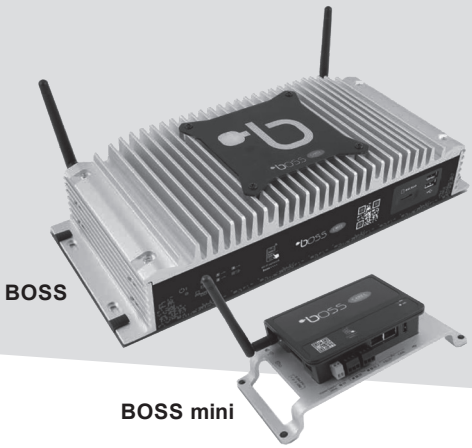
BOSS AND BOSS MINI SUPERVISION

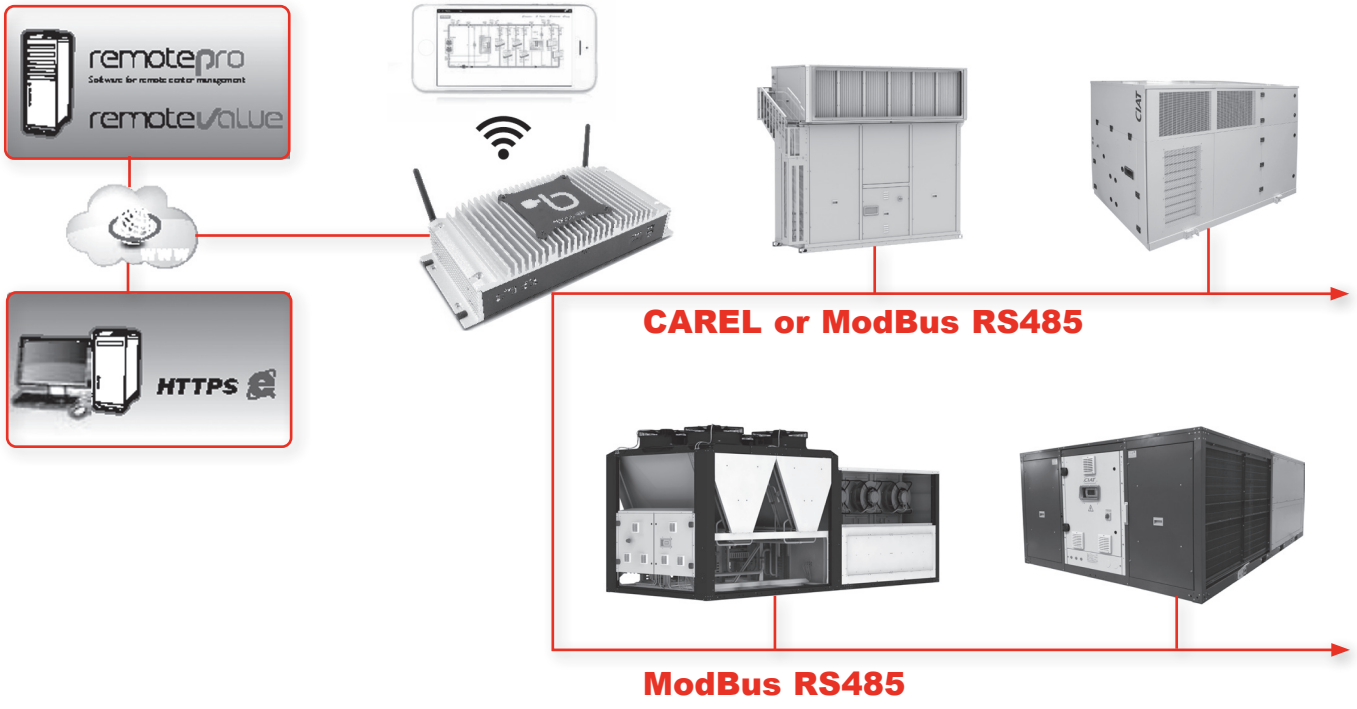
System of connectivity, monitoring and remote management



The complete range for mobile-ready local supervision

for medium and large sites

- *Hotspot Wi-Fi integrated.*
- *Remote control.*
- *Supervisor BOSS: management of up to 300 units (with a total of 3500 variables).*
- *Supervisor BOSS mini: management of up to 50 units (with a total of 500 variables).*
- *Management of alarms.*
- *Creation of diagrams and reports.*
- *Scheduling and managing of events and operating scenarios.*
- *Installation drawing with location of machines.*
- *Energy management.*
- *Analysis of risks and critical monitoring points.*
- *Notes.*



USE

CIAT BOSS SUPERVISION is a pre-installed PC-based solution for the management and supervision of large air conditioning facilities of up to:

- BOSS: 300 units (3500 variables in total);
- BOSS mini: 50 units (500 variables in total).

It implements advanced monitoring and maintenance functions and enables creating areas and groups which simplify the management of the installation. It integrates an installation drawing and the list of units.

Completely browsable from mobile devices, from commissioning to daily access for system maintenance.

Built-in Wi-Fi to create a network and allow the supervisor to be accessed from the user's devices without requiring other network infrastructure.

The following controls can be managed:

- Vectic: ModBus protocol only.
- CIATrtc and CIATpool: CAREL or ModBus protocol.

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Main features

■ BOSS always in your pocket

Responsive web pages offer the possibility to access all BOSS pages for both programming and everyday operations using mobile devices. The graphics automatically to the device they are displayed on (computers with different screen resolutions, tablets, smartphones), minimising the need for the user to resize the pages and scroll the contents.

■ Centralised management

BOSS permits automatic data and alarm synchronisation with RemotePRO, so as to keep the situation on all connected systems under control from just one interface. Centralised system management also increases reliability, through alarm analysis and scheduling of service. It also allows increased energy efficiency by comparing energy consumption and performance between the different sites and identifying possible cost reduction actions.

■ Remote service

Access to typical operating system functions, such as printer driver installation, copying files, etc. is also available via a web interface, another first for a supervisory system. This means that remote service operations can be performed by authorised personnel without needing to travel on site, as is required with other supervisory systems.

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PROTOCOLS AND CONNECTIVITY

For the first time ever on a CAREL supervisor, BOSS introduces the BACnet protocol, the leading protocol in HVAC supervision applications.

■ Integration of third party devices

This new feature significantly increases the possibility to integrate third party devices. The BACnet Master protocol is available in both MS/TP (RS485) and TCP/IP modes, and together with the Modbus RS485 and Modbus TCP/IP protocols, these too available on BOSS, offers the possibility to interact with the widest range of devices in the HVAC/R sector.

■ BMS integration

In addition to Master mode, the BACnet protocol is also available on BOSS in TCP/IP Slave mode, allowing BOSS to be integrated into a higher-level BMS, sharing the values of interest for overall building management (e.g. unit status, alarm status, ON/OFF controls,...)

■ Wireless field connectivity

If Modbus RTU devices cannot be connected directly to the BOSS / BOSS-mini RS485 network due to installation constraints, these can be integrated into the boss system via its Wi-Fi network, using the WiFi-Modbus gateways. Nonetheless, when a wired connection is available, this is the preferred option due to its reliability.

SYSTEM OPTIMISATION FUNCTIONS (OPTIONAL)

■ Energy

Consumption control and management. Allows users to monitor system energy consumption using graphs and reports.

CUSTOMISED GRAPHICS

User interfaces that can be customised according to the way in which information is managed by different users.

With the c.web tool, system status and the main variables relating to each controller can be represented using customised graphics.

Indeed c.web offers several powerful features, such as :

- the creation of vectorial images that can adapt to all screen sizes on both desktop and mobile devices without losing resolution;
- the possibility to develop customised animated widgets in just a few clicks;
- the reusability of graphic libraries developed for one project inside another.

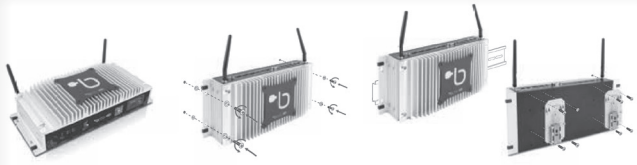
THE SAME HARDWARE IS SUITABLE FOR ALL APPLICATIONS

The absence of an internal fan and heat dissipation ensured by a robust aluminium casing mean BOSS / BOSS-mini can be installed in many different environments, even industrial environments in which conditions are unfavourable.

BOSS mini

Desktop | Wall-mounted | DIN rail

BOSS



Desktop | Wall-mounted | DIN rail

TECHNICAL CHARACTERISTICS

■ Hardware characteristics:

- Power supply:
  - BOSS: 100-240 V~, 1,5 A max, 50-60 Hz
  - BOSS mini: 24 Vdc 1,5 A max
- Video output:
  - BOSS: VGA/Display Port
  - BOSS mini: micro HDMI
- Double Ethernet port
- Integrated backup memory expansion:
  - BOSS: YES with µSD memory
  - BOSS mini: YES with SD memory
- Serial ports RS485 master:
  - BOSS: 2 opto-isolated
  - BOSS mini: 1 opto-isolated - 1 not opto-isolated
- Digital input : BOSS only
- Temporary IP address reset button: BOSS mini.
- Digital outputs:
  - BOSS : 3 relays : 24 V max, 8 A max
  - BOSS mini : 3 voltage outputs, +24 Vdc
- Standard HOST USB ports with type A connector :
  - BOSS : 2 ports on front; 4 ports at rear
  - BOSS mini : 1 port on front
- Buzzer : Max 80 dB at 10 cm, BOSS only
- Dimensions:
  - BOSS: 340 x 145 x 77 mm
  - BOSS mini: 143 x 100 x 30 mm
- Operating conditions: from 5 to 45 °C
- Storage conditions: from -20 to 65 °C
- Compliance: Directive 2014/35/EU (LVD) - Directive 2014/30/EU (EMCD) - Directive 2011/65/EU (RoHS)
- Pollution degree: 2 as per EN60950-1
- Chassis material: chassis made of SEEC (steel, electro-galvanized, cold-rolled), top and lateral casing in anodized aluminium

■ Software characteristics:

Software available in 14 languages with English remaining the second language for support. CIAT machine variables available in 3 languages: Spanish, English and French (please consult us for other languages).

BOSS Supervision system allows CIAT units with the following control systems to be integrated into the supervision network: Vectic, CIATrtc or CIATpool.

The Vectic control can only be installed on a line with the ModBus protocol. The other control systems can be configured with the CAREL or ModBus protocols.

The devices included in the system have a factory configuration for alarm priorities, recording frequency and the main page presentation.

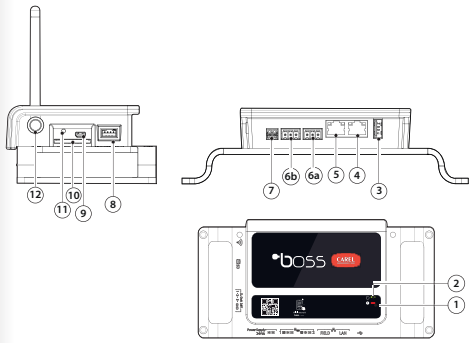
The units can be connected to two RS485 ports on the BOSS system. It is possible to have additional lines by using RS232 RS485 converters on the USB ports.

Four secure access levels are available:

- Administrator (highest level).
- Installer (level 3).
- Maintenance (level 2).
- End user (level 1).

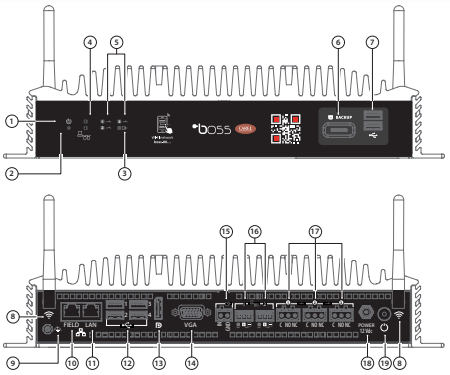
The highest level gives access to all the available functions.

BOSS mini



Key
1. Alarm status LED
2. ON/OFF status LED
3. USB host port
4. LAN Ethernet
5. FIELD Ethernet
6a: RS485 Serial non opto-isolated
6b: RS485 Serial opto-isolated
7. Power supply
8. Digital outputs +24Vdc (1, 2, 3)
9. µHDMI port
10. SD port
11. Temporary IP enable button
12. wi-fi antenna

BOSS



Key
1. ON/OFF status LED
2. Alarm status LED
3. Digital input status LED
4. RS485 status LED (1, 2)
5. relay status LED (1, 2, 3)
6. µSD port
7. USB ports (1, 2)
8. Two antennas
9. Earth
10. FIELD Ethernet
11. LAN Ethernet
12. USB ports (1, 2, 3, 4)
13. Display port
14. VGA port
15. Digital inputs
16. RS485 line (1, 2)
17. Relay outputs (1, 2, 3)
18. Power supply
19. ON/OFF button

ER-1740/2000

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The manufacturer reserves the right to make any changes, without notice.

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