DATASHEET

Mobilizer



The Ixxat Mobilizer is a powerful and versatile solution for automotive uses, integrating Automotive Ethernet, FlexRay, LIN, Sent, K-Line, EtherCAT and up to eight CAN FD. 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**
  Variants available with CAN FD, Automotive Ethernet 100/1000 Base-T1, FlexRay, LIN, Ethernet (10/100/1000 Base-TX), Digital in/out (A/E), Analog in, Analog out, Sent, USB 3.0 device and USB 2.0 host and 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, FlexRay 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.

TECHNICAL DATA	MOBILIZER STANDARD 800	MOBILIZER PRO 820 ETHERCAT	MOBILIZER PRO 822 ETHERCAT
ORDER NUMBER	1.01.0143.08000	1.01.0143.08201	1.01.0143.08221
CAN/CAN FD channels	8		

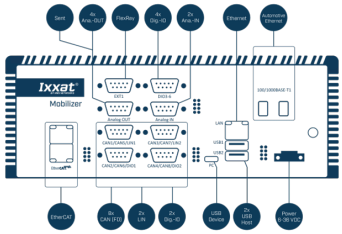
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ORDER NUMBER	**1.01.0143.08000**	**1.01.0143.08201**	**1.01.0143.08221**
CAN high-speed bit rates	up to 1 Mbit/s		
CAN FD bit rates	up to 8 Mbit/s		
CAN bus termination resistors	-		
CAN/CAN FD transceiver	SIC Transceiver TCAN1462		
Galvanic isolation	D-Sub connectors: 1 kV DC for 1 second, 500 V AC/60Hz for 1 minute; LAN connection: 1.5 kVrms/60Hz, 2.25 kV DC for 1 minute	D-Sub connectors: 1 kV DC for 1 second, 500 V AC/60Hz for 1 minute; LAN connection: 1.5 kVrms/60Hz, 2.25 kV DC for 1 minute; EtherCAT connection: 1 kVrms for 1 minute	D-Sub connectors: 1 kV DC for 1 second, 500 V AC/60Hz for 1 minute; LAN connection: 1.5 kVrms/60Hz, 2.25 kV DC for 1 minute; EtherCAT 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		
FlexRay	no	no	yes
Automotive Ethernet	no	100/1000-Base-T1 (via 2 x IEC63171-2 connectors)	100/1000-Base-T1 (via 2 x IEC63171-2 connectors)
Sent	no	yes	yes
Ethernet connector	RJ45		
Ethernet channels	1		
EtherCAT (slave)	no	yes	yes
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	2	6	6
Analog In	-	4	4
Analog Out	-	2	2

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

CERTIFICATES
CE FC

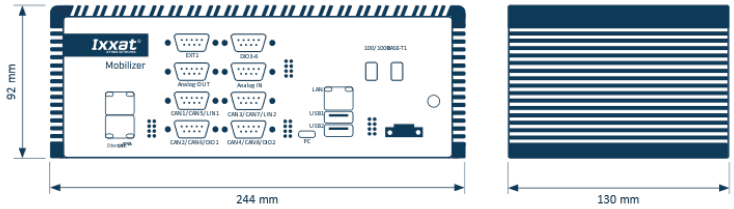
ACCESSORIES	ORDER NUMBER
Mobilizer DIN Rail Mount	1.04.0143.00001
Mobilizer Y-CAN Cable	1.04.0143.00002
Mobilizer Power Cable	1.04.0143.00003
Termination adapter for CAN/CAN FD (D-Sub plug to socket)	1.04.0075.03000
Termination adapter for 2x CAN/CAN FD (D-Sub plug to socket)	1.04.0075.30003

PIN ALLOCATION



This drawing shows the Mobilizer Pro 822/EtherCAT variant (Order no.: 1.01.0143.08221). Other variants differ.

TECHNICAL DRAWING



This drawing shows the Mobilizer Pro 822/EtherCAT variant (Order no.: 1.01.0143.08221). Other variants have the same dimensions but may differ in their connectors.

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.

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