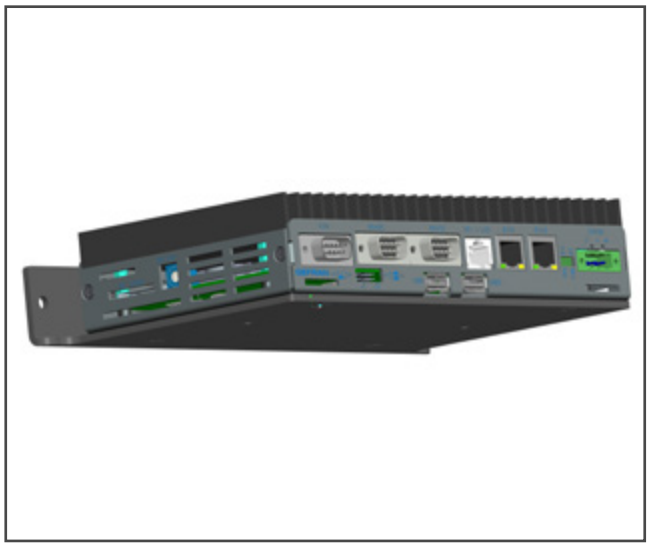
GEFRAN

# eView BOX

*Control panel*



**Applications**

- Plastic Extrusion
- Heat treatment
- Metal

**Main characteristics:**

- One programming environment.
- IP20 protection level
- wide range of communication ports and protocols

| | |
|---|---|
| **Code** | According to model (see order code) |
| **Brief description** | Internal cabinet control panel |

**PROFILE**

The eView BOX internal cabinet control panel lets you display, set, and manage all of the machine or system automation data. The use of an Intel ATOM low-consumption processor, plus an extremely efficient design (no fans or moving parts), eliminates all maintenance. The processor can run at either 1 GHz or 1.3 GHz.
The controller has several communication ports (USB, Ethernet, RS232, RS485 and CAN) and different protocols (Ethercat (Master), GDNET (Master), Modbus TCP/IP (Master\Slave), CANopen (Master), Modbus RTU (Master/Slave)).
The 2 GB internal mass memory can be expanded with SD cards.
Programming is done with a single development tool: GF_Project VX, which ensures complete and fast management of application software by means of the five standard IEC61131-3 languages and a powerful graphic editor.
In combination with I/Os, eView BOX completes the management and control of process and automation. It manages sequences and work processes, and sets and displays data and connectivity.

In addition, there is a series of specific application templates, user-friendly and easily customizable, for the plastics and heat treatment industries.

## ARCHITECTURE

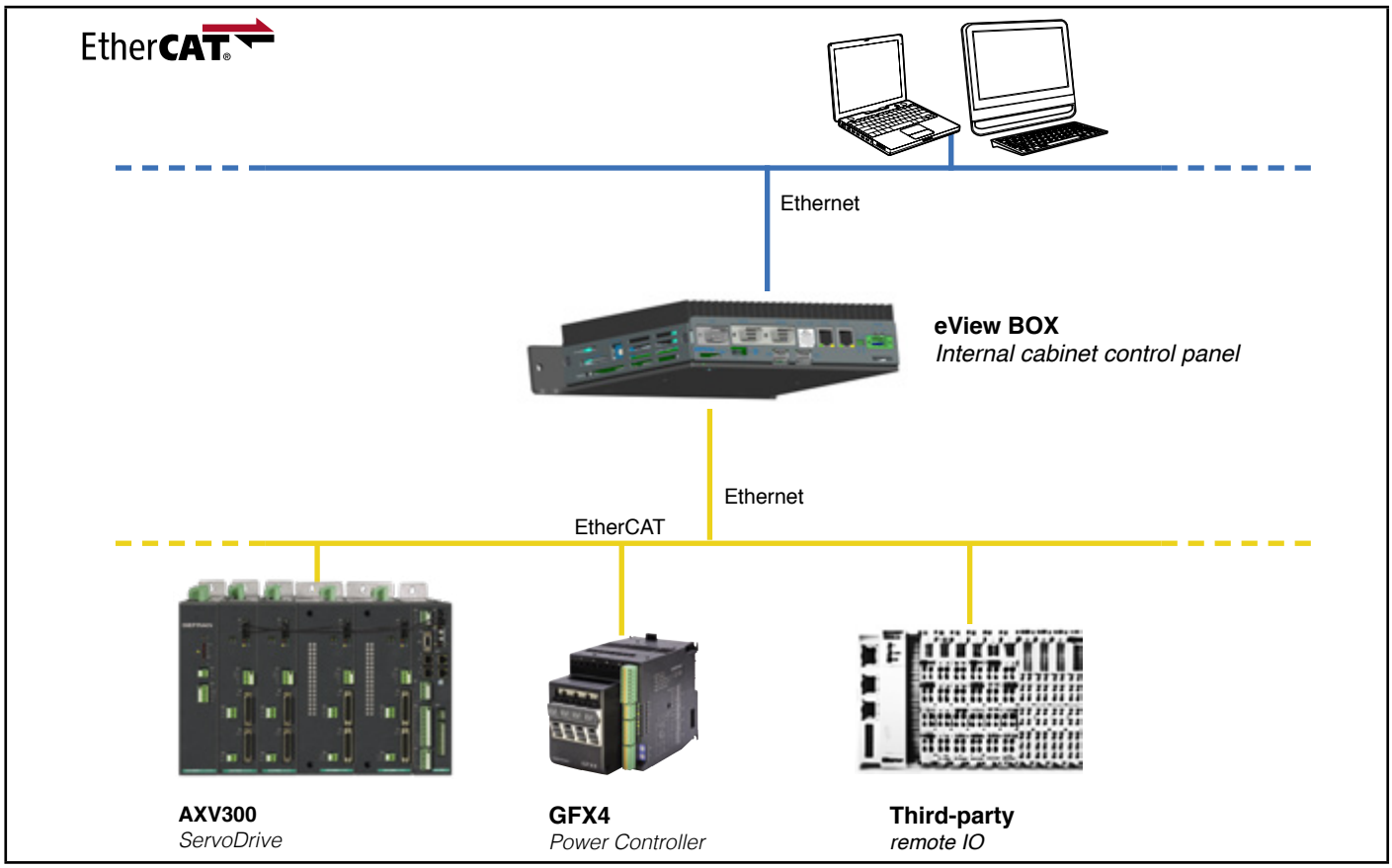



Figure 1 - Ethernet - EtherCAT architecture

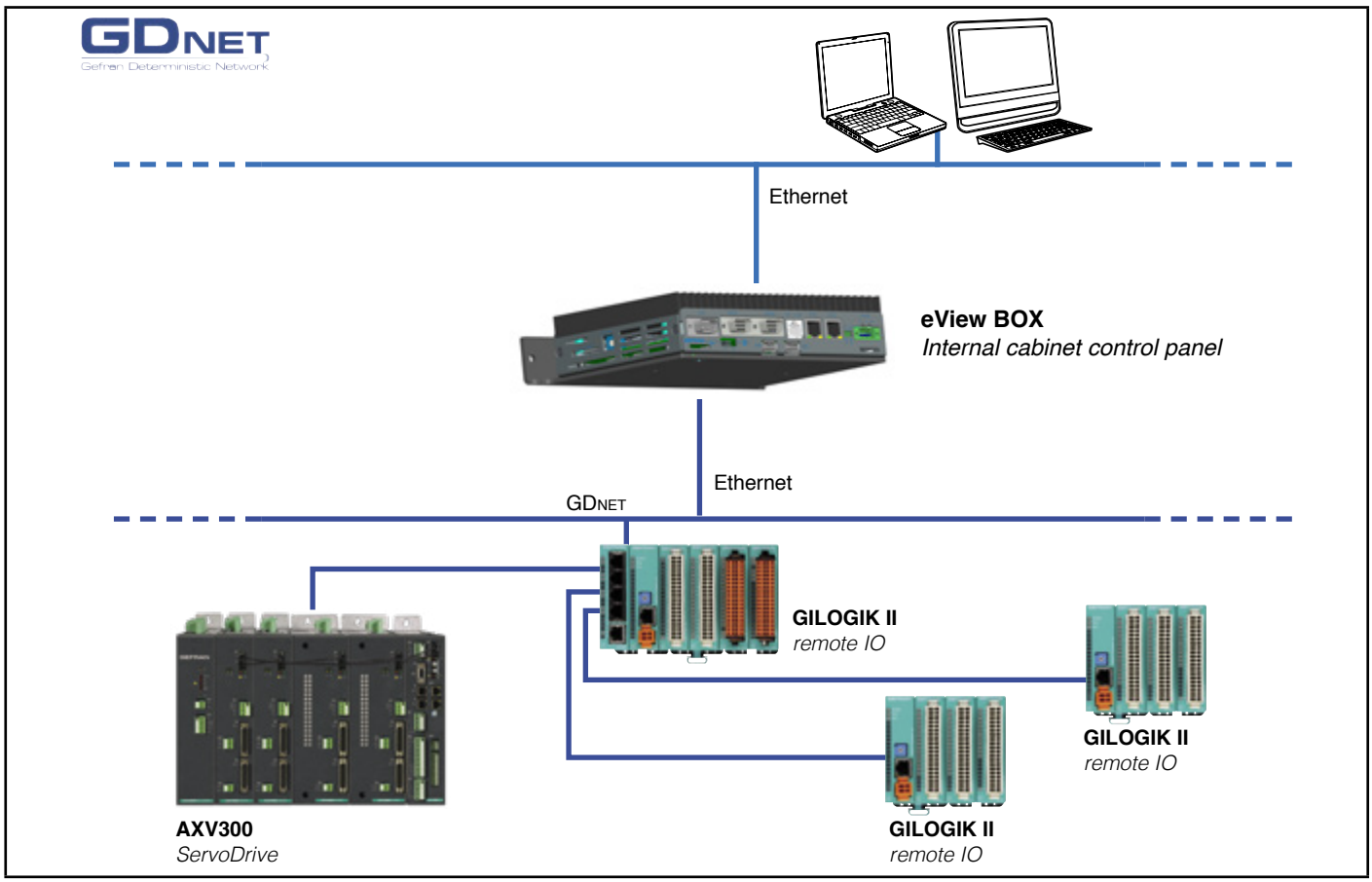



Figure 2 - Ethernet - GDNET architecture

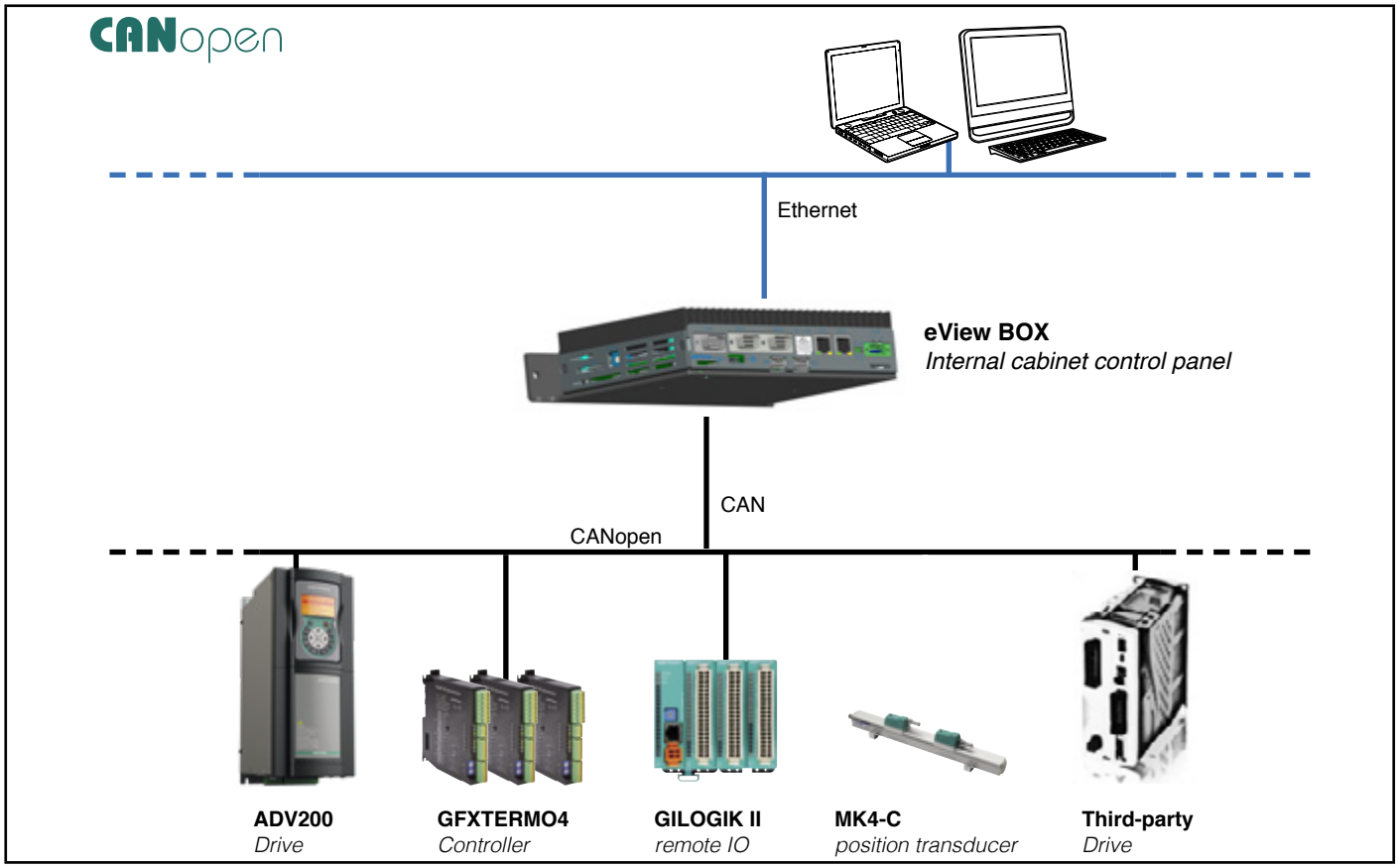



Figure 3 - Ethernet - CAN (CANopen) architecture

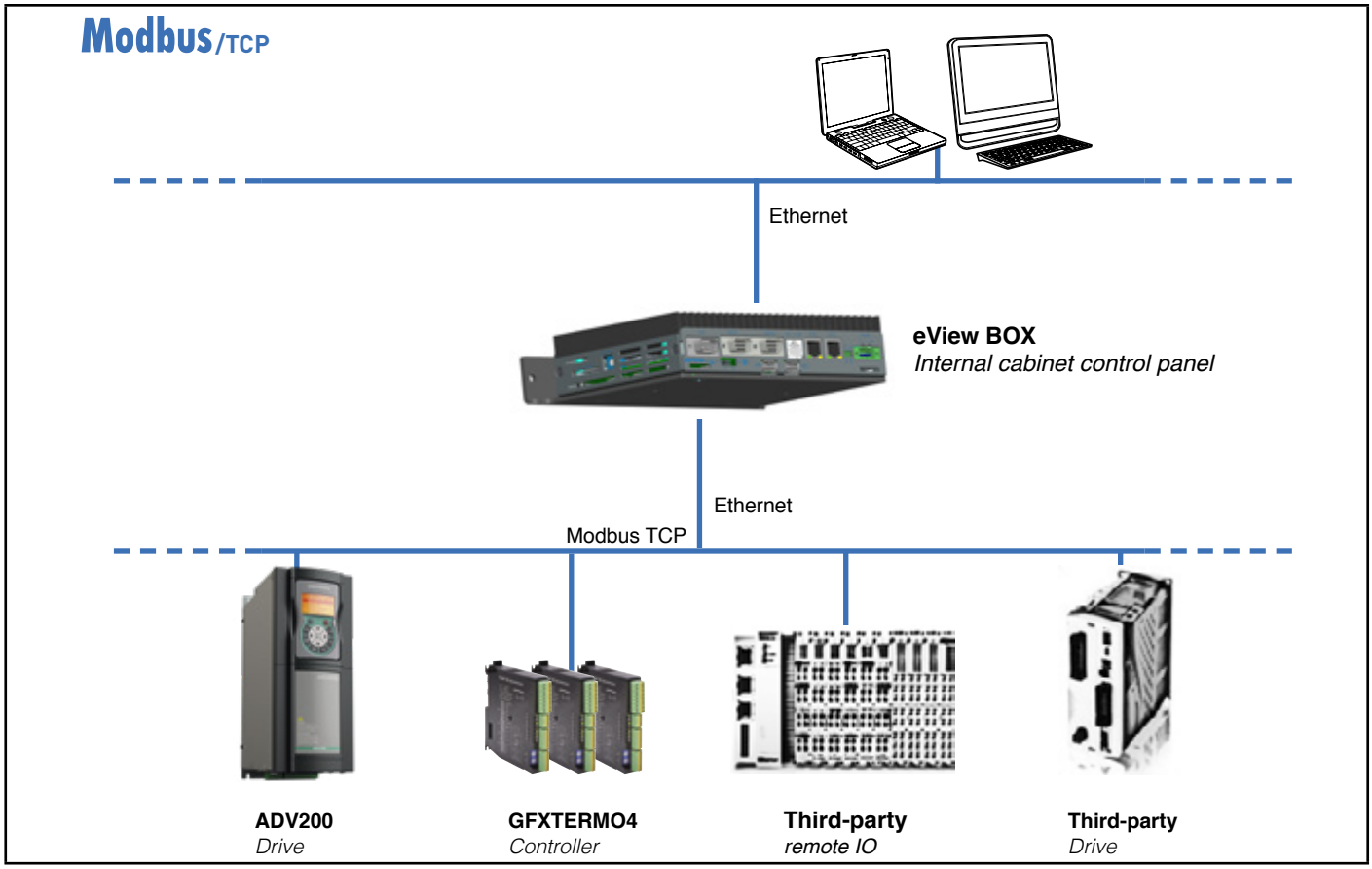



Figure 4 - Ethernet – Modbus TCP architecture

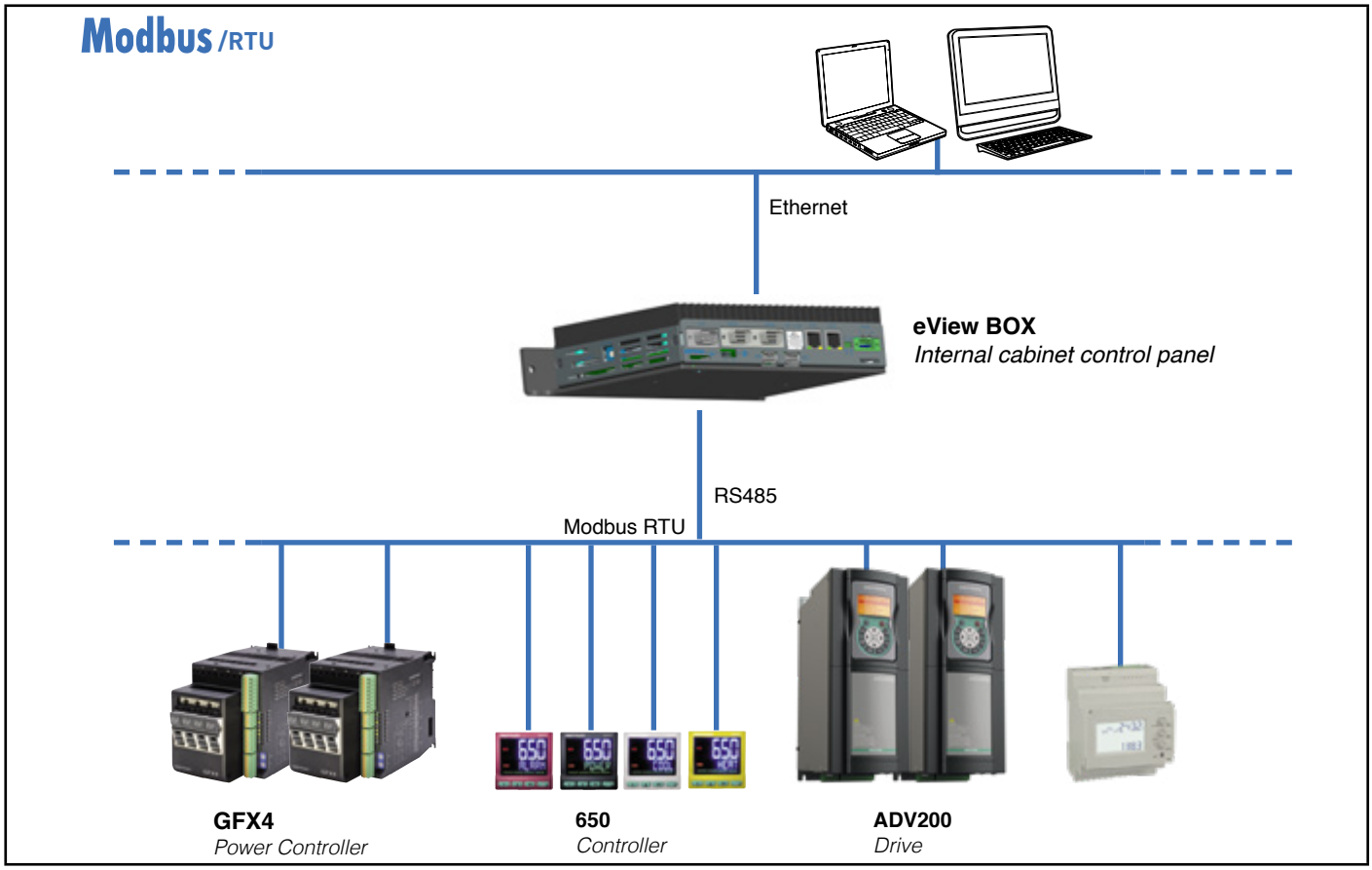



Figure 5 - Example of Ethernet - Modbus RTU (RS485) architecture

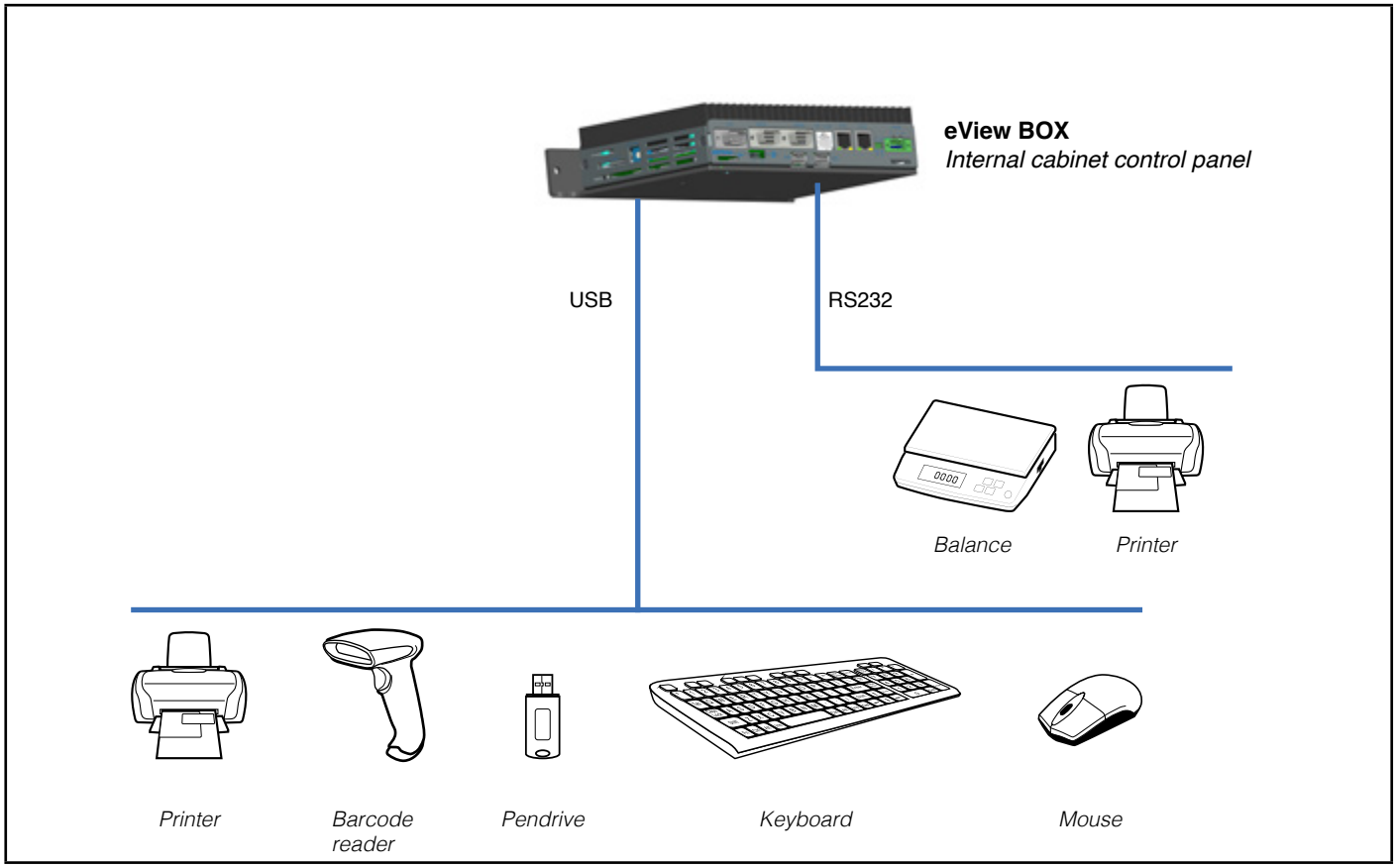



Figure 6 - Example with USB and RS232 ports

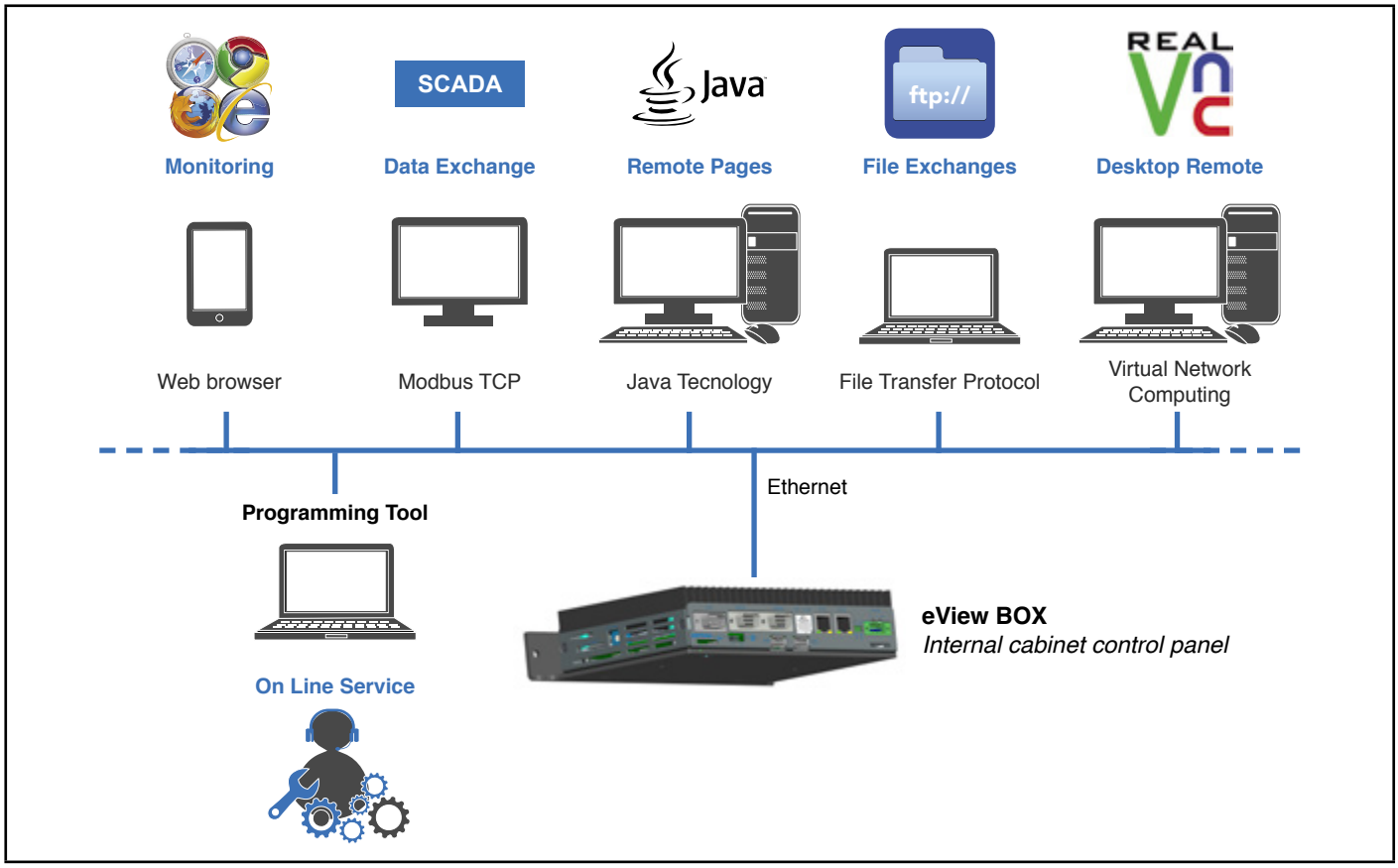



Figure 7 - Examples of remote services

## TECHNICAL DATA

| | | eView BOX |
|---|---|---|
| **POWER SUPPLY** | Operating voltage | 24 VDC ±25% |
| | Current draw (at 24 VDC) | 500 mA max |
| | Power dissipation | 12 W max |
| | Protections | Polarity inversion<br>Short circuit |
| | Connection | 3-pin polarized removable connector<br>Screw terminals, max cable section 2.5 $mm^2$ |
| **CONNECTIONS** | Ethernet port (ETH) | Number of channels: 2 max (1 optional)<br>Connector: RJ45<br>Velocity: 10 / 100 / 1000 Mbit/s<br>Signals: green connection LED, yellow data LED |
| | KEY & LED port | Connector: RJ45<br>Standard: USB2.0 |
| | RS-232 port (optional) | Connector: DB9 M<br>Speed: 1.2kbit/s…115kbit/s |
| | RS-485 port (optional) | Optically isolated<br>Connector: DB9 M<br>Speed: 9 kbit/s … 19 kbit/s<br>Terminations and polarization: internal, selectable with jumper |
| | CAN port (optional) | Optically isolated<br>Connector: DB9 M<br>Speed: 20, 50, 100, 125, 250, 500, 1000 kbit/s, default 500 kbit/s<br>Termination: internal, selectable with jumper |
| | USB port | Number of ports: 2 max<br>Connector: type A<br>Standard: USB 2.0<br>Protection: overload |
| **COMMUNICATION PROTOCOLS** | Ethernet | FTP (File Transfer Protocol) Modbus TCP/IP Master/Slave<br>Ethercat Master<br>GDNET Master |
| | CAN | CANopen Master |
| | Modbus | Modbus RTU Master/Slave |
| **CONFIGURATION ELEMENTS** | Access to software procedures | 16-position rotary switch |
| | Touch screen calibration | Via software on product |
| **CONTROL ELEMENTS** | Touch screen | 4-wire resistive technology |
| **VIEWING ELEMENTS** | Diagnostics | PW LED (yellow): power supply on<br>RN LED (green): PLC program state<br>LED E1 (red): HW Watchdog state<br>LED E2 (red): PLC program error |
| **MICROPROCESSOR** | Type and frequency | ATOM E640 1 GHz<br>ATOM E660, 1.3 GHz |
| **MEMORY** | System | 512 MB, DRAM type DDR II |
| | Mass | 2 GB Flash memory |
| | Mass extension | SD Card Slot * |

| | | eView BOX |
|---|---|---|
| **AMBIENT CONDITIONS** | Operating temperature | 0 ... +55 °C (as per IEC 68-2-14) |
| | Storage temperature | -20 ... +70 °C (as per IEC 68-2-14) |
| | Relative humidity | max 95% RH non condensing (as per IEC 68-2-3) |
| | Vibrations | 5 to 9 Hz: sine constant 3.5 mm<br>10 to 150 Hz: sine acceleration 1G |
| **ASSEMBLY** | | Mounting inside the control panel, horizontally with the DIN bar or vertically with fixing screws. |
| **PROTECTION LEVEL** | | IP 20 (as per IEC 68-2-3) |
| **WEIGHT** | | 1,250 kg |
| **CE STANDARDS** | EMC (electromagnetic compatibility) | Conforms to Directive 2014/30/EU<br>EN61131-2: Programmable controllers<br>Part 2: Equipment requirements and tests. |

* SD card not supplied. Available as accessory

## DIMENSIONS AND SPACES REQUIRED FOR INSTALLATION

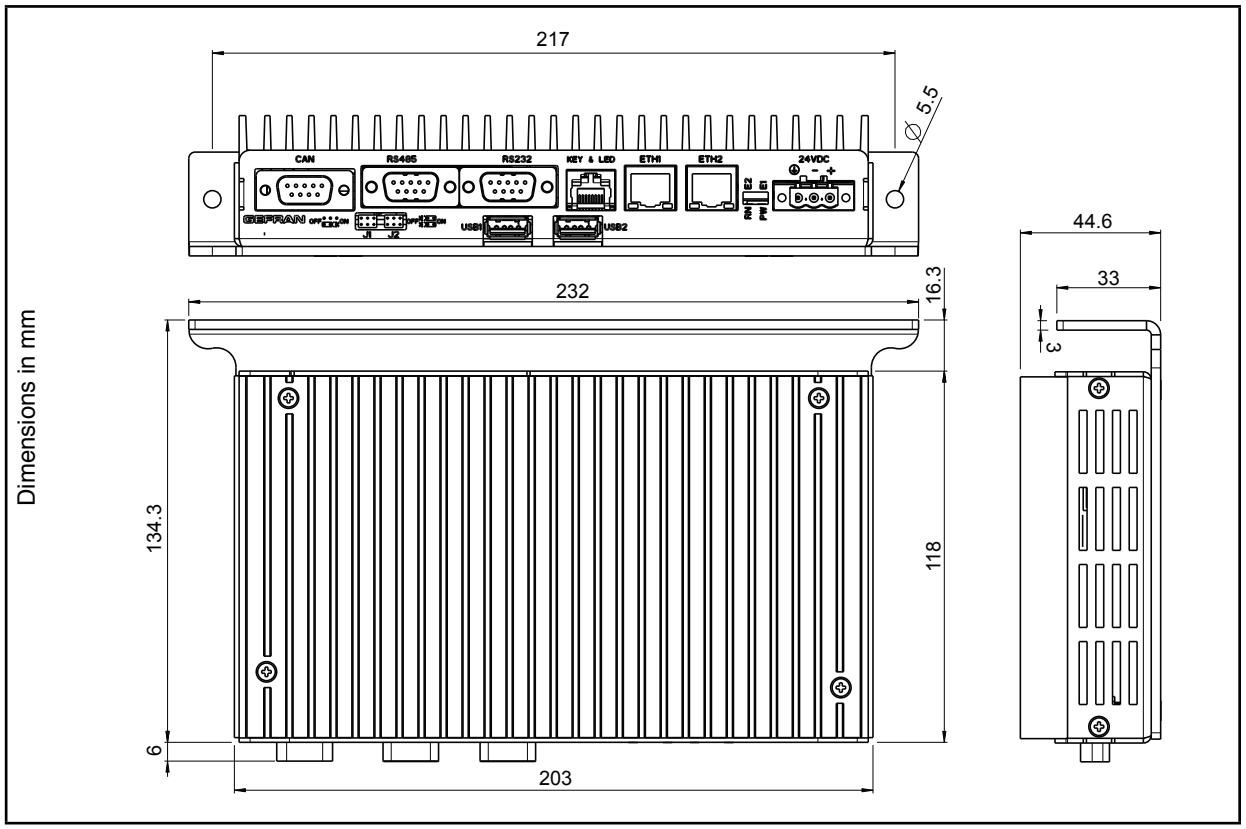



Figure 8 - eViewBOX dimensions

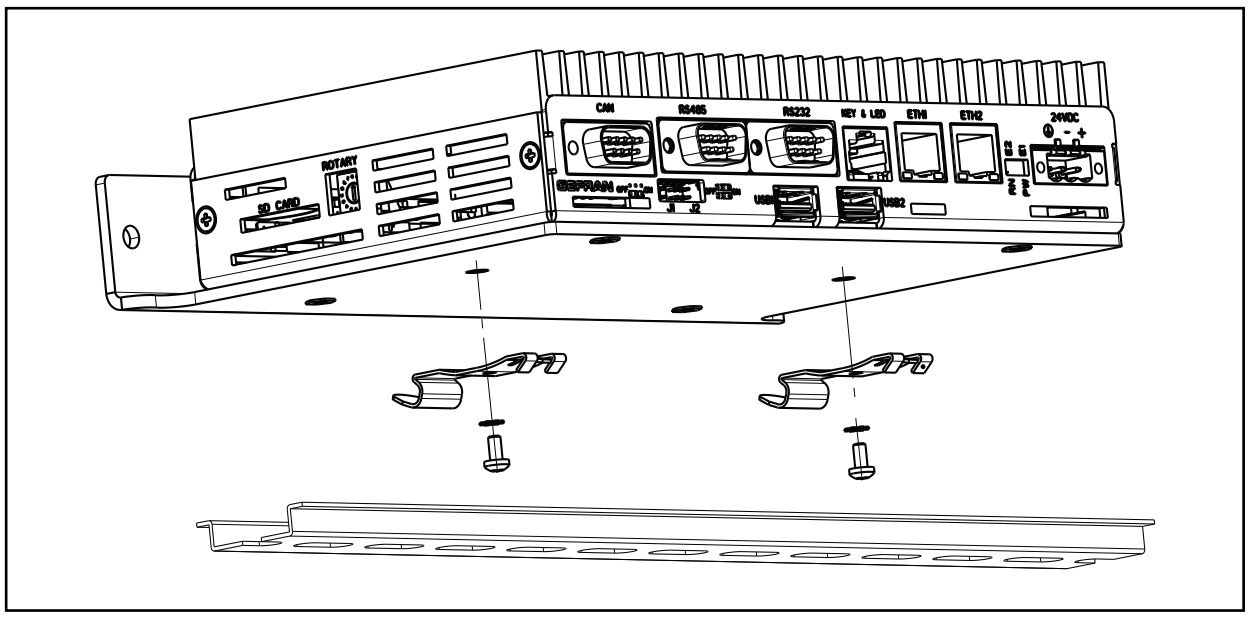



Figure 9 - Installation on DIN track

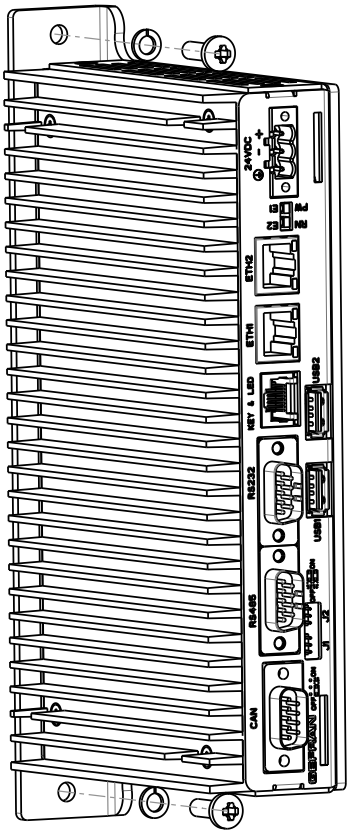



Figure 10 - Vertical installation

## CODICI DI ORDINAZIONE

**eView BOX with Atom 1 GHz, 512 MB RAM, 2 GB flash memory**

| Code | Model Number | Description |
|---|---|---|
| **F073912** | **eView BOX-20-E1-00-00** | communication peripherals<br>2 x Ethernet (Modbus TCP, GDNet), 2 x USB, 1 x keyboard eKMxx |
| **F073914** | **eView BOX-20-E1-S1-C1** | communication peripherals<br>2 x Ethernet (Modbus TCP, GDNet), 2 x USB, 1 x keyboard eKMxx, 1 x RS232, 1 x RS485, 1 x CAN (CANopen) |

**eView BOX with Atom 1.3 GHz, 512 MB RAM, 2 GB flash memory,**

| Code | Model Number | Description |
|---|---|---|
| **F073915** | **eView BOX-30-E1-00-00** | communication peripherals<br>2 x Ethernet (Modbus TCP, GDNet), 2 x USB, 1 x keyboard eKMxx |
| **F073916** | **eView BOX-30-E1-S1-C1** | communication peripherals<br>2 x Ethernet (Modbus TCP, GDNet), 2 x USB, 1 x keyboard eKMxx, 1 x RS232, 1 x RS485, 1 x CAN (CANopen) |
| **F079039** | **eView BOX-30-E2-S1-C1** | communication peripherals<br>2 x Ethernet (Modbus TCP, GDNet\EtherCAT), 2 x USB, 1 x keyboard eKMxx, 1 x RS232, 1 x RS485, 1 x CAN (CANopen) |

## ACCESSORIES

| Code | Model Number | Description |
|---|---|---|
| **F067831** | **CAV_USB_PANEL_1m** | USB cable to panel L = 1 m |
| **F057777** | **SD_CARD1G** | SD Card 1GB |
| **F057679** | **USB_PEN1G** | 1 GB USB key |

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