

## DATA SHEET

## TECHNICAL DATA



Housing dimensions	102,5 x 52 x 132,4 mm
Housing type	DIN rail housing (for DIN rail version EN 50022)
Housing material	Anodized Aluminum
Weight	approx. 235 g / 278 g (incl. connectors)
Protection class	IP20 / NEMA Class 1
Power Supply	9 30.0 V DC
Max. Power consumption	18 W (incl. 1 x 1000 mA USB load)
Approved operating temperature	-25 +55 °C
Approved storage temperature	-40 + 85°C
Max. relative humidity (at 40°C)	Up to 93% (non-condensing)
Interfaces	1 x USB A Gen 1
	4 x RJ45 Gbit Ethernet
	2 x RS485 screw-type terminal with ground
	1 x Micro-USB (solely for factory programming)
	1 x HDMI 2.0a (4K)
	1 x RP-SMA socket for connecting an external WLAN/BT antenna (2.4 / 5 GHz)
Connectors	2 x 3-pole screw-type terminal for RS485 (opto isolated)
	1 x 8-pole screw-type terminal for relay contact and signal input (opto isolated)

Processor cooling Passive (chassis)  RAM 2GB LPDDR4-3200 SDRAM with EEC (option for 1GB,4GB or 3GB)  Flash memory 8GB eMMC flash memory (options for 16GB or 32GB)  WLAN / Bluetooth Certified Radio Module 2.4 GHz IEEE 802.11 b/g/n/ ac wireless with Access Point dual function, Bluetooth 5.0, BLE  Antenna Embedded or External with electronic switching  UPS Embedded SuperCAPS UPS (up to 30 sec.)  Embedded PLC User Programmable RP2040 Dual Core Microcontroller with RS485 access  Crypto Chip Crypto Chip Corypto C		1 x 2-pole screw-type terminal for WAN On/Off control
Processor cooling Passive (chassis)  RAM 2GB LPDDR4-3200 SDRAM with EEC (option for 16B,4GB or 8GB)  Flash memory 8GB eMMC flash memory (options for 16GB or 32GB)  WLAN / Bluetooth Certified Radio Module 2.4 GHz IEEE 802.11 b/g/n/ ac wireless with Access Point dual function. Bluetooth 5.0, BLE  Antenna Embedded or External with electronic switching  UPS Embedded SuperCAPS UPS (up to 30 sec.)  Embedded PLC User Programmable RP2040 Dual Core Microcontroller with RS485 access  Crypto Chip ECDH (Elliptic Curve Diffie Hellman) security protocol and ECDSA (Elliptic Curve Digital Signature Algorithm) sign-verify authentication with integrated AES hardware accelerator, ECC P256 (ECDH and ECDSA), SHA256, AES-3GM, Internal high-quality EiPS 800-99 A/B/C Random Number Generator (RNC)  USD Card Slot External slot (up to 128Gb disk expansion) with electronic on/off switch  M2 Internal Slot GSM/2G/3G/4G/5G modern with external uSIMM Slot with electronic on/off switch  Display Programmable TFT 0.96 Color Display  Ethernet Switch 3 Ports Gigabit IEEE 1588 Managed Ethernet Switch (Operating System Independent) with electronic on/off switch  1 Gigabit Ethernet PHY supporting IEEE 1588  WAN Port control Electronic on/off switch Hardware on/off terminal  Hardware Button Firmware programmable RGB Led  Electrical Protection Short Circuit, Polarity Inversion protected power connector  EMC interference emission According to IEC 61000-6-4 Emission standard for industrial environments  EMC interference resistance According to IEC 61000-6-2 Immunity standard for	Processor	Broadcom BCM2711, quad-core Arm Cortex-A72
PAM 2GB LPDDR4-2200 SDRAM with EEC (option for 1GB,4GB or 8GB)  Flash memory 8GB eMMC flash memory (options for 16GB or 32GB)  WLAN / Bluetooth Certified Radio Module 2.4 GHz IEEE 802.11 b/g/n/ ac wireless with Access Point dual function. Bluetooth 5.0, BLE  Antenna Embedded or External with electronic switching  UPS Embedded SuperCAPS UPS (up to 30 sec.)  Embedded PLC User Programmable RP2040 Dual Core Microcontroller with RS485 access  Crypto Chip ECDH (Elliptic Curve Diffie Hellman) security protocol and ECDSA (Elliptic Curve Digital Signature Algorithm) sign-verify authentication with integrated AES hardware accelerator, ECC P256 (ECDH and ECDSA), SHA256, AES-GOM, Internal high-quality FIPS 800-90 A/B/C Random Number Generator (RNG)  uSD Card Slot External slot (up to 128Gb disk expansion) with electronic on/off switch  M2 Internal Slot GSM/2G/3G/4G/5G modem with external uSIMM Slot with electronic on/off switch  Display Programmable TFT 0.96 Color Display  Ethernet Switch 3 Ports Gigabit IEEE 1588 Managed Ethernet Switch (Operating System Independent) with electronic on/off switch  1 Gigabit Ethernet PHY supporting IEEE 1588  WAN Port control Electronic on/off switch  Hardware on/off terminal  Hardware Button Firmware programmable external button  ED Firmware programmable RGB Led  Electrical Protection Short Circuit, Polarity Inversion protected power connector  EMC interference emission According to IEC 61000-6-4 Emission standard for industrial environments	Clock rate	1.5 GHz
IGB,4GB or 8GB)  Flash memory  8GB eMMC flash memory (options for 16GB or 32GB)  WLAN / Bluetooth  Certified Radio Module 2.4 GHz IEEE 802.11 b/g/n/ ac wireless with Access Point dual function, Bluetooth 5.0, BLE  Antenna  Embedded or External with electronic switching  UPS  Embedded SuperCAPS UPS (up to 30 sec.)  Embedded PLC  User Programmable RP2040 Dual Core Microcontroller with RS485 access  Crypto Chip  ECDH (Elliptic Curve Diffie Hellman) security protocol and ECDSA (Elliptic Curve Digital Signature Algorithm) sign-verify authentication with integrated AES hardware accelerator, ECC P256 (ECDH and ECDSA), SHA256, AES-GCM, Internal high-quality FIPS 800-90 A/B/C Random Number Generator (RNG)  uSD Card Slot  External slot (up to 128Gb disk expansion) with electronic on/off switch  GSM/2G/3G/4G/5G modern with external uSIMM Slot with electronic on/off switch  Display  Programmable TFT 0.96 Color Display  Ethernet Switch  3 Ports Gigabit IEEE 1588 Managed Ethernet Switch (Operating System Independent) with electronic on/off switch  1 Gigabit Ethernet PHY supporting IEEE 1588  WAN Port control  Electronic on/off switch  Hardware on/off terminal  Hardware Button  Firmware programmable RGB Led  Electrical Protection  Short Circuit, Polarity Inversion protected power connector  EMC interference emission  According to IEC 61000-6-4 Emission standard for industrial environments  EMC interference resistance  According to IEC 61000-6-2 Immunity standard for	Processor cooling	Passive (chassis)
WLAN / Bluetooth  Certified Radio Module 2.4 GHz IEEE 802.11 b/g/n/ ac wireless with Access Point dual function, Bluetooth 5.0, BLE  Antenna  Embedded or External with electronic switching  UPS  Embedded SuperCAPS UPS (up to 30 sec.)  Embedded PLC  User Programmable RP2040 Dual Core Microcontroller with RS485 access  Crypto Chip  ECDH (Elliptic Curve Diffie Hellman) security protocol and ECDSA (Elliptic Curve Digital Signature Algorithm) sign-verify authentication with integrated AES hardware accelerator, ECC P256 (ECDH and ECDSA), SHA256, AES-GCM, Internal high-quality FIPS 800-90 A/B/C Random Number Generator (RNG)  uSD Card Slot  External slot (up to 128Gb disk expansion) with electronic on/off switch  M2 Internal Slot  GSM/2G/3G/4G/5G modern with external uSIMM Slot with electronic on/off switch  Display  Programmable TFT 0.96 Color Display  Ethernet Switch  3 Ports Gigabit IEEE 1588 Managed Ethernet Switch (Operating System Independent) with electronic on/off switch  1 Gigabit Ethernet PHY supporting IEEE 1588  WAN Port control  Electronic on/off switch  Hardware on/off terminal  Hardware Button  Firmware programmable external button  Electrical Protection  Short Circuit, Polarity Inversion protected power connector  EMC interference emission  According to IEC 61000-6-4 Emission standard for industrial environments	RAM	• •
ac wireless with Access Point dual function, Bluetooth 5.0, BLE  Antenna Embedded or External with electronic switching  UPS Embedded SuperCAPS UPS (up to 30 sec.)  Embedded PLC User Programmable RP2040 Dual Core Microcontroller with RS485 access  Crypto Chip ECDH (Elliptic Curve Diffie Hellman) security protocol and ECDSA (Elliptic Curve Digital Signature Algorithm) sign-verify authentication with integrated AES hardware accelerator, ECC P256 (ECDH and ECDSA), SHA256, AES-GCM, Internal high-quality FIPS 800-90 A/B/C Random Number Generator (RNG)  uSD Card Slot External slot (up to 128Gb disk expansion) with electronic on/off switch  M2 Internal Slot GSM/2G/3G/4G/5G modern with external uSIMM Slot with electronic on/off switch  Display Programmable TFT 0.96 Color Display  Ethernet Switch 3 Ports Gigabit IEEE 1588 Managed Ethernet Switch (Operating System Independent) with electronic on/off switch  1 Gigabit Ethernet PHY supporting IEEE 1588  WAN Port control Electronic on/off switch  Hardware on/off terminal  Hardware Button Firmware programmable external button  LED Firmware programmable RGB Led  Electrical Protection Short Circuit, Polarity Inversion protected power connector  EMC interference emission According to IEC 61000-6-2 Immunity standard for industrial environments	Flash memory	- · · · · · · · · · · · · · · · · · · ·
UPS Embedded SuperCAPS UPS (up to 30 sec.)  Embedded PLC User Programmable RP2040 Dual Core Microcontroller with RS485 access  Crypto Chip ECDH (Elliptic Curve Diffie Hellman) security protocol and ECDSA (Elliptic Curve Digital Signature Algorithm) sign-verify authentication with integrated AES hardware accelerator, ECC P256 (ECDH and ECDSA), SHA256, AES-GCM, Internal high-quality FIPS 800-90 A/B/C Random Number Generator (RNG)  uSD Card Slot External slot (up to 128Gb disk expansion) with electronic on/off switch  M2 Internal Slot GSM/2G/3G/4G/5G modem with external uSIMM Slot with electronic on/off switch  Display Programmable TFT 0.96 Color Display  Ethernet Switch 3 Ports Gigabit IEEE 1588 Managed Ethernet Switch (Operating System Independent) with electronic on/off switch  1 Gigabit Ethernet PHY supporting IEEE 1588  WAN Port control Electronic on/off switch  Hardware on/off terminal  Hardware Button Firmware programmable external button  LED Firmware programmable RGB Led  Electrical Protection Short Circuit, Polarity Inversion protected power connector  EMC interference emission According to IEC 61000-6-4 Emission standard for industrial environments  EMC interference resistance According to IEC 61000-6-2 Immunity standard for	WLAN / Bluetooth	ac wireless with Access Point dual function,
Embedded PLC  User Programmable RP2040 Dual Core Microcontroller with RS485 access  Crypto Chip  ECDH (Elliptic Curve Diffie Hellman) security protocol and ECDSA (Elliptic Curve Digital Signature Algorithm) sign-verify authentication with integrated AES hardware accelerator, ECC P256 (ECDH and ECDSA), SHA256, AES-GCM, Internal high-quality FIPS 800-90 A/B/C Random Number Generator (RNG)  uSD Card Slot  External slot (up to 128Gb disk expansion) with electronic on/off switch  M2 Internal Slot  GSM/2G/3G/4G/5G modem with external uSIMM Slot with electronic on/off switch  Display  Programmable TFT 0.96 Color Display  Ethernet Switch  3 Ports Gigabit IEEE 1588 Managed Ethernet Switch (Operating System Independent) with electronic on/off switch  1 Gigabit Ethernet PHY supporting IEEE 1588  WAN Port control  Electronic on/off switch  Hardware on/off terminal  Hardware Button  Firmware programmable RGB Led  Electrical Protection  Short Circuit, Polarity Inversion protected power connector  EMC interference emission  According to IEC 61000-6-4 Emission standard for industrial environments	Antenna	Embedded or External with electronic switching
Microcontroller with RS485 access  Crypto Chip  ECDH (Elliptic Curve Diffie Hellman) security protocol and ECDSA (Elliptic Curve Digital Signature Algorithm) sign-verify authentication with integrated AES hardware accelerator, ECC P256 (ECDH and ECDSA), SHA256, AES-GCM, Internal high-quality FIPS 800-90 A/B/C Random Number Generator (RNG)  uSD Card Slot  External slot (up to 128Gb disk expansion) with electronic on/off switch  M2 Internal Slot  GSM/2G/3G/4G/5G modem with external uSIMM Slot with electronic on/off switch  Display  Programmable TFT 0.96 Color Display  Ethernet Switch  3 Ports Gigabit IEEE 1588 Managed Ethernet Switch (Operating System Independent) with electronic on/off switch  1 Gigabit Ethernet PHY supporting IEEE 1588  WAN Port control  Electronic on/off switch  Hardware on/off terminal  Hardware Button  Firmware programmable external button  LED  Firmware programmable RGB Led  Electrical Protection  Short Circuit, Polarity Inversion protected power connector  EMC interference emission  According to IEC 61000-6-4 Emission standard for industrial environments	UPS	Embedded <b>SuperCAPS</b> UPS (up to 30 sec.)
protocol and ECDSA (Elliptic Curve Digital Signature Algorithm) sign-verify authentication with integrated AES hardware accelerator, ECC P256 (ECDH and ECDSA), SHA256, AES-GCM, Internal high-quality FIPS 800-90 A/B/C Random Number Generator (RNG)  uSD Card Slot External slot (up to 128Gb disk expansion) with electronic on/off switch  M2 Internal Slot GSM/2G/3G/4G/5G modem with external uSIMM Slot with electronic on/off switch  Display Programmable TFT 0.96 Color Display  Ethernet Switch 3 Ports Gigabit IEEE 1588 Managed Ethernet Switch (Operating System Independent) with electronic on/off switch  1 Gigabit Ethernet PHY supporting IEEE 1588  WAN Port control Electronic on/off switch  Hardware on/off terminal  Hardware Button Firmware programmable external button  LED Firmware programmable RGB Led  Electrical Protection Short Circuit, Polarity Inversion protected power connector  EMC interference emission According to IEC 61000-6-4 Emission standard for industrial environments  EMC interference resistance According to IEC 61000-6-2 Immunity standard for	Embedded PLC	<u> </u>
electronic on/off switch  M2 Internal Slot  M3 Internal Slot  M5 Internal Slot  M6 Internal Slot  M7 Internal Slot  M8 Internal Slot  M8 Internal Slot  M8 Internal Slot  M8 Internal Slot  M9 Internal Slot  M8 Programmable TFT 0.96 Color Display  Bethernet Switch  3 Ports Gigabit IEEE 1588 Managed Ethernet Switch (Operating System Independent) with electronic on/off switch  1 Gigabit Ethernet PHY supporting IEEE 1588  WAN Port control  Electronic on/off switch  Hardware on/off terminal  Hardware Button  Firmware programmable external button  LED  Firmware programmable RGB Led  Electrical Protection  Short Circuit, Polarity Inversion protected power connector  EMC interference emission  According to IEC 61000-6-4 Emission standard for industrial environments  EMC interference resistance  According to IEC 61000-6-2 Immunity standard for	Crypto Chip	protocol and ECDSA (Elliptic Curve Digital Signature Algorithm) sign-verify authentication with integrated AES hardware accelerator, ECC P256 (ECDH and ECDSA), SHA256, AES-GCM, Internal high-quality FIPS 800-90 A/B/C Random Number
Slot with electronic on/off switch  Display Programmable TFT 0.96 Color Display  Ethernet Switch 3 Ports Gigabit IEEE 1588 Managed Ethernet Switch (Operating System Independent) with electronic on/off switch  1 Gigabit Ethernet PHY supporting IEEE 1588  WAN Port control Electronic on/off switch  Hardware on/off terminal  Hardware Button Firmware programmable external button  LED Firmware programmable RGB Led  Electrical Protection Short Circuit, Polarity Inversion protected power connector  EMC interference emission According to IEC 61000-6-4 Emission standard for industrial environments  EMC interference resistance According to IEC 61000-6-2 Immunity standard for	uSD Card Slot	` ' '
Ethernet Switch  3 Ports Gigabit IEEE 1588 Managed Ethernet Switch (Operating System Independent) with electronic on/off switch  1 Gigabit Ethernet PHY supporting IEEE 1588  WAN Port control  Electronic on/off switch  Hardware on/off terminal  Hardware Button  Firmware programmable external button  LED  Firmware programmable RGB Led  Electrical Protection  Short Circuit, Polarity Inversion protected power connector  EMC interference emission  According to IEC 61000-6-4 Emission standard for industrial environments  EMC interference resistance  According to IEC 61000-6-2 Immunity standard for	M2 Internal Slot	
Switch (Operating System Independent) with electronic on/off switch  1 Gigabit Ethernet PHY supporting IEEE 1588  WAN Port control Electronic on/off switch Hardware on/off terminal  Hardware Button Firmware programmable external button  LED Firmware programmable RGB Led  Electrical Protection Short Circuit, Polarity Inversion protected power connector  EMC interference emission According to IEC 61000-6-4 Emission standard for industrial environments  EMC interference resistance According to IEC 61000-6-2 Immunity standard for	Display	Programmable TFT 0.96 Color Display
WAN Port control  Electronic on/off switch  Hardware on/off terminal  Hardware Button  Firmware programmable external button  ED  Firmware programmable RGB Led  Short Circuit, Polarity Inversion protected power connector  EMC interference emission  According to IEC 61000-6-4 Emission standard for industrial environments  EMC interference resistance  According to IEC 61000-6-2 Immunity standard for	Ethernet Switch	Switch (Operating System Independent) with
Hardware on/off terminal  Hardware Button  Firmware programmable external button  Firmware programmable RGB Led  Short Circuit, Polarity Inversion protected power connector  EMC interference emission  According to IEC 61000-6-4 Emission standard for industrial environments  EMC interference resistance  According to IEC 61000-6-2 Immunity standard for		1 Gigabit Ethernet PHY supporting IEEE 1588
Hardware Button  ED  Firmware programmable external button  Firmware programmable RGB Led  Short Circuit, Polarity Inversion protected power connector  EMC interference emission  According to IEC 61000-6-4 Emission standard for industrial environments  EMC interference resistance  According to IEC 61000-6-2 Immunity standard for	WAN Port control	Electronic on/off switch
LED Firmware programmable RGB Led  Short Circuit, Polarity Inversion protected power connector  EMC interference emission According to IEC 61000-6-4 Emission standard for industrial environments  EMC interference resistance According to IEC 61000-6-2 Immunity standard for		Hardware on/off terminal
Electrical Protection  Short Circuit, Polarity Inversion protected power connector  EMC interference emission  According to IEC 61000-6-4 Emission standard for industrial environments  EMC interference resistance  According to IEC 61000-6-2 Immunity standard for	Hardware Button	Firmware programmable external button
EMC interference emission  According to IEC 61000-6-4 Emission standard for industrial environments  EMC interference resistance  According to IEC 61000-6-2 Immunity standard for	LED	Firmware programmable RGB Led
industrial environments  EMC interference resistance  According to IEC 61000-6-2 Immunity standard for	Electrical Protection	· · · · · · · · · · · · · · · · · · ·
, , , , , , , , , , , , , , , , , , ,	EMC interference emission	
	EMC interference resistance	· · · · · · · · · · · · · · · · · · ·

Mean time between failures (MTBF) at 25 °C	32.4 years
Mean time between failures (MTBF) at 50 $^{\circ}\text{C}$	22.9 years
Conformity	CE, UKCA
Production	Made in Italy



contact@cyberstone.it www.cyberstone.it