

Gateway Solutions for building and home integration





Intesis - connecting buildings and homes

The market-leading portfolio of Intesis gateways for building and home automation covers all relevant standards and technologies, including 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 and AC interfaces are widely used for system integration. Users benefit from efficient commissioning and uninterrupted operation in the system.

Intesis by HMS Networks

In 2016, Intesis was acquired by 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 communication and the IIoT. HMS is "Connecting Devices" for a more productive and sustainable world. Our solutions enable our customers to expand their businesses globally.

Employees: > 600

in 16 countries Locations: > 50 countries

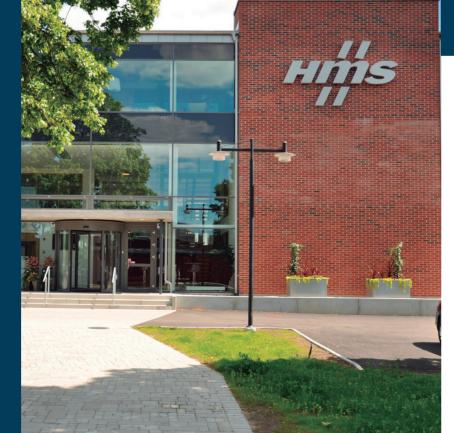
Anybus, Ewon, Intesis, Ixxat

Customers:

Distributors:

Device manufacturers, machine builders, system integrators, end users

Year founded: 1988





High quality standards for Intesis products

Intesis products are subject to different tests and certifications 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 independant 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.









Modern buildings include equipment from many different vendors that need to communicate in highly advanced networks.

System integrators, BMS vendors, HVAC manufacturers and professionals in the automation market all over the world have one thing in common - they trust Intesis products in their building automation integration projects.

Proto

Protocol Translators

BACnet, KNX, Modbus, DALI, M-Bus, ASCII, LonWorks and more. All of them 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 Conditioner manufacturers, Intesis AC interfaces enable high quality integration of climate systems into BACnet, KNX, Modbus, and 2,4 GHz wireless installations.



OEM solutions

Intesis gateways can be customized into OEM-specific solutions. Take advantage of our protocol engineering knowledge and let us help your team bring your products to market faster.

> Contact HMS for more details.





...Intesis has the communication solution!



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.



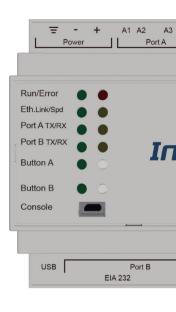
IP/USB console

Selectable configuration via USB or IP ports.



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.



Slim DIN-rail mounting

Consuming just 5 DIN-Rail modules, it is easy to fit Intesis protocol translators into cabinets.

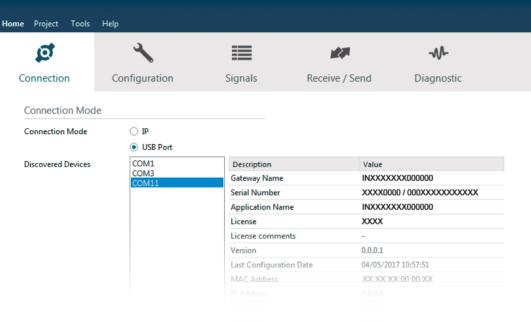


Low powered solution

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

Global connectivity enabled!

Intesis MAPS enables fast navigation to a working configuration

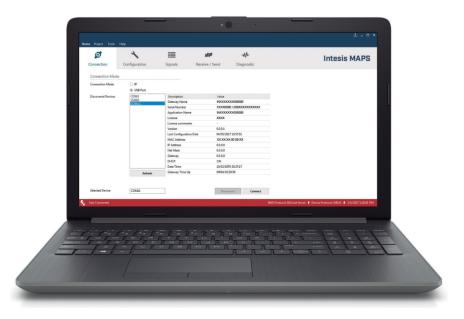


Intesis MAPS

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

Intesis MAPS supports 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.

Intesis MAPS provides device templates which import data automatically. Conversions such as scaling and offset are supported to allow the desired data transformation. MAPS also enables advanced diagnostics and troubleshooting by the user.



Multi Addressing Point Solution



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.



Intesis MAPS

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.



ASCII protocol translators



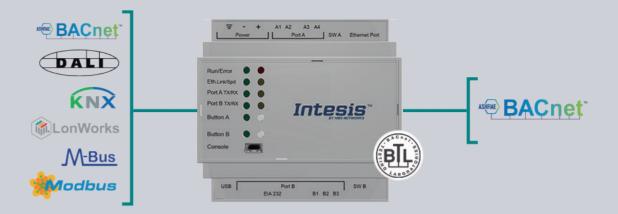
General features for ASCII

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

BACnet	ORDER CODE	POINT VERSION
BACnet to ASCII	INASCBAC600000 INASCBAC3K00000	600 P.V. 3000 P.V.
KNX to ASCII	INASCKNX6000000 INASCKNX3K00000	600 P.V. 3000 P.V.

BACnet protocol translators



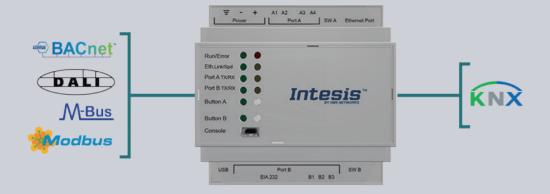
General features for BACnet

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

KNX	ORDER CODE	POINT VERSION
KNX to BACnet	INBACKNX1000000	100 P.V.
	INBACKNX2500000	250 P.V.
	INBACKNX6000000	600 P.V.
	INBACKNX1K20000	1200 P.V.
	INBACKNX3K00000	3000 P.V.
LonWorks		
LonWorks to BACnet	INBACLON1000000	100 P.V.
	INBACLON2500000	250 P.V.
	INBACLON6000000	600 P.V.
	INBACLON1K20000	1200 P.V.
	INBACLON3K00000	3000 P.V.
Modbus		
Modbus to BACnet	INBACMBM1000000	100 P.V.
	INBACMBM2500000	250 P.V.
	INBACMBM6000000	600 P.V.
	INBACMBM1K20000	1200 P.V.
	INBACMBM3K00000	3000 P.V.
DALI		
DALI to BACnet	INBACDAL0640000	64 D.V.
	INBACDAL1280000	128 D.V.
V -Bus		
M-Bus to BACnet	INBACMEB0100000	10 D.V.
	INBACMEB0200000	20 D.V.
	INBACMEB0600000	60 D.V.
	INBACMEB1200000	120 D.V.
BACnet		
BACnet MSTP to BACnet IP Router	INBACRTR0320000	32 D.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 adresses
- Sending and listening addresses
- Ri flag: Read on initialization flag

Cnet	ORDER CODE	POINT VERSION
BACnet to KNX	INKNXBAC1000000	100 P.V.
8 V C u 6 V ®	INKNXBAC2500000	250 P.V.
	INKNXBAC6000000	600 P.V.
	INKNXBAC1K20000	1200 P.V.
	INKNXBAC3K00000	3000 P.V.
dbus		
Modbus TCP/RTU to KNX	INKNXMBM1000000	100 P.V.
	INKNXMBM2500000	250 P.V.
	INKNXMBM600000	600 P.V.
	INKNXMBM1K20000	1200 P.V.
	INKNXMBM3K00000	3000 P.V.
Modbus RTU to KNX	INKNXMBM1000100	100 P.V.
DALI to KNX	INKNXDAL0640000	64 D.V.
<u>us</u>		
M-Bus to KNX	INKNXMEB0100000	10 D.V.
	INKNXMEB0200000	20 D.V.
	INKNXMEB0600000	60 D.V.
	INKNXMEB1200000	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

® BACnet ⁻	ORDER CODE	POINT VERSION
BACnet to Modbus	INMBSBAC1000000	100 P.V.
& A C n e 1 ®	INMBSBAC2500000	250 P.V.
PTI 1	INMBSBAC6000000	600 P.V.
	INMBSBAC1K20000	1200 P.V.
180	INMBSBAC3K00000	3000 P.V.
KNX		
KNX to Modbus	INMBSKNX1000000	100 P.V.
	INMBSKNX2500000	250 P.V.
	INMBSKNX6000000	600 P.V.
	INMBSKNX1K20000	1200 P.V.
	INMBSKNX3K00000	3000 P.V.
DALI		
DALI to Modbus	INMBSDAL0640000	64 D.V.
	INMBSDAL1280000	128 D.V.
M-Bus		
JV Dus		
M-Bus to Modbus	INMBSMEB0100000	10 D.V.
	INMBSMEB0200000	20 D.V.
	INMBSMEB0600000	60 D.V.
	INMBSMEB1200000	120 D.V.
Modbus		
Modbus RTU to Modbus TCP router	INMBSRTR0320000	32 D.V.



Intesis - the right choice for HVAC integration

In 2006, Intesis launched the first certified product able to directly integrate expansion Air Conditioner units into KNX. Today, after many years of experience gained and more than half a million AC units integrated all over the world, a very broad 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.



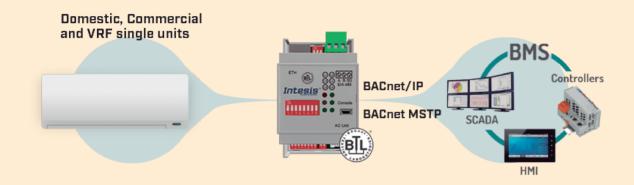
AC units scan

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.

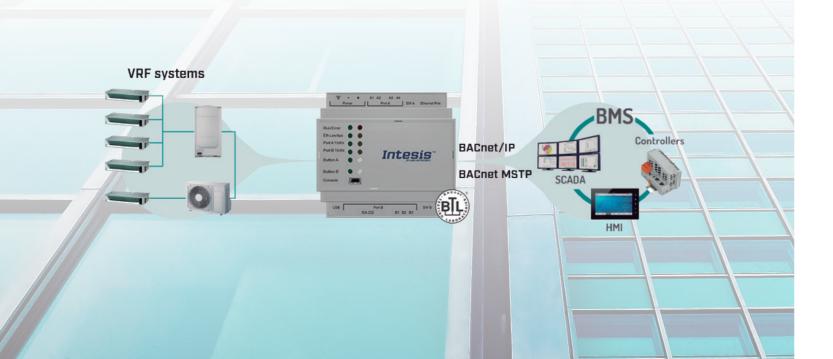


Specific features for one to one solutions

- 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.

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.



DAIKIN	ORDER CODE	POINT VERSION
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.
Hisense		
VRF systems to BACnet IP/MSTP	INBACHIS016O000	16 I.U.
	INBACHIS064O000	64 I.U.
HITACHI		
VRF systems to BACnet IP/MSTP	INBACHIT016O000	16 I.U.
	INBACHIT064O000	64 I.U.
Midea		
Commercial and VRF systems to BACnet IP/MSTP	INBACMID004I000	4 I.U.
MITSUBISHI ELECTRIC		
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.
MITSUBISHI HAVY INDUSTRIES, LTD.		
FD and VRF systems to BACnet IP/MSTP	INBACMHI001R000	1 I.U.
FD and VRF systems to BACnet MSTP	INBACMHI001R100	1 I.U.
Panasonic		
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	INBACPAN016O000	16 I.U.
ECOi, ECOg and PACi systems to BACnet IP	INBACPANIA 380000	64 I.U.
ecoi, ecoy una PACI systems to BACHELIP	INBACPAN128O000	128 I.U.
SAMSUNG		
NASA VRF systems to BACnet IP/MSTP	INBACSAM004O000	4 I.U.
	INBACSAM0160000	8 I.U.
	INBACSAM016O000 INBACSAM064O000	16 I.U 64 I.U.
TOSHIBA		
VRF and Digital systems to BACnet IP/MSTP	INBACTOS001R000	1 I.U.
VRF and Digital systems to BACnet MSTP	INBACTOS001R100	1 I.U.

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.

Specific features for multi-unit solutions

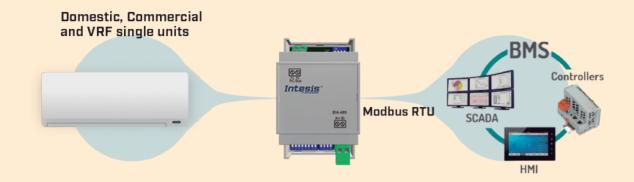
- Smooth integration of KNX thermostats thanks to the "virtual temperature" function.
- Covers a wide range of standard DPTs which ensures interoperability with other KNX devices.



DAIKIN	ORDER CODE	POINT VERSION
AC Domestic units to KNX	INKNXDAI001I000	1 I.U.
VDV and Christians to VAIV	INKNXDAI001I100 INKNXDAI001R000	1 I.U. with Binary Inputs
VRV and Sky systems to KNX	INKNXDAI001R000	1 I.U. 1 I.U. with Binary Inputs
บเกรีย		, , ,
RAC and VRF systems to KNX	INKNXFGL001R000	1 I.U. with Binary Inputs
VRF systems to KNX	INKNXFGL016O000	16 I.U.
-laier		
Commercial and VRF systems to KNX	INKNXHAI008C000	8 I.U. 16 I.U.
	INKNXHAI016C000 INKNXHAI064C000	64 I.U.
lisense		
VRF systems to KNX	INKNXHIS001R000	1 I.U. with Binary Inputs
	INKNXHIS016O000 INKNXHIS064O000	16 I.U. 64 I.U.
HITACHI	INKNAHI30040000	04 1.0.
Commercial and VRF systems to KNX	INKNXHIT001R000	1 I.U. with Binary Inputs
VRF systems to KNX	INKNXHITO1K000	16 I.U.
•	INKNXHIT064O000	64 I.U.
Air to Water to KNX	INKNXHIT001A000	1 I.U.
U LG		
VRF systems to KNX	INKNXLGE001R000	1 I.U. with Binary Inputs
Midea		
Commercial and VRF systems to KNX	INKNXMID001I000	1 I.U.
	INKNXMID016I000 INKNXMID064I000	16 I.U. 64 I.U.
MITSUBISHI	HVKIVAIVIID0041000	041.0.
Domestic, Mr.Slim and City Multi to KNX	INKNXMIT001I000	1 I.U.
	INKNXMIT001I100	1 I.U. with Binary Inputs
City Multi systems to KNX	INKNXMIT015C000 INKNXMIT100C000	15 I.U. 100 I.U.
MITSUBISHI	INKNAMITIOCCOO	100 1.0.
FD and VRF systems to KNX	INKNXMHI001R000	1 I.U. with Binary Inputs
VRF systems to KNX	INKNXMHI048O000	48 I.U.
	INKNXMHI128O000	128 I.U.
Panasonic		
Etherea AC units to KNXunit	INKNXPAN001I000	1 I.U. with Binary Inputs
ECOi and PACi systems to KNX	INKNXPAN001R000	1 I.U. with Binary Inputs
ECOi, ECOg and PACi systems to KNX	INKNXPAN016O000 INKNXPAN064O000	16 I.U. 64 I.U.
Air to Water (Aquarea H) to KNX	INKNXPAN001A000	1 I.U.
SAMSUNG		
NASA VRF systems to KNX	INKNXSAM004O000	4 I.U.
	INKNXSAM008O000 INKNXSAM016O000	8 I.U. 16 I.U.
	INKNXSAM0640000	64 I.U.
TOSHIBA		
VRF and Digital systems to KNX	INKNXTOS001R000	1 I.U. with Binary Inputs
VRF systems to KNX	INKNXTOS016O000	16 I.U.
UNIVERSAL	INKNXTOS064O000	64 I.U.
UNIVERSAL	INIVALVITADIO	A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Universal IR Air Conditioner to KNX	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.

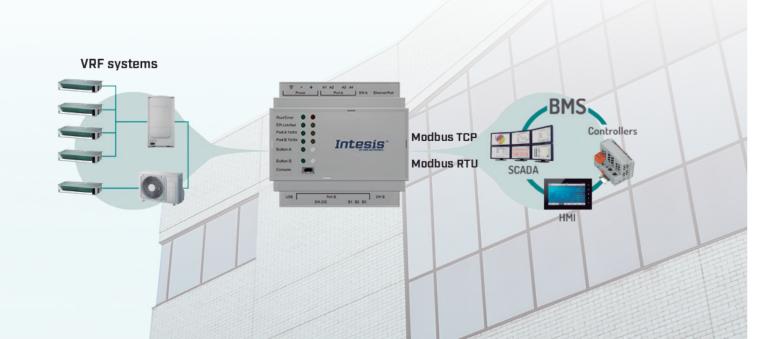


Specific features for one to one solutions

- Consistent register mapping presents a common interface for all AC brands.
- Fast and easy configuration thanks to a dip switch on the product.

Specific features for multi-unit solutions

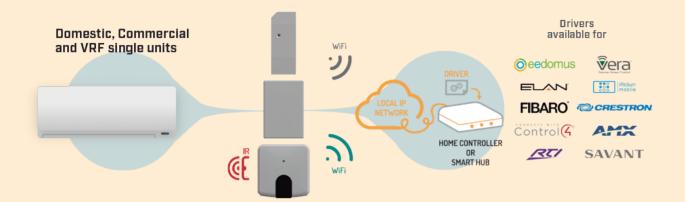
- Supports both Modbus RTU and TCP simultaneously.
- Control all connected AC units from a single Modbus register.



DAIKIN	ORDER CODE	POINT VERSION
AC Domestic units to Modbus RTU VRV and Sky systems to Modbus RTU	INMBSDAI0011000 INMBSDAI001R000	1 I.U. 1 I.U.
FUĴÎTSU		
RAC and VRF systems to Modbus RTU	INMBSFGL001R000 INMBSFGL001I000	1 I.U. (to remote controller) 1 I.U. (to CN connector)
VRF systems to Modbus TCP/RTU	INMBSFGL016O000	16 I.U.
Hisense		
VRF systems to Modbus RTU VRF systems to Modbus TCP/RTU	INMBSHIS001R000 INMBSHIS016O000 INMBSHIS064O000	1 I.U. 16 I.U. 64 I.U.
HITACHI		
VRF systems to Modbus RTU VRF systems to Modbus TCP/RTU	INMBSHIT001R000 INMBSHIT016O000 INMBSHIT064O000	1 I.U. 16 I.U. 64 I.U.
(L)		
VRF systems to Modbus RTU	INMBSLGE001R000	1 I.U.
Midea		
Commercial and VRF systems to Modbus RTU	INMBSMID001I000 INMBSMID004I000 INMBSMID008I000 INMBSMID032I000	1 I.U. 4 I.U. 8 I.U. 32 I.U.
MITSUBISHI		
Domestic, Mr. Slim and City Multi lines to Modbus RTL City multi systems to Modbus TCP/RTU	INMBSMIT0011000 INMBSMIT050C000 INMBSMIT100C000	1 I.U. 50 I.U. 100 I.U.
MITSUBISHI ARAT INDUSTRIES, CTD.		
FD and VRF systems to Modbus RTU VRF systems to Modbus TCP/RTU	INMBSMHI001R000 INMBSMHI0480000 INMBSMHI1280000	1 I.U. 48 I.U. 128 I.U.
Panasonic		
Etherea AC units to Modbus RTU ECOi and PACi systems to Modbus RTU ECOi, ECOg and PACi systems to Modbus TCP/RTU	INMBSPAN001I100 INMBSPAN001R000 INMBSPAN016O000 INMBSPAN064O000	1 I.U. 1 I.U. 16 I.U. 64 I.U.
ECOi, ECOg and PACi systems to Modbus TCP Air to Water (Aquarea H) to Modbus RTU	INMBSPAN1280000 INMBSPAN001A000	128 I.U. 1 I.U.
SAMSUNG		
NASA units to Modbus RTU NASA VRF systems to Modbus TCP/RTU	INMBSSAM001R100 INMBSSAM004O000 INMBSSAM008O000 INMBSSAM016O000	1 I.U. 4 I.U. 8 I.U. 16 I.U.
NON-NASA units to Modbus RTU	INMBSSAM064O000 INMBSSAM001R000	64 I.U. 1 I.U.
TOSHIBA		
VRF and Digital systems to Modbus RTU	INMBSTOS001R000	1 I.U.

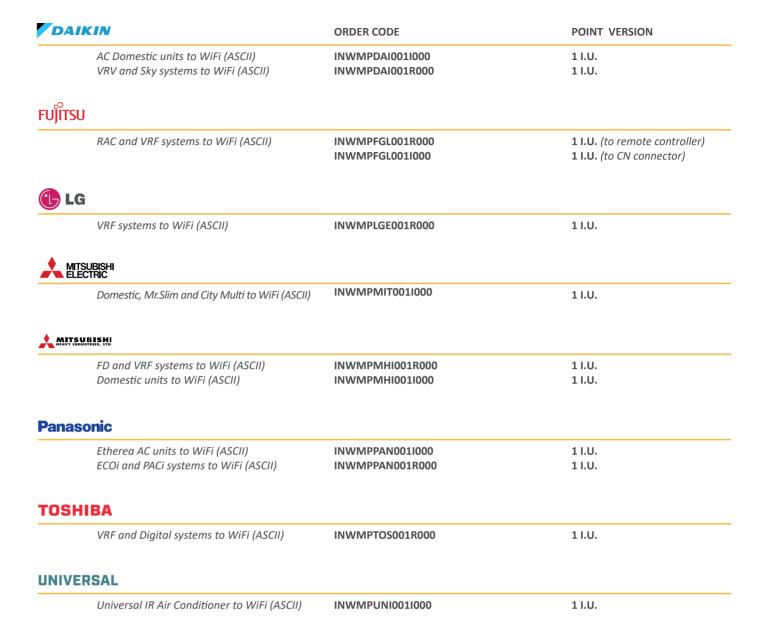
WiFi interfaces for Air Conditioners

Intesis WiFi 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.



General features for WiFi

- WiFi configuration supporting both dynamic or static IPs.
- Drivers available for all major Home Automation manufacturers.
- Easy and open protocol generation of new integration drivers.
- Auto-discovering of WiFi 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.





Work with HMS.
The number one choice for industrial communication and IIoT.

HMS Networks - Contact

HMS is represented all over the world. Find your nearest contact here:

www.hms-networks.com/contact



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