

# TOX® SystemControl Core

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# TOX<sup>®</sup> SystemControl Core

## Field of application

The integrated real-time control enables precise control of the TOX<sup>®</sup>- drives and systems. The TOX<sup>®</sup>- operating system used is based on a hardened Real-Time Linux<sup>®</sup> to meet IT security requirements. The central processes of the TOX<sup>®</sup>- systems are executed and monitored by the integrated multi-core application with SoftMotion. The existing fieldbus interfaces enable connection to higher-level control systems. The device is compact in design and intended for installation in switch cabinet environments.

## Properties

- Fanless device
- Optimized heat dissipation
- Reliable and robust
- Undervoltage protection by means of supercapacitors
- Fieldbus interfaces: Profinet, EtherCAT, Ethernet/IP

## Technical data

Voltage	Min.	19.2 V DC
	Type	24 V DC
	Max.	28.8 V DC
Power consumption (during operation)		7 W
Operating temperature range		+0 °C - +60 °C
Protection class (switch cabinet installation)		IP20
Weight		1.5 kg
Fixture / mounting		Retaining plate for mounting in the switch cabinet
Processor		Cortex A72 (up to 1.5 Ghz), 4 cores
Working storage		LPDDR4 / 4 GB
Start-up time		< 20 s
Typical buffer time (at rated power)		10 s
Removable disk	Type	MicroSD
	Capacity	32 GB, contains customer-specific, project-specific configuration
eMMC		16 GB, contains operating system
Real Time Clock battery		CR2032
Cooling		Without fan
Transport / storage temperature		-20 °C - +70 °C
Operating system		TOX <sup>®</sup> OperatingSystem: hardened Linux <sup>®</sup> system
Fieldbus options		Profinet, Ethernet/IP, EtherCAT

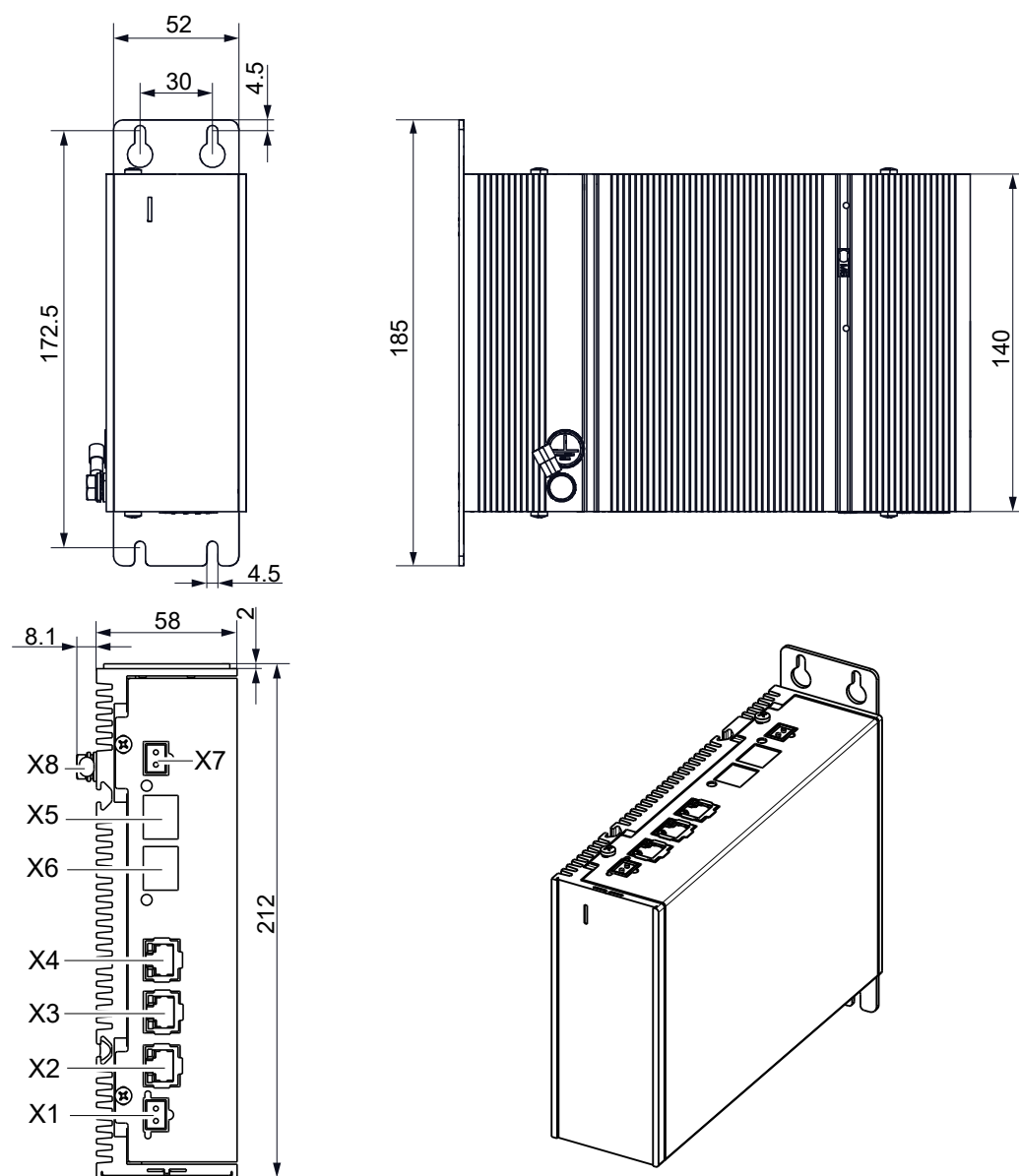
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## Connection allocation

Designation	Model	Function	Pin allocation
X1 Power	Phoenix MSTBA Raster 5.08.	Power IN, buffered internally (UPS)	<ul style="list-style-type: none"> <li>Pin 1 = 24 V</li> <li>Pin 2 = GND</li> </ul>
X2 EtherCAT Master	RJ45	Max. 100 Mbit	<ul style="list-style-type: none"> <li>Pin 1 = TD+</li> <li>Pin 2 = RD+</li> <li>Pin 3 = TD-</li> <li>Pin 4 = -</li> <li>Pin 5 = -</li> <li>Pin 6 = RD-</li> <li>Pin 7 = -</li> <li>Pin 8 = -</li> </ul>
X3 Ethernet TOX <sup>®</sup>	RJ45	Max. 1 Gbit, communication with TOX <sup>®</sup> software/HMI, buffered (UPS)	See pin allocation X2
X4 Ethernet (customer)	RJ45	Max. 100 Mbit, for free use, DHCP preset	See pin allocation X2
X5 Fieldbus In	RJ45	Optional Profinet, Ethernet/IP, EtherCAT Realtime Ethernet Port A	See pin allocation X2
X6 Fieldbus Out	RJ45	Optional Profinet, Ethernet/IP, EtherCAT Realtime Ethernet Port B	See pin allocation X2
X7 Power	Phoenix MSTBA Raster 5.08.	External fieldbus power to maintain switch functionality X5 + X6	<ul style="list-style-type: none"> <li>Pin 1 = 24 V</li> <li>Pin 2 = GND</li> </ul>
X8 PE	M6		

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## Dimensions



Mounting instructions and installation distances can be found in our operating instructions.

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## System overview

