

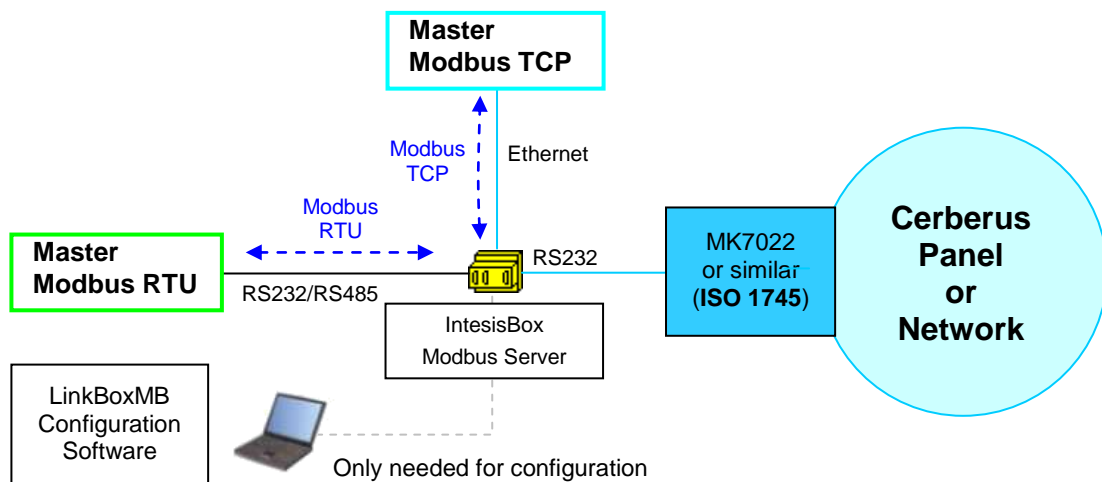


IntesisBox[®]

Modbus Server - Cerberus CS11 & CS10 ISO 1745 protocol

Gateway for the integration of Siemens Cerberus fire detection systems CS11 & CS10 into Modbus enabled control systems.

Monitor & Control your network of CERBERUS fire panels remotely from your Control Center using any commercial SCADA or monitoring software with Modbus TCP driver.



IntesisBox has been designed to monitor and control Siemens Cerberus fire detection systems CS11 & CS10 (equipped with BMS interface providing ISO 1745 protocol through serial port RS232), from a Modbus master or client device. Several panels connected in network can be integrated using just one IntesisBox, up to 5000 points in total.

IntesisBox connects directly to the serial port RS232 of the Cerberus interface providing ISO 1745 protocol in one side, and in the other side to the Modbus network, via TCP (Ethernet) or RTU (RS232 or RS485) configurable by software.

Immediate availability of the states of Cerberus elements in IntesisBox (event driven protocol). IntesisBox has a fully configurable table associating Cerberus elements with Modbus register addresses, also the value desired in Modbus to indicate any possible state (alarm, fault...) is fully configurable. Import of Cerberus points into the configuration table is made easily thanks to an embedded import tool able to read Cerberus configuration files provided by the Cerberus engineer.

Commands toward Cerberus are allowed (Reset, Test, AckAlarm...), the value to use in Modbus for each command is configurable. Date & time synchronization of Cerberus can be done by writing in specific Modbus registers enabled for this.

IntesisBox Modbus Server series are configured using *LinkBoxMB*, a software tool for windows[™] which is supplied along with the purchase of IntesisBox with no additional cost. *The user interface of LinkBoxMB allows simulating the values of the Modbus registers without the need to be physically connected to the panel, very useful while in commissioning phase.*

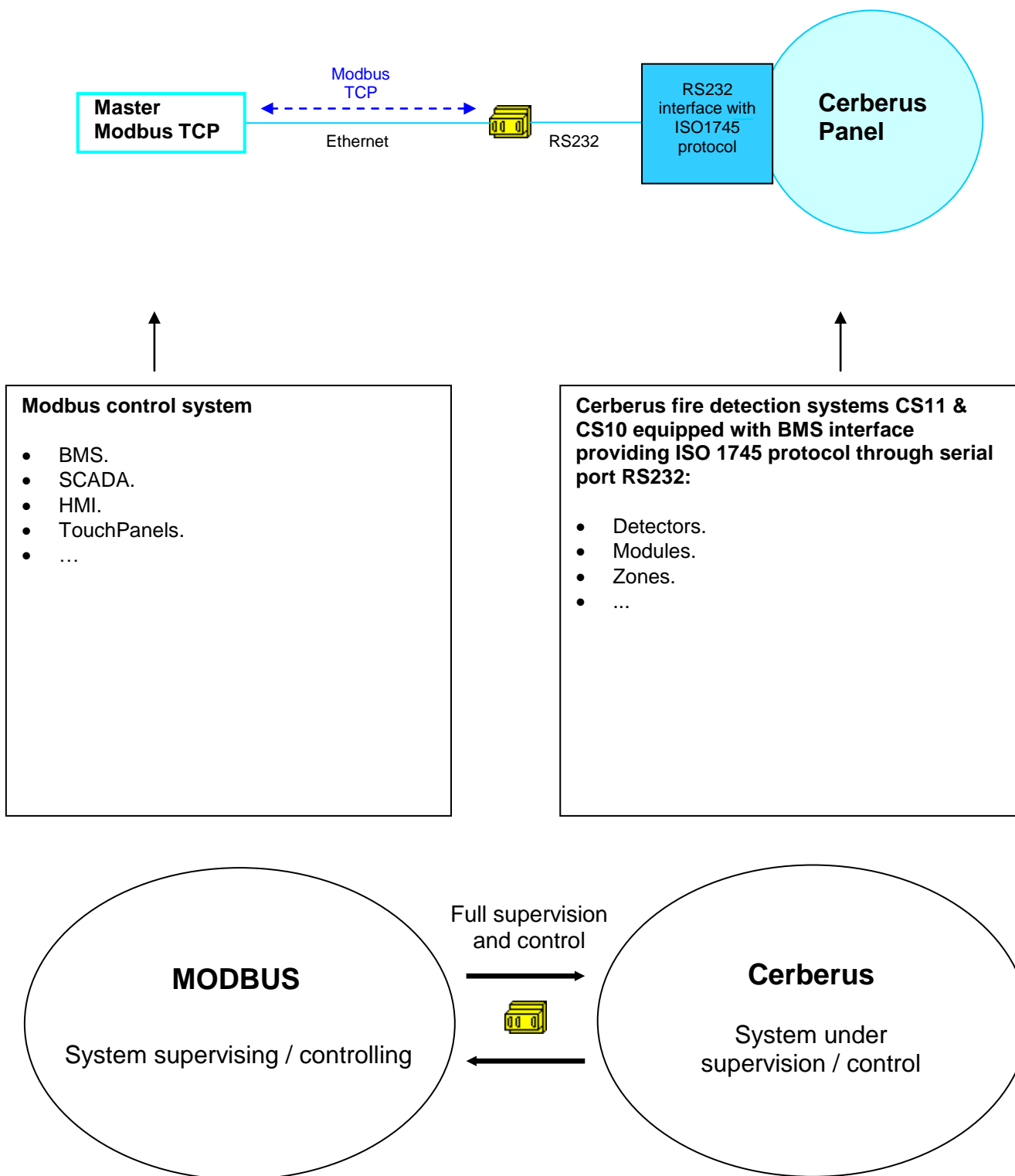
IntesisBox capacity

Element	Max.	Notes
Number of Panels	No limit	IntesisBox has no limit in terms of maximum number of Cerberus Panels in network supported, in fact no panels are defined into IntesisBox, just Elements or Points (existing in any Cerberus Panel in network).
Number of Points	5000	Number of Cerberus elements or points that can be defined in IntesisBox.

Ref.: *IBOX-MBS-CERBERUS*

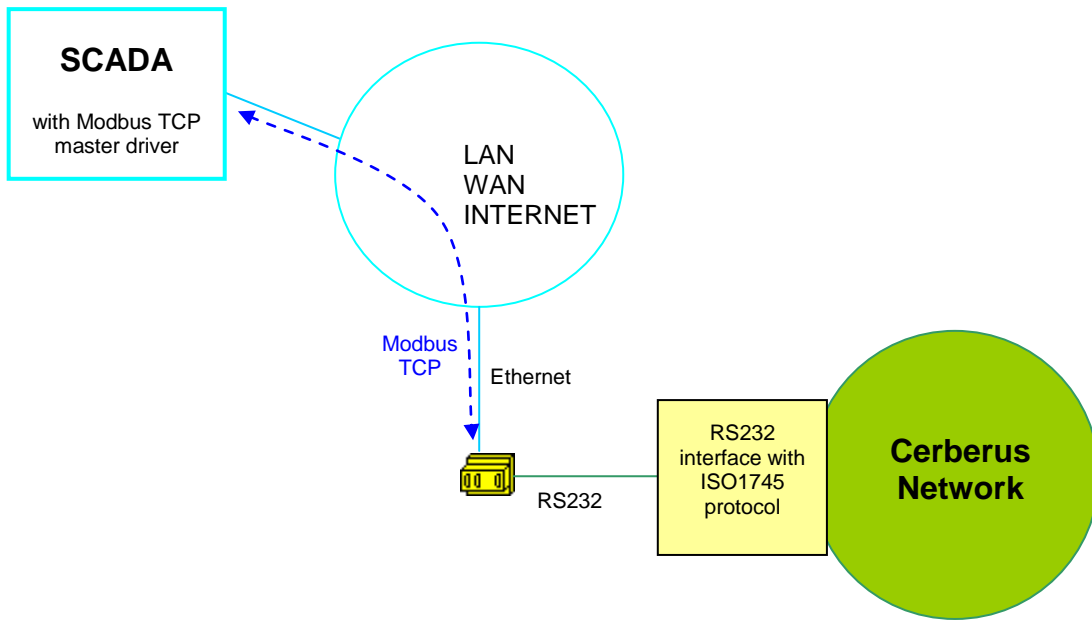
Sample applications

Integration of any Cerberus fire panel device into Modbus control systems.



Typical application

Monitor & Control of a network of CERBERUS fire panels remotely from a Control Center using any commercial SCADA or monitoring software with Modbus TCP driver.



Cerberus interface of IntesisBox

General	
Max. points	5000
Virtual signals	Communication error with Cerberus system. Available from Modbus.

Cerberus interface	
Type	Partner system connected to MK7022 Communication unit (RS232) as defined by Siemens Cerberus. Compliant with Cerberus MK7022 Communication unit interface (SW Version 10). <i>In general compatible with any Cerberus system equipped with BMS interface providing ISO 1745 protocol through serial port RS232.</i>
Configuration parameters	<ul style="list-style-type: none"> • Baud rate. • Data bits. • Parity. • Timeout for communication error signal activation. • Every possible status (Normal, Alarm, Fault...) of a device (detector, panel...) in the Cerberus system can be freely associated to a numerical value. • Allows <i>This numerical value will be the point's value read from Modbus when the associated Cerberus device is in this status. All the points are of type analog from the point of view of Modbus.</i>
Interactivity with Cerberus system	<ul style="list-style-type: none"> • Allows monitoring and command of CS11 and CS10 fire detection systems. • Read and Write (send of commands towards the panels) is allowed.

Modbus interface of IntesisBox

Modbus interface	
Device type	Slave.
Modbus modes supported	TCP, RTU RS232 or RS485.
Modbus TCP configuration parameters	<ul style="list-style-type: none"> • IP address. • Subnet mask. • Default gateway. • TCP port.
Modbus RTU configuration parameters	<ul style="list-style-type: none"> • RS232/RS485. • Baud rate. • Slave number.

Points	
Parameters configurable per point	<p>Generic fields.</p> <ul style="list-style-type: none"> • Point description. Useful to identify the point's location into the building. • Active (Yes/No). Useful to deactivate points maintaining the configuration for later use. <p>Cerberus related fields.</p> <ul style="list-style-type: none"> • Structure CSX (Area/Section/Zone/Element/IBD/CBD). • Sector. • DMS. • ADF12. <p><i>This information must be supplied by the engineer that has set up the Cerberus system.</i></p> <p>Modbus related fields.</p> <ul style="list-style-type: none"> • Point address (1...5000). <p><i>This information, along with the description of points, must be supplied to the engineer in charge of setting up the integration into the Modbus system.</i></p>
Modbus data types	All the points are of data type UNSIGNED INT in the Modbus interface.

Configuration tool

LinkBoxMB	<ul style="list-style-type: none">• Visual engineering tool, easy of use, for gateway's configuration and supervision compatible with Microsoft Windows operating systems, supplied with the gateway free of charge.• Multi-window tool allowing to supervise simultaneously the communication activity with both protocols (systems), real time values for all the signals allowing to modify any value (very useful for test purposes), console window showing debug and working status messages, and configuration windows to configure all the gateway's parameters and signals.• Signals configuration in plain text files (tab separated) for easy and quick configuration using Microsoft Excel (very useful in projects with a lot of points).• Allows configuring the gateway's parameters and signals while in off-line (not connected to the gateway).• Connection to the gateway for download the configuration and supervision by using serial COM port of the PC (serial cable supplied with the gateway).• Allows configuring all the external protocols available for IntesisBox[®] Modbus series.• Upgrades for this software tool available free of charge whenever a new protocol is added to the IntesisBox[®] Modbus series.• Multi-project tool allowing having in the engineer's PC the configuration for all the sites with different IntesisBox[®] Modbus series gateways.• Multi-language tool, all the language-dependent strings are in a plain text file (tab separated) for easy modification or addition of new languages.• A list of system commands is available to send to the gateway for debugging and adjust purposes (Reset, Date/time consultation/adjust, Firmware version request...).
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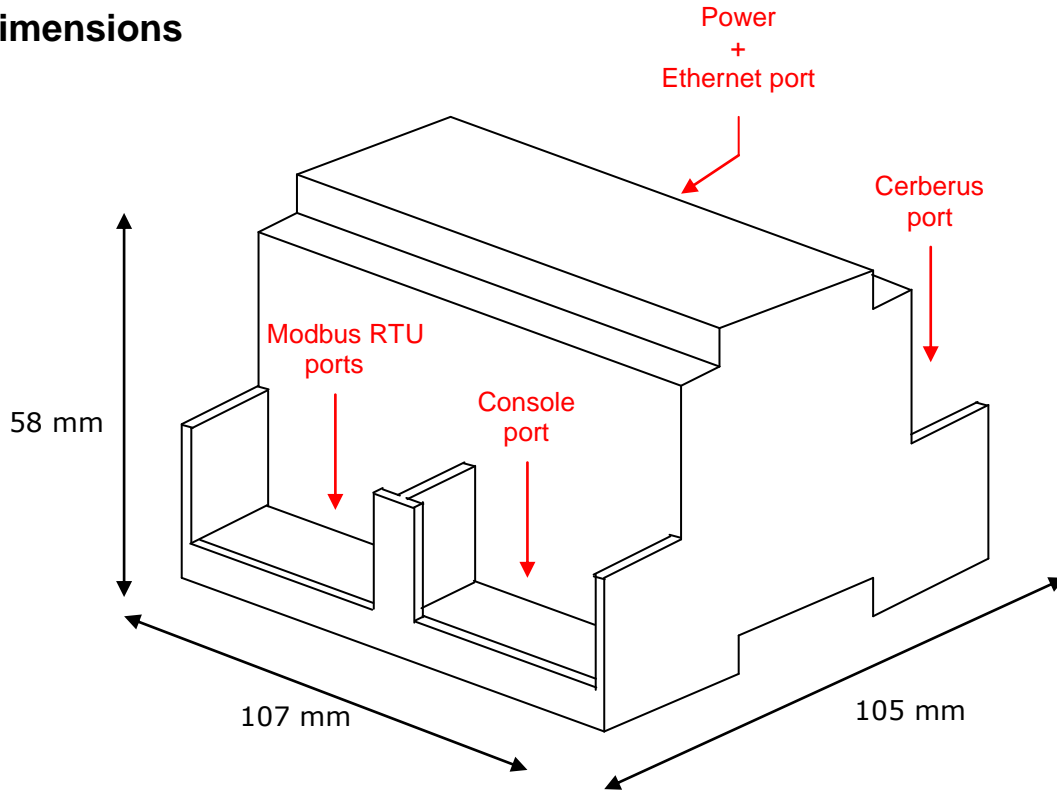
Mechanical & Electrical characteristics



Enclosure	Plastic, type PC (UL 94 V-0). Dimensions: 107mm x 105mm x 58mm.
Color	Light Grey. RAL 7035.
Power	9 to 30Vdc +/-10% 1.4W. 24Vac +/-10% 1.4VA. Plug-in terminal bloc for power connection (2 poles).
Mounting	Wall. DIN rail EN60715 TH35.
Modbus TCP port	1 x Ethernet 10BT RJ45.
Modbus RTU ports	1 x RS232. DB9 male connector (DTE). 1 x RS485. Plug-in terminal bloc (2 poles).
Cerberus port	1 x RS232. DB9 male connector (DTE).
LED indicators	1 x Power. 2 x Cerberus port activity (Tx, Rx). 2 x Modbus RTU port activity (Tx, Rx). 2 x Ethernet port link and activity (LNK, ACT).
Console port	RS232. DB9 female connector (DCE).
Configuration	Via console port. ¹
Firmware	Allows upgrades via console port.
Operational temperature	0°C to +70°C
Operational humidity	5% to 95%, non condensing
Protection	IP20 (IEC60529).
RoHS conformity	Compliant with RoHS directive (2002/95/CE).
Certifications	CE

¹ Standard cable DB9male-DB9female 1,8 meters long is supplied with the device for connection to a PC COM port for configuring and monitoring the device. The configuration software, compatible with Windows® operating systems, is also supplied.

Dimensions



Recommended available space for its installation into a cabinet (wall or DIN rail mounting), with space enough for external connections:

