

MCU0x48M4-OLED

Monitoring Control Unit with OLED
display



DISCOVER →

MCU0x48M4 OLED

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OLED display



Smart, Hot-swappable and Seamless Power Monitoring

The **MCU0x48-OLED** is a microcontroller-based monitoring system designed for **telecommunications** power systems using 300W and 1000W rectifiers. It enables the **monitoring** and **control** of up to 4 rectifiers (up to 9 when integrated with the COMPAS platform), one battery string, and power distribution within a 1U to 2U power shelf, depending on the number of rectifiers installed.

This controller is a **hot-pluggable, hot-swappable** unit that fits into a 1U slot alongside the rectifier modules. It integrates **COMPAS**, providing advanced monitoring capabilities via Ethernet or USB.

Additionally, it supports interoperability with **CAN bus-connected** peripherals and equipment, such as cabinet security systems and environmental management devices.

Specifications

Electrical

Input	Input DC Voltage	48 Vdc (-15%, +20%)
	Starting Voltage	36 V
	Source Power	15 W max
Output USB-A	Voltage	5 V (+/- 0.25 V)
	Current Nominal	500 mA
	Current Max	600 mA

Mechanical

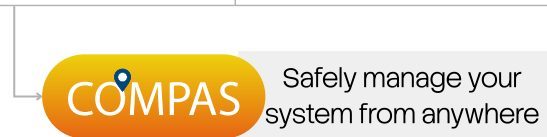
Dimensions	85.9 mm x 217.3 mm x 40.7 mm (1U)
Weight (g)	200

Part Number

9413 060 10161	Monitoring Control Unit on a 1 U height (with OLED screen)
9413 060 10171	Monitoring Control Unit on a 0.5U height (no screen)

Features

Communication Interface	<ul style="list-style-type: none"> Ethernet 10/100 Mbit USB PC USB A for extra devices CAN
Controller I/O	<ul style="list-style-type: none"> DC Bus Voltage Battery Current Battery Temperature Rectifier Status 4 Digital Inputs 4 potential free relays (NO/NC)
Battery Management	<ul style="list-style-type: none"> Current Limitation Temperature Compensation Battery test Capacity Estimation ...
4 Relay for digital output	max 60 VDC (42 VAC) max 1 A (per contact)
Digital inputs	4 digital inputs for external dry contacts monitoring
Customization	<ul style="list-style-type: none"> Specific configuration Python Scripting Specific alarming



Standards

Safety	CEBEC markings IEC 62368-1 IEC 62368-3 (USB power)
Environment	RoHS compliant
EMC (inside related shelves)	EN 61000-6-1 ETSI EN300386 EN 61000-6-3
Global Approvals	CE and CEBEC marked US and CAN checked

Environmental

Temperature Operation	-40 to +70 °C
Humidity Operating	20 to 80% RH non-condensing
Humidity Operating Option	up to 95% with coating
Humidity Storage	10 to 95% RH non-condensing

Mechanical dimensions

Switch PIN 1:

OFF = configuration with modules **ECOR0348TN** (300W)
ON = configuration with modules **ECOR1048TN** or **CDCWI/1048TN**

Switch PIN 2:

OFF = normal configuration
ON = BEZEQ configuration

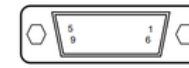
Switch PIN 3:

Not used. **OFF** by default

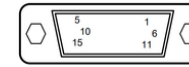
Connectors to rack backplane

CAPTIN 100BW

1	NC
2	CAN L
3	0V signal
4	-48V
5	0V
6	0V signal
7	CAN H
8	NC
9	NC

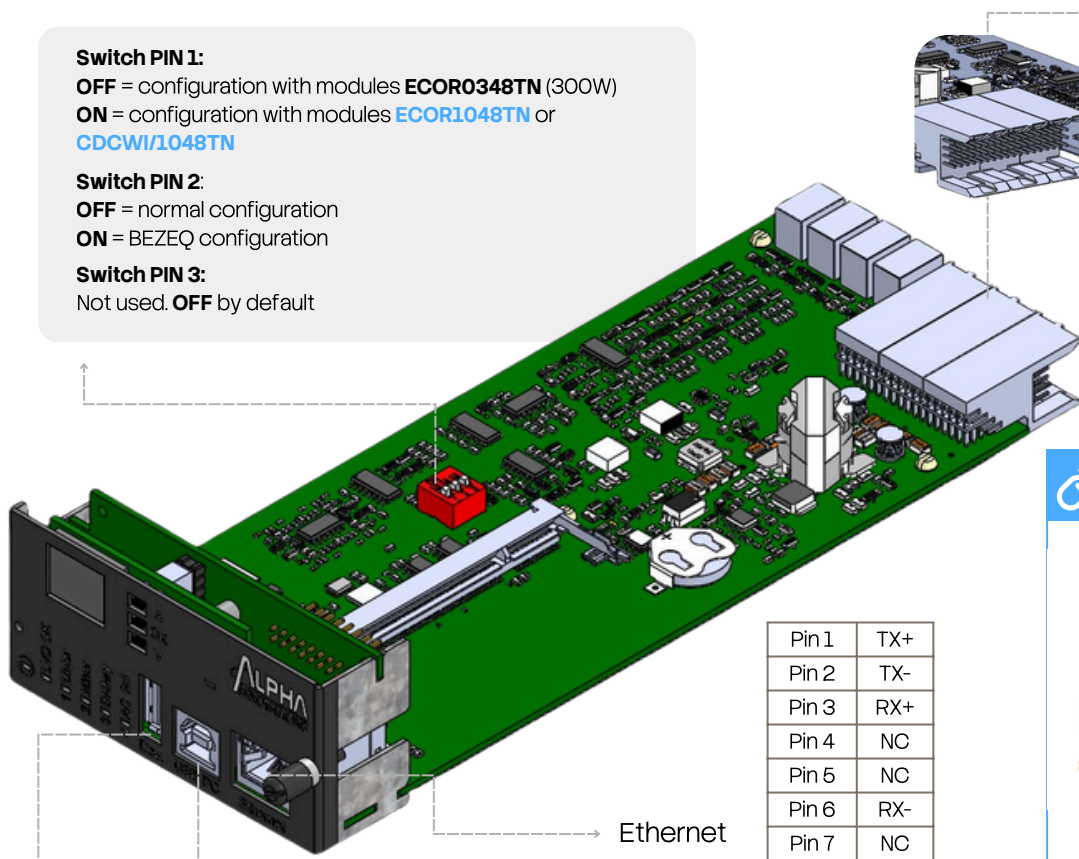


CAN connector



I/O connector

1	Digital output 1 NO
2	Digital output 2 NO
3	Digital output 3 NO
4	Digital output 4 NO
5	Digital input 3
6	Digital output 1 COM
7	Digital output 2 COM
8	Digital output 3 COM
9	Digital output 4 COM
10	0V signal
11	Digital output 1 NC
12	Digital output 2 NC
13	Digital output 3 NC
14	Digital output 4 NC
15	Digital input 4



Pin 1	TX+
Pin 2	TX-
Pin 3	RX+
Pin 4	NC
Pin 5	NC
Pin 6	RX-
Pin 7	NC
Pin 8	NC

Ethernet

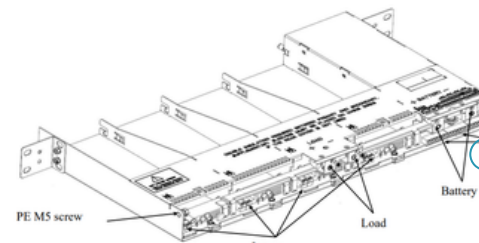
USB A
(External device extension)

USB B
(Local COMPAS connexion)

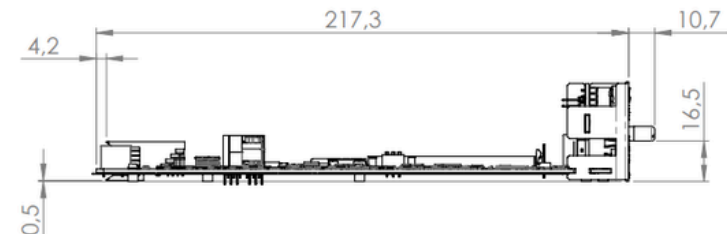
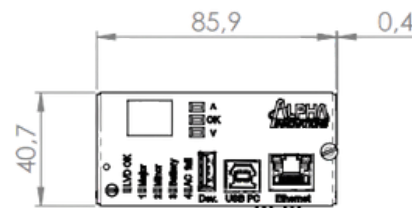
Pin 1	Power for external device
Pin 2	USB_N
Pin 3	USB_P
Pin 4	GROUND

Do not hot-plug USB A

ACE 104, ACE 102, ACE300FA

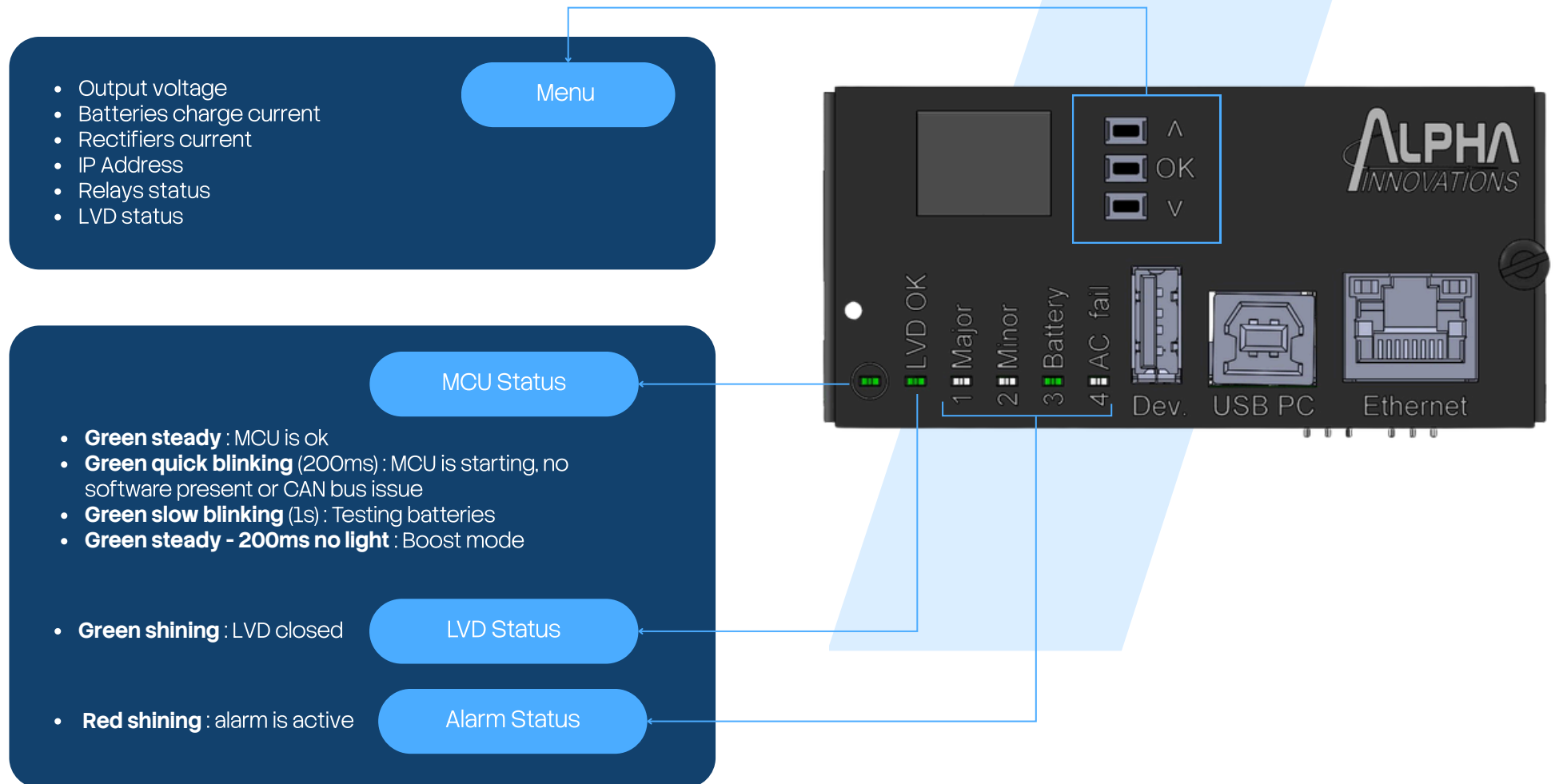


#	Name
X125.1	-48V sense
.2	0V sense
.3	0V signal
.4	TH sensor
.5	DIGIN1
.6	DIGIN2
.7	CAN H
.8	CAN L
X126.1	DIGIN3
.2	DIGIN4
.3	Dig_Out1_com
.4	Dig_Out1_no
.5	Dig_Out1_nc
.6	Dig_Out2_com
.7	Dig_Out2_no
.8	Dig_Out2_nc
X127.1	Dig_Out3_com
.2	Dig_Out3_no
.3	Dig_Out3_nc
.4	Dig_Out4_com
.5	Dig_Out4_no
.6	Dig_Out4_nc
.7	Uprog
.8	Sharing



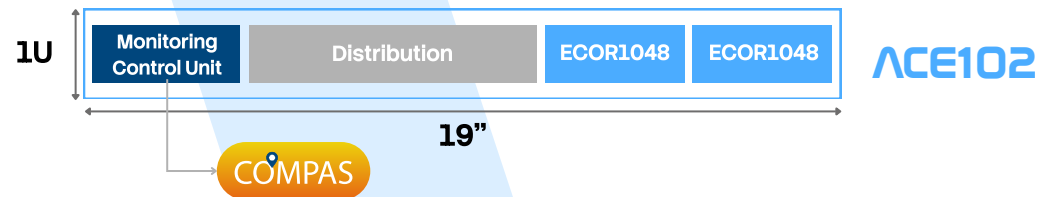
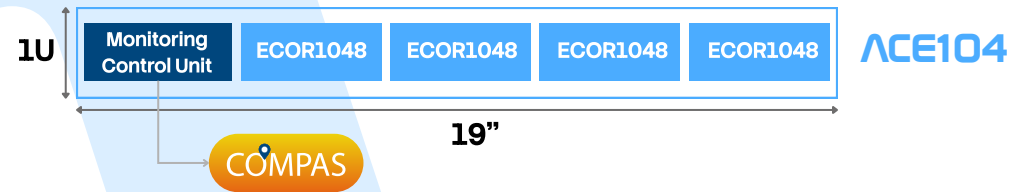
Oled screen control

Information displayed



Related items

Modular & Configurable Power Racks



ACE Shelves Series

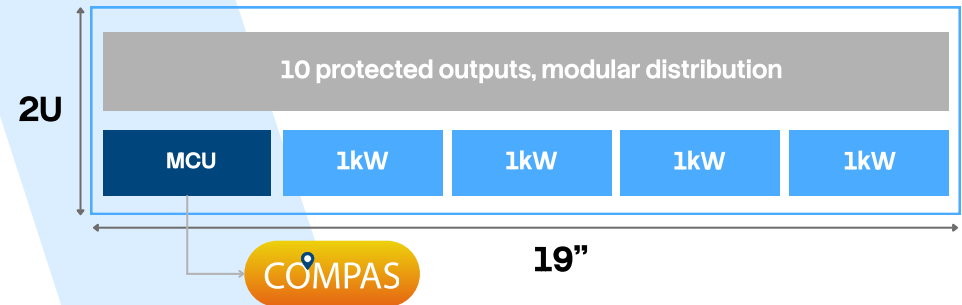
The **ACE Series** is a compact line of 19" power racks from Alpha Innovations, with full front access, hot-swappable rectifiers, advanced monitoring, and flexible battery management, ideal for space-constrained, high-reliability applications.

Related items

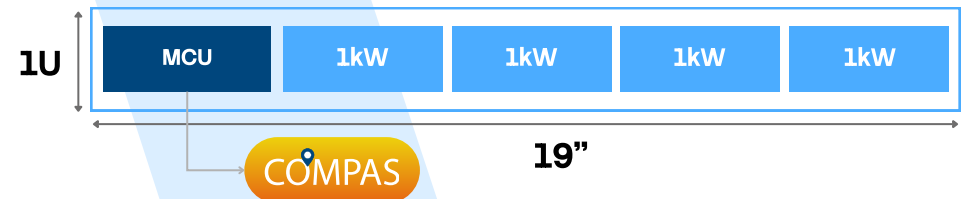
Combining power supplies and distribution



CAPTIN1000BW



CAPTIN300FA



CAPTIN Shelves Series

The CAPTIN Series is an integrated line of 2U - 19" power racks from Alpha Innovations, designed for outdoor telecom cabinets. Delivering up to 4000W, it integrates power conversion, distribution, and advanced monitoring

More info ?

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