

SM-ACN-KNX-4/8/16/64 Samsung NASA to KNX gateway

Order Codes:

IBKNXSAM004O000 (4 indoor units)
 IBKNXSAM008O000 (8 indoor units)
 IBKNXSAM016O000 (16 indoor units)
 IBKNXSAM064O000 (64 indoor units)

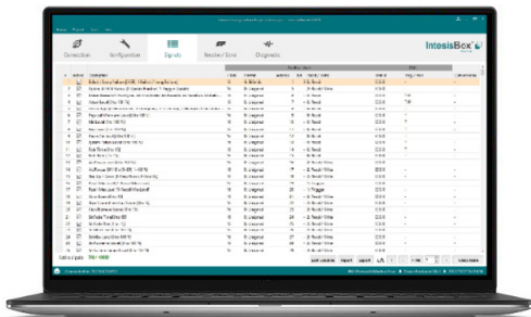
HOW IT WORKS

The IntesisBox **SM-ACN-KNX** Gateway has been specially designed to work as a KNX interface for Samsung NASA Air conditioning systems.

IntesisBox acts as a KNX TP-1 device in the KNX side, allowing other KNX devices to read and write the datapoints of the Samsung installation, as KNX objects, using standard KNX group addresses.

Up to 64 indoor units in the Samsung installation are supported. Their status will be continuously monitored and reported to KNX side. Also commands will be executed on Samsung when received from KNX side.

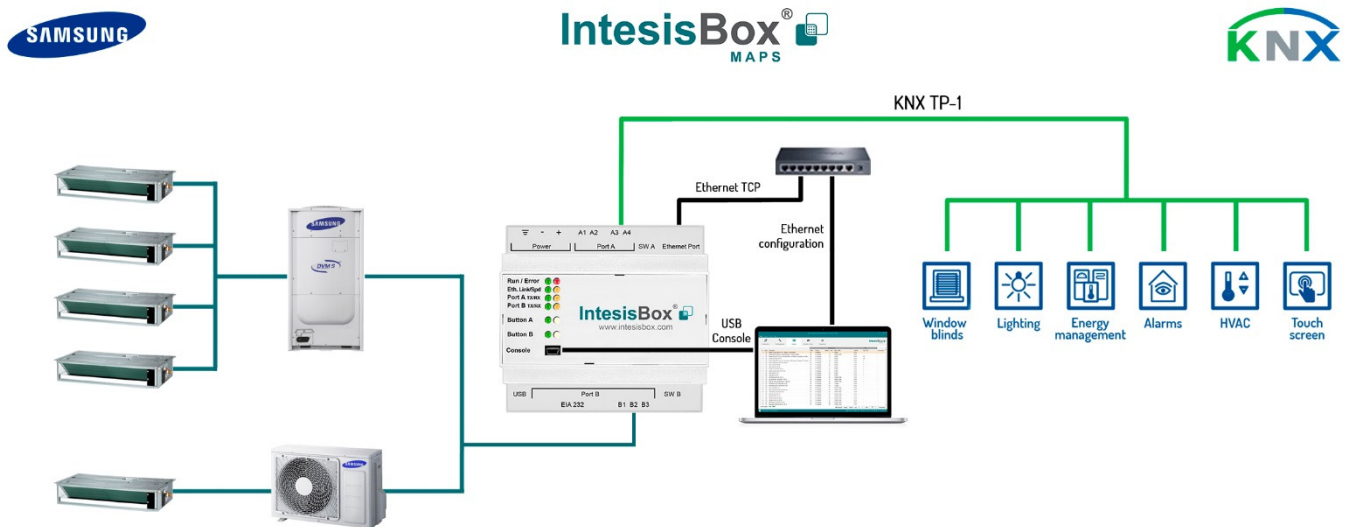
Configuration of the interface is needed using IntesisBox MAPS software, which also allows diagnostics.



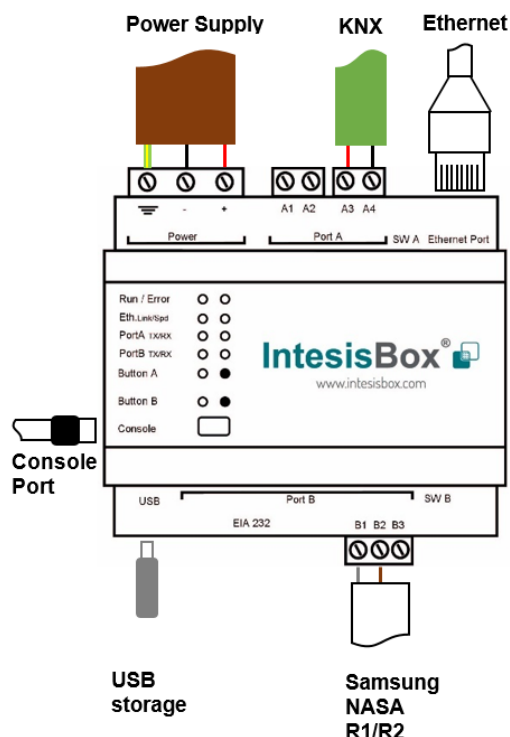
FEATURES

- Handles conversion between KNX and Samsung units' datapoints (number of supported units depends on IntesisBox version).
- Complete range of Samsung indoor unit types supported (AC Indoor unit, HE, HT, EHS, AHU, ERV, ERV+, Chillers).
- Wide range of monitoring & control datapoints available, according to unit type.
- Compatible with Samsung's centralized controller systems connected to NASA's R1/R2 bus (e.g. MCM300N).
- Datalogging through external USB port.
- Configuration through IP or USB (Console) port.
- Front cover LED indicators to provide easy to check communication status on both the Ethernet and serial ports.
- Includes IntesisBox MAPS with automatic updates for both IntesisBox MAPS and Gateway's firmware.

INTEGRATION EXAMPLE



CONNECTIONS



PROTOCOLS



KNX is the world's only open Standard for the control in both commercial and residential buildings.

This standard is based upon more than 20 years of experience in the market. Bus devices can either be sensors or actuators needed for the control of building management equipment such as: lighting, blinds/shutters, security systems, energy management, heating, ventilation and air-conditioning systems, signaling and monitoring systems, interfaces to service and building control systems, remote control, metering, audio/video control, white goods, etc.

For further information, please visit www.knx.org



Samsung NASA (Network Architecture for System Air conditioner) is Samsung's standard bus for interconnection of its air conditioning systems of arbitrary size, since 2013.

Access to NASA is based upon a two-wire connection, R1/R2, usually accessible at each outdoor unit of Samsung.

Bus is used not only for communication of AC Indoor Units, but also all other Samsung's cooling/heating products (EHS, AHU, ...).

Compatibility with Samsung's previous generation products is possible, using Samsung's MIM-N01 interface.

COMMUNICATION

	KNX	Samsung NASA
Connection	TP-1 +/-	R1/R2 (2-wire, isolated)
Data rate	9.6 kbps	non-standard
Data Types	DPT_1.001 / 1.002 / 1.005 / 1.015 (1 bit) DPT_5.x / DPT_5.010 (1 byte unsigned) DPT_8.x (2 byte signed) DPT_9.001 (2 byte float) DPT_20.x (1 byte unsigned)	Supported unit types: <ul style="list-style-type: none"> • Indoor Unit • HE • HT • EHS • AHU • ERV • ERV+ • CHILLER
Functions supported		

ELECTRICAL & MECHANICAL FEATURES

Enclosure	Plastic, type PC (UL 94 V-0) Net dimensions (dxwxh): 90x88x56 mm Recommended space for installation (dxwxh): 130x100x100mm Color: Light Grey. RAL 7035	Battery	Size: Coin 20mm x 3.2mm Capacity: 3V / 225mAh Type: Manganese Dioxide Lithium
Mounting	Wall. DIN rail EN60715 TH35.	Console Port	Mini Type-B USB 2.0 compliant 1500VDC isolation
Terminal Wiring (for power supply and low-voltage signals)	Per terminal: solid wires or stranded wires (twisted or with ferrule) 1 core: 0.5mm ² ... 2.5mm ² 2 cores: 0.5mm ² ... 1.5mm ² 3 cores: not permitted If cables are more than 3.05 meters long, Class 2 cable is required.	USB port	Type-A USB 2.0 compliant Only for USB flash storage device (USB pen drive) Power consumption limited to 150mA (HDD connection not allowed)
Power	1 x Plug-in screw terminal block (3 poles) 9 to 36VDC +/-10%, Max.: 140mA. 24VAC +/-10% 50-60Hz, Max.: 127mA Recommended: 24VDC	Push Button	Button A: KNX programming button (Not used) Button B: Not used
Ethernet	1 x Ethernet 10/100 Mbps RJ45 2 x Ethernet LED: port link and activity	Operation Temperature	0°C to +60°C
Port A	1 x KNX TP-1 Plug-in screw terminal block orange (2 poles) 2500VDC isolation from other ports KNX power consumption: 5mA Voltage rating: 29VDC 1 x Plug-in screw terminal block green (2 poles) Reserved for future use 1500VDC isolation from other ports	Operational Humidity	5 to 95%, no condensation
Switch A (SWA)	1 x DIP-Switch for PORTA configuration: Reserved for future use	Protection	IP20 (IEC60529)
PORT B	1 x Serial EIA232 (SUB-D9 male connector) Not used 1 x R1/R2 Plug-in screw terminal block (3 poles) Samsung NASA R1/R2 1500VDC isolation from other ports	LED Indicators	10 x Onboard LED indicators 2 x Run (Power)/Error 2 x Ethernet Link/Speed 2 x Port A TX/RX 2 x Port B TX/RX 1 x Button A indicator 1 x Button B indicator
Switch B (SWB)	1 x DIP-Switch for PORT B configuration: Not used (leave all OFF)		

