

netFIELD Compact X8M

Edge platform for standard applications

- ARM-processor-compatible embedded computer that suits industrial needs
- Preloaded 64-bit operating system, web front-end and container engines
- Open for any containers based on ARM32/64 architecture
- Reliable platform due to secure booting
- Central device/container management possible via cloud portal



Edge Gateway with remote management option

The netFIELD Edge devices are intelligent data routers between the operating (OT) and the information technology (IT) level of automated systems. They autonomously aggregate, process, or transmit IIoT information alongside established production and control processes utilizing freely loadable software packed in containers.

The devices' basis builds a secured Linux, a web configuration interface, and two independently operating container engines. Each device and one of the container engines can optionally be managed remotely over a platform. The digital workspace allows the 24/7 life cycle engineering of your distributed units and the containers from a central location. It reduces the management complexity to simple clicks of UI controls that allow you to face each of your upcoming remote IIoT projects with confidence.

The flexibility of the devices is suitable for all kinds of IoT-supported industrial applications - whether you deploy your data mining code directly to the devices or shift data intelligence to any cloud in forwarding scenarios. In either case, those logics enable you to better understand plant patterns and relationships for optimization purposes or anomaly recognitions. Challenges like building digital twins and implementing downstream predictive maintenance and condition monitoring solutions can be accomplished with minimum effort in the shortest time.



→ QR Code Link: netFIELD Compact X8M
Service-Hotline: +49 (0) 6190 9907-90
www.hilscher.com

Technical Data

Category	Parameter	Value
Processor	CPU	1,8 GHz Quad-Core-ARM Cortex-A53 64 Bit (NXP i.MX8M Mini)
	RAM	2 GB LPDDR4
Memory	Storage	32 GB eMMC Flash, ca. 50 TBW (Terabytes Written)
	Operating system	netFIELD OS, based on Security Enhanced YOCTO Linux
Software	Standard Docker	Docker for manual and local deployment and maintenance of container
	IoT Edge Docker	Docker for remote and automatic deployment and maintenance of containers from the netFIELD Cloud
	Local Device Manager	Web-based GUI for local device parameterization
Security	Secure boot	"High Assurance Boot" of signed software only
	Access	HTTPS, TLS
Power supply	Supply voltage	Unregulated +8 V DC ... +36 V DC IN (typical: +24 V DC) Note: Voltages above 36 V may cause damage to the device. Voltages below 8 V may cause a shutdown of the device.
	Current consumption without USB (typical)	110 mA at 24 V DC 220 mA at 12 V DC
	Current consumption with USB (typical)	350 mA at 24 V DC with two USB ports (at 5 V and 500 mA per port, resulting in additional 120 mA per port) Note: Maximum load over all three USB ports is 1 A
	Connector	5.5 × 2.5 mm coaxial input jack with "bajonet" lock
	Real-time clock	Buffering
Ethernet LAN interfaces	Type	ETH1: 1 Gbit/s Ethernet port (eth0 in netFIELD OS) ETH2: 100 Mbit/s Ethernet port (eth1 in netFIELD OS)
	Connector	2 × RJ45 jacks
Additional interfaces	USB	3 × USB 2.0 ports, type-A connector Note: Maximum allowed output current over all USB ports is 1 A
	Console	Serial UART-to-USB interface, Mini USB connector
	Serial port	RS-232 or RS-485 (2-wire/half-duplex), terminal block connector
LED indicators	Edge LED	User-programmable yellow/green duo LED (labelled "LED" on the device)
	Ethernet-LAN	LINK (green): Ethernet Link status ACT (yellow): Ethernet Activity status
	Power-on	Orange LED indicating on/off state of the device
Mechanics and housing	Dimensions of device (without plugs and mounting bracket)	112 mm x 84 mm x 25 mm
	Dimensions of device with plugs and mounting bracket	Ca. 167 mm x 118 mm x 27 mm
	Weight of device with mounting bracket	Ca. 350 g
	Housing material	Aluminum
	Degree of protection	IP20
Admissible ambient conditions	Mounting type	DIN top hat rail mounting or wall mounting (with two M4 screws)
	Ambient temperature	Operation: -20 °C ... +60 °C Storage: -40 °C ... +85 °C
	Relative humidity	Operation: 10 % ... 90 % Storage: 5 % ... 95 %
Compliance	Electromagnetic compatibility (EMC) Safety	EN 55032/5, EN 61000-6-2, EN 61000-6-3 EN/UL/IEC 62368-1
Approvals	UL	In preparation
Conformity declarations	CE / UKCA / FCC / RoHS	Yes / Yes / Yes / Yes

Note: All technical data may be changed without further notice.

Product name	Part number	Brief description
NFX8M-D2-N32-010	1918.010	netFIELD Compact X8M - Edge Gateway with remote management option