


MFN 100

Edge Computing Device



Key Benefits

- ✓ Resource virtualization
- ✓ Data connectivity
- ✓ Open Interoperability
- ✓ Centralized management

MFN 100 is an edge computing device, designed for harsh industrial environments (-40 °C to +70 °C). The device is based on an Intel Atom x5-E3940/50 CPU and offers 4GB/8GB RAM and up to 512GB SSD storage. MFN 100 supports fieldbus connectivity and also integrates a Time Sensitive Networking (TSN) switch for open, standard deterministic Ethernet communication. MFN 100 devices are part of the Nerve platform which integrates fogOS™ and fogSM™ software from Nebbiolo Technologies in a scalable fog computing architecture.

Resource virtualization

Computational resources of MFN 100 can be securely shared between different operating systems and applications enabling the convergence of various functionality (e.g. industrial PC, gateway, PLC and firewall) in one device.

Data connectivity

Nerve enables data to be used in three ways: at the edge, on your local server or remotely in a cloud. This gives users the flexibility to choose where and when data is stored, visualized and processed.

Open Interoperability

Nerve provides openness, interoperability and flexibility. The platform helps users to become vendor independent, giving the freedom to choose the solutions, from any provider, which best suit specific business needs.

Centralized management

fogOS and fogSM combine to put installed MFN 100 devices at the users fingertips. Software updates to machines can be applied without needing to be on site. Central management of device software and applications delivers new operational flexibility and reduces support and maintenance efforts.



Application Fields

- Manufacturing
- Industrial Automation
- Industrial Robotics

Product features

CPU	Intel E3940 4 cores, 1.8 GHz 4GB RAM	Intel E3950 4 cores, 8GB RAM	
Storage	64GB SSD MLC	256GB SSD MLC	512GB SSD MLC
Interfaces	1 x 1000 Mbit/s SFP 3 x 100/1000 Mbit/s RJ45 1 x 100/1000Mbit/s Ethernet Console Port RJ45 2 x USB 2.0 1 x Display Port		
System software	fogOS™ from Nebbiolo Technologies - Hosts docker containers or binaries - Hosts Customer OS (Windows and Linux) - Interface to fogSM™ System Manager for secure application deployment - Role-based access control - Built-in firewall - Data path with visualization, time-series database and analytics framework		
Operating system hosting	Customer OS (Windows and Linux) hosted as Virtual Machine		
System manager	fogSM™ from Nebbiolo Technologies - On premise or hosted cloud service available - Remote management of multiple devices - Remote software lifecycle management - Remote screen viewing - Remote status viewing		
Connect button	Connection to fogSM™ can be manually controlled at the device. Indicator is lit when a connection to the fogSM™ is established.		
Integrated soft PLC	*CODESYS 3.5 (1ms cycle time, PROFINET Master)		
ProtocolsSupport	OPC/UA, MQTT, REST API		
Housing	DinRail or wall mount Dimensions (H x W x D) 177.5 x 75 x 141mm		
Power	2 x 24V redundant input Maximum power consumption 33.6W		
Environmental	Intended for use in control cabinets Operational temperature: -40°C to +70 °C IP 40 according to IEC 60529 Shock & vibration		

* indicates optional extra



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