BoltCOR 45-10

EN50155 Fanless 3U Rail Server - Intel Core Ultra Series 3



- **Intel Core Ultra Series 3 (Panther Lake H)**
- **Fanless EN50155 OT4 ST2**
- **IEC 62443-4-2 SC-L2 Certifiable**
- **Multiple 10GbE Interfaces**
- **Out-of-Band Management**
- **3U, 19" Rack-mount, Ultra Short-Depth; Up to 3 Units Side-by-Side**

EN50155

Features

High Performance Rail Server : Cutting-edge CPU and advanced 10GbE networking
Fanless Design - EN50155 OT4 ST2 Class : Fanless, certified for Rolling Stock in the OT4 ST2 temperature class
Wide Range Power - EN50155 Class S2 : Highly versatile, rail certified power supply, with a 24-110VDC power in range
Cybersecure : IEC 62443-4-2 SC-L2 certifiable, with advanced protection with electromechanical antitampering detection, TPM 2.0 and Secure Boot
Advanced Networking : Great support for networking with 2x 2.5GbE ports, up to 3x 10GbE ports and BMC interface for remote management
Optional Additional Storage : Option for up to two internal NVMe
Easy to Deploy : Compatible with very short depth racks and just 3U high, fits up to 3 units side-by-side; ideal in space-constrained on-board and track-side installations

Description

The BoltCOR 45-10 is a Rack Mount, 3U, 19” ultra-short depth Rail server that combines the extreme ruggedization of a fanless system with the computational power of a cutting edge CPU.

The BoltCOR 45-10 is EN50155 certified and meets the requirements of Rolling Stock applications in the OT4 ST2 temperature class; it is extremely rugged and suitable for any project where consistent performance and reliability are a must.

The BoltCOR 45-10 supports both traditional and networking workloads thanks to an Intel Core Ultra Series 3 (Panther Lake H), with configurations ranging from 8 to 16 cores, a main RAM up to 64GB LPDDR5x 7467 with IBECC, up to 1TB of embedded NVMe. Additional storage capacity can be added thanks to two M.2 expansions supporting NVMe units.

Designed to enable real server use cases under the harshest operating conditions, the BoltCOR 45-10 comes with high-end features such as two 2.5GbE interfaces (factory option: up to 9x GbE ports), up to three 10GbE ports and one BMC interface for Out-of-Band management.

The BoltCOR 45-10 has a 3U, 19? rack-mount form factor and is extremely short at just 240mm to fit in most recesses; thanks to a very compact width, up to 3 units can be installed side-by-side, increasing dramatically the density of the deployment.

The BoltCOR 45-10 can be optionally configured with Everyware Software Framework (ESF), a commercial, enterprise-ready edition of Eclipse Kura, the open source Java/OSGi middleware for IoT Edge Gateways. Distributed and supported by Eurotech, ESF offers ready-to-use field protocols, MQTT connectivity, web-based visual data flow programming and deep configuration. ESF is also integrated with Everyware Cloud (EC), Eurotech IoT Integration Platform (separately available), enabling advanced diagnostics, provisioning, and full remote device access and management.

Note: The information in this document may be subject to change without notice and should not be construed as a commitment by Eurotech.
While responsible precautions have been taken, Eurotech assumes no responsibility for any error that may appear in this document.
All trademarks or registered trademarks are property of their respective companies

BoltCOR 45-10

EN50155 Fanless 3U Rail Server - Intel Core Ultra Series 3

FEATURES		
PROCESSOR	CPU	Intel® Core™ Ultra Series 3 (Panther Lake H), up to 16 Cores
MEMORY	RAM (Soldered)	up to 64GB LPDDR5x 7467 with IBECC
GRAPHICS	Integrated GPU/NPU	Integrated 4Xe Graphics, Integrated NPU 5.0
	Display	1x DisplayPort
STORAGE	Embedded (Soldered)	128GB NVMe
	Internal	2x M.2 Key M PCIe x4 Gen5, NVME not Included. Options: NVMe up to 4TB, RAID0/1 Support
I/O INTERFACES	GbE - Front	2x 2.5G/1G/100M/10M (M12 X-Coded) [Factory Option: up to 9x GbE Interfaces]
	10GbE - Front	Up to 1x 10GbE (M12 X-Coded)
	10GbE - Rear	Up to 2x 10GbE (M12 X-Coded) Option
	USB	1x USB 3.2 Gen2x1 (Type A) Noise and Surge Protected
	I2C	1x Isolated (DSUB9)
MANAGEMENT	BMC (IPMI)	Factory Option: M12 Port for OOB Management
	Temperature	Abnormal Temperature: Automatic Shutdown and Logging
OTHER	LEDs	ETH[X], ETH_IPMI - 1x CPU Status - 1x Temperature - 1x Fault - 1x Power
	Buttons	Not present - Factory Option: 1x Reset Button (Pinhole)
	Sensors	Temperature, Humidity, Power-supply Voltage
	RTC	Discrete, 64 bit Enconding, Precision ±1ppm, no Battery, at Least 60 Day Operation without Supply Voltage
	Watchdog	Discrete, Supporting Linux Watchdog API
POWER	Power IN	Wide Range 24-110VDC, EN50155 Class S2, Protected and Isolated, Reverse Polarity Protected
	Ignition Sense	Ignition Key Support
	Consumption	6A Max
ENVIRONMENT	Operating Temp.	EN50155 OT4 ST2 (-40°C to +70°C, 85°C Cycle C)
	Storage Temp.	-40 to +85°C
	Relative Humidity	10% to 95% (non-condensing)
MECHANICAL	Dimensions	142mmx240mmx3U (WxDxH)
	Cooling	Passive cooling / Fanless
	Weight	Less than 10Kg
	Mount Options	19" 3U, Rack Mount Chassis, Side-by-Side Multiunit
CYBERSECURITY	TPM	dTPM2.0 with Secure and Measured Boot
	Secure Boot	Supported
	Antitamper	Yes, with Always-on Event Monitoring and Logging
CERTIFICATIONS	Regulatory	CE
	Safety	EN62368-1
	Rail	EN50155, EN45545, EN50121, EN61373
	Environmental	RoHS, REACH
	Cybersecurity	IEC 62443-4-2 SC-L2 Host Certifiable
	MTBF	100,000 Hours
	Ingress Protection	IP20 (EN 60529)
SOFTWARE	BIOS	UEFI, Configured During Production Assembly
	OS	Linux
	IoT Framework	Factory Option: Eurotech Everyware Software Framework

Note: The information in this document may be subject to change without notice and should not be construed as a commitment by Eurotech.
While responsible precautions have been taken, Eurotech assumes no responsibility for any error that may appear in this document.
All trademarks or registered trademarks are property of their respective companies