

# Mobilizer Pro 820 EtherCAT



The Ixxat Mobilizer Pro 820 EtherCAT is a powerful and versatile solution for automotive uses, integrating Automotive Ethernet, LIN, Sent, K-Line, EtherCAT and eight CAN FD interfaces. It's ideal for logging, gateway, and rest bus simulation tasks – easily configurable with the Ixxat Advanced Configuration Tool (ACT).

## FEATURES AND BENEFITS

- **Go-to solution for demanding network requirements**  
The Mobilizer enables easy integration of multiple bus systems into a single, compact device. This is essential for e-mobility projects and complex industrial applications.
- **Multi-connectivity with various interfaces**  
Additional interfaces included: 8 x CAN FD, 2 x Automotive Ethernet 100/1000 Base-T1, 2 x LIN, 1 x Ethernet (10/100/1000 Base-TX), 6 x Digital in/out (A/E), 4 x Analog in, 2 x Analog out, 2 x Sent, USB 3.0 device and USB 2.0 host and a SDXC slot.
- **Embedded platform with own processing power**  
All applications run on the device, a PC is only needed for configuration or stimulation/visualization of data, as the actual intelligence is outsourced to the embedded platform.
- **Quick and easy configuration through ACT support**  
The platform is supported by the Ixxat ACT (Advanced Configuration Tool), a Windows-based tool to easily configure the device via drag and drop. Most use cases can be solved by using ACT Freeware.
- **Compatibility with advanced standards**  
Supports industrial protocols, including Automotive Ethernet and EtherCAT, facilitating high-speed data transfer and network integration for complex applications – especially suited for automotive engineering.
- **Improved data management for efficient engineering**  
The Ixxat Mobilizer series streamlines data management and protocol handling, optimized for automotive testing, logging and gateway operations. Ensuring easy integration and reliable performance.
- **Overvoltage protection**  
Galvanic isolation safeguards against overvoltage and protects from potential electrical damage.

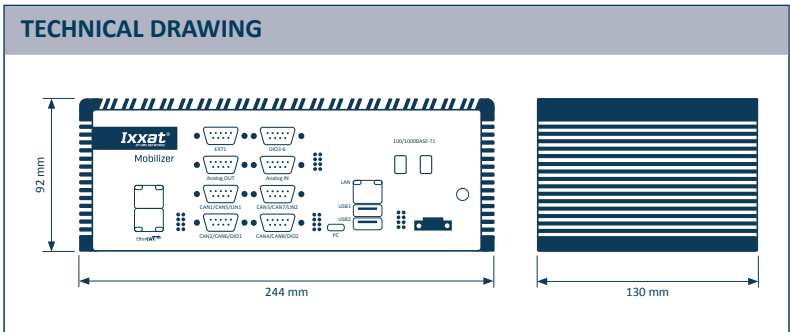
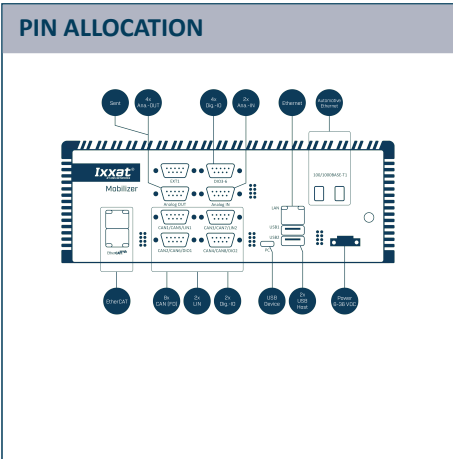
| ORDER NUMBER             | 1.01.0143.08201 |
|--------------------------|-----------------|
| CAN/CAN FD channels      | 8               |
| CAN high-speed bit rates | up to 1 Mbit/s  |

| ORDER NUMBER                  | 1.01.0143.08201                                                                                                                                                              |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CAN FD bit rates              | up to 8 Mbit/s                                                                                                                                                               |
| CAN bus termination resistors | -                                                                                                                                                                            |
| CAN/CAN FD transceiver        | SIC Transceiver TCAN1462                                                                                                                                                     |
| Galvanic isolation            | D-Sub connectors: 1 kV DC for 1 second, 500 V AC/60Hz for 1 minute;<br>LAN connection: 1.5 kVrms/60Hz, 2.25 kV DC for 1 minute; EtherCAT<br>connection: 1 kVrms for 1 minute |
| LIN bit rates                 | up to 20 kBit/s                                                                                                                                                              |
| LIN transceiver               | MCP2003B                                                                                                                                                                     |
| LIN VBAT                      | 8 to 36 V DC                                                                                                                                                                 |
| LIN channels                  | 2                                                                                                                                                                            |
| LAN bit rates                 | 10/100/1000Base-TX                                                                                                                                                           |
| Automotive Ethernet           | 100/1000-Base-T1 (via 2 x IEC63171-2 connectors)                                                                                                                             |
| Ethernet connector            | RJ45                                                                                                                                                                         |
| Ethernet channels             | 1                                                                                                                                                                            |
| USB interface                 | 3                                                                                                                                                                            |
| USB connector                 | USB-A, USB-C                                                                                                                                                                 |
| USB 2.0 host                  | via USB-A Socket, USB 2.0 up to 480 Mbit/s                                                                                                                                   |
| USB 3.0 device                | via USB-C Socket, USB 3.0 up to 5 Gbit/s                                                                                                                                     |
| Digital in/out                | 6                                                                                                                                                                            |
| Analog In                     | 4                                                                                                                                                                            |
| Analog Out                    | 2                                                                                                                                                                            |
| Microcontroller               | i.MX 8M Plus, Quad-Core, 1.8 GHz Cortex-A53 Processor                                                                                                                        |
| RAM                           | 1 GB                                                                                                                                                                         |
| Flash                         | 4 GB eMMC                                                                                                                                                                    |
| Host system                   | Linux                                                                                                                                                                        |
| Power supply                  | 6 to 36 V DC                                                                                                                                                                 |
| Power consumption at 24 V     | 310 mA                                                                                                                                                                       |
| Power consumption at 12 V     | 620 mA                                                                                                                                                                       |
| Power connector               | Phoenix MC 1.5-3-STF-3.81 BK                                                                                                                                                 |
| Weight                        | 1,900 g                                                                                                                                                                      |
| Housing material              | Aluminum (6063-T5, finish: Surtec 650)                                                                                                                                       |
| Dimensions                    | 130 x 244 x 92 mm                                                                                                                                                            |
| SDHC slot                     | yes, SDXC                                                                                                                                                                    |
| Operating temperature         | -40 °C to +70 °C ambient                                                                                                                                                     |
| Storage temperature           | -40 °C to +85 °C                                                                                                                                                             |
| Protection class              | IP40                                                                                                                                                                         |

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|-------------------|------------------------------------------|
| Relative humidity | 10-95 %, non-condensing                  |
| Certification     | CE, FCC                                  |
| Shock/Vibration   | Shock: 8 g, 11 ms / Impulse: 3g , 200 Hz |



| ACCESSORIES                                                  | ORDER NUMBER    |
|--------------------------------------------------------------|-----------------|
| Mobilizer DIN Rail Mount                                     | 1.04.0143.00001 |
| Mobilizer Y-CAN Cable                                        | 1.04.0143.00002 |
| Mobilizer Power Cable                                        | 1.04.0143.00003 |
| Termination adapter for CAN/CAN FD (D-Sub plug to socket)    | 1.04.0075.03000 |
| Termination adapter for 2x CAN/CAN FD (D-Sub plug to socket) | 1.04.0075.30003 |



## SOFTWARE SUPPORT

The Mobilizer provides various possibilities to manage configurations. HMS provides with Ixxat ACT (Advanced Configuration Tool) an easy to use Windows-based tool enabling customers to configure the device via drag-and-drop. Most use-cases can be solved by using ACT Freeware.

### **Dashboard**

With the dashboard, that is accessible via the IP address and a web browser, the state of the Mobilizer and the connected bus systems can be monitored, the different basic configurations can be selected and downloaded to the device, and data can be visualized.

### **ACT Tool**

The engineering tool ACT is Windows based and allows the easy creation of configurations via drag-and-drop. The ACT tool provides further configuration possibilities (e.g. forwarding individual signals, changing message ID and content).

### **IxAdmin**

IxAdmin is included in the ACT. With IxAdmin the different basic configurations can be selected, started and stopped and downloaded to the device. Changing baud rate settings is also possible as well as updating the firmware and managing the connected devices.