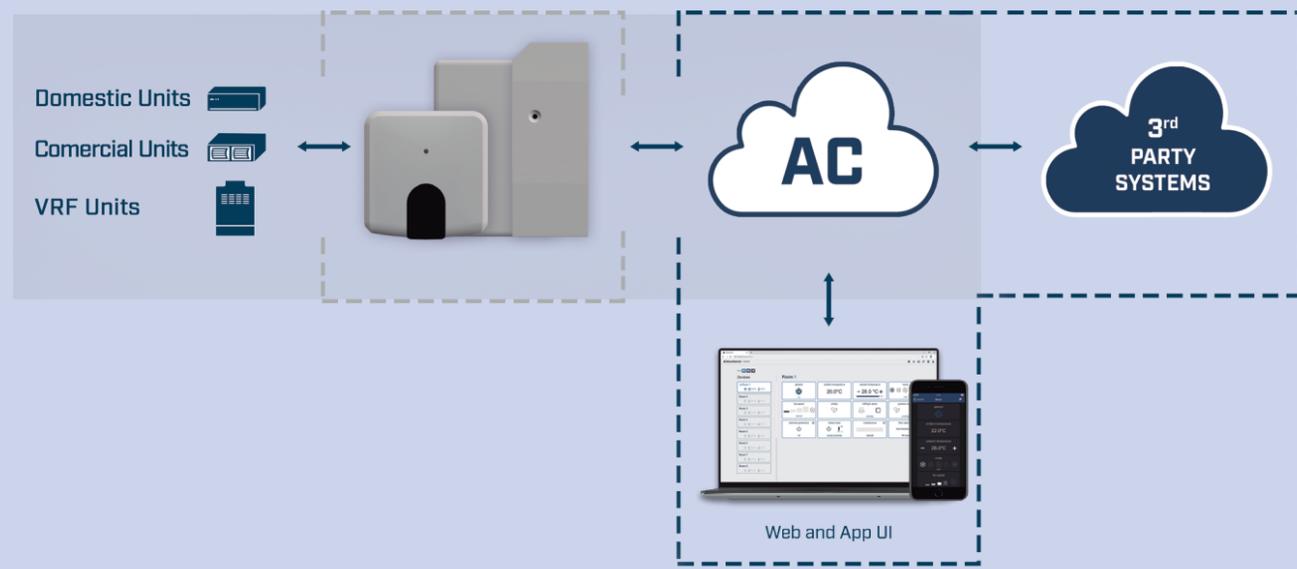
Device Versions

INSTCMBG\*\*\*0000

4, 8, 16 & 32 D.V.

Make conventional BACnet or Modbus devices smart with Intesis ST Cloud Control

# Intesis AC Cloud Control—HVAC IoT solution for building and facility management



AC Cloud Control is an HVAC IoT solution created by Intesis for building and facility management. A cloud-based remote-control system, that allows comfortable and intuitive control of air conditioners and heat pumps from a smartphone, tablet, smart watch or from a simple internet browser.

The AC Cloud Control gateways, developed together with the major AC manufacturers, offer cloud connectivity to a wide range of compatible AC units. No cables are needed for cloud connectivity, as the devices use Wi-Fi technology to bring all the data to the cloud.

The bidirectional communication between Intesis devices and the AC unit, ensures the end user can keep using the manufacturers remote controller if desired, while keeping the cloud system updated with the real status of the HVAC units.

The devices can be managed using a web-based dashboard, so no additional management tool needs to be installed. User friendly Android and iOS apps are available.

Integrate any air conditioning system and control it from anywhere

# AC Cloud Control Functionalities

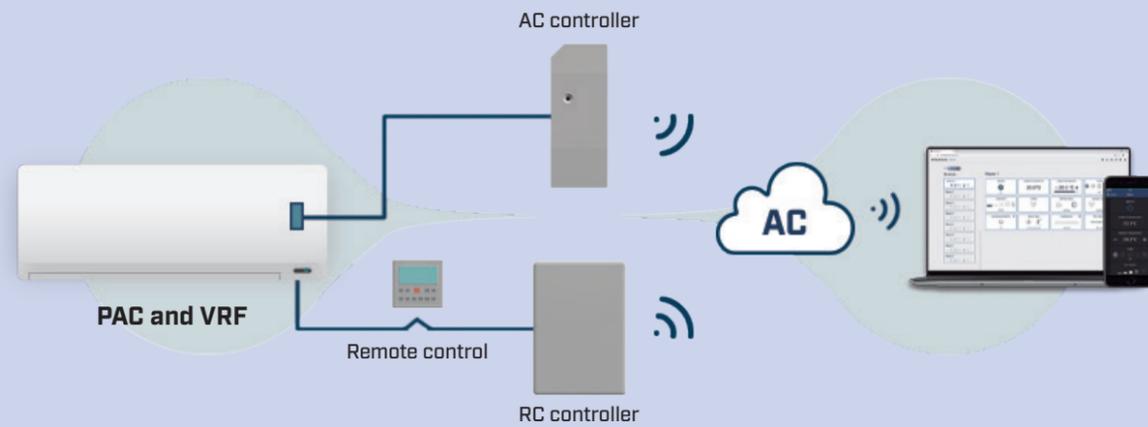
<b>Remote control</b>	ON/OFF	T° Set point	<b>MODE</b>	Ambient T°	Fan & vane control
<b>Smart</b>	Email & push notifications	Timer & scenes	Multi-language	Error codes & descriptions	
	Voice over	Anti-frost & overheat	Operating hours	Auto updates	
<b>Professional</b>	Maintenance & filter cleaning	Binary input	Schedule calendar	T° limitation	Multiple sites

# AC Cloud Control main strengths

<b>Multiple brands and multiple sites</b> Organize any brand and model in three different levels.	<b>Energy saving and maintenance functionalities</b> Special functionalities to help our customers increase energy efficiency.
<b>Secondary users</b> Manage who can monitor and control each unit.	<b>Professional API for 3rd party integration</b> Connect your system to Intesis cloud solutions and offer bidirectional HVAC control to your customers.
<b>Email and push notifications</b> Be aware of everything that happens in your climate system.	<b>OEM projects</b> Reduce the time to market and maintenance costs, our R&D resources are at your disposal.

## Smart interfaces for air conditioning and heat pumps

AC Cloud Control devices are developed to interface with AC units and provide cloud connectivity using the local Wi-Fi network. They are b/g/n compatible and use 2.4GHz frequency, ensuring a strong data connection within the installation. Communication issues are avoided thanks to IoT-optimized communication protocols. They are firewall friendly since only outbound ports are used, ensuring an easy and secure configuration.



### Specific features for brand specific devices

- Devices manufactured along with the major AC manufacturers use the proprietary communication protocol of each manufacturer.
- Offers advanced parameters like error signals, error codes, power consumption\*.
- The AC controller is directly connected to the internal electronic card, and specifically designed for RAC and domestic lines.
- The RC controller is connected to the HVAC remote control bus, and specifically designed for PAC and VRF.

### Specific features for universal controller

- Offers compatibility for thousands of AC models.
- Only requires an indoor unit that has an IR receiver working with a standard wireless infrared remote controller.
- Equipped with an IR receiver.
- Allows using the universal and the manufacturer's controller at the same time.
- The Universal controller is specifically designed for PAC, RAC and VRF.



DAIKIN	AC Cloud Control	Order Code	Indoor Units
	AC Domestic units to Wi-Fi (ASCII)	INWFIDA1001I000	1 I.U.
	VRV and Sky systems to Wi-Fi (ASCII)	INWFIDA1001R100	1 I.U.
FUJITSU	AC Cloud Control		
	RAC and VRF systems to Wi-Fi (ASCII)	INWFIFGL001I000	1 I.U.
		INWFIFGL001R100	1 I.U.
LG	AC Cloud Control		
	VRV systems to Wi-Fi (ASCII)	INWIFILGE001R100	1 I.U.
MITSUBISHI HEAVY INDUSTRIES	AC Cloud Control		
	FD and VRF systems to Wi-Fi (ASCII)	INWFIMHI001I000	1 I.U.
	Domestic units to Wi-Fi (ASCII)	INWFIMHI001R100	1 I.U.
Panasonic	AC Cloud Control		
	Etherea AC units to Wi-Fi (ASCII)	INWFIPAN001I000	1 I.U.
	ECOi and PACi systems to Wi-Fi (ASCII)	INWFIPAN001R100	1 I.U.
TOSHIBA	AC Cloud Control		
	VRV and Digital systems to Wi-Fi (ASCII)	INWFITOS001R100	1 I.U.
UNIVERSAL	AC Cloud Control		
	Universal IR air conditioner to Wi-Fi (ASCII)	INWFIUNI001I000	1 I.U. with Binary Inputs

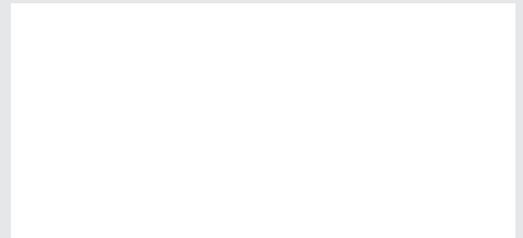


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