



MA01 SkyBox Product Specifications

SKU: MA01-EP, MA01-EP-WBNA V1.1 - 5.6.26

Modbus/BACnet to CTA-2045

- Provides a certified CTA-2045 Level 2 EcoPort to any machine with Modbus or communications and ability to request increase or curtailment of energy consumption
- Can provide CA Title 24 JA13 compliance for previously noncompliant systems
- Ethernet port for Modbus TCP (adapter available for Modbus RTU - Accessory 2)

Communication Pathways

- Standard communication via ethernet (RJ45) port to network switch
- Optionally equipped with a CAT-1 cellular communications modem for direct cellular access to equipment

Certifications:

FCC Certified

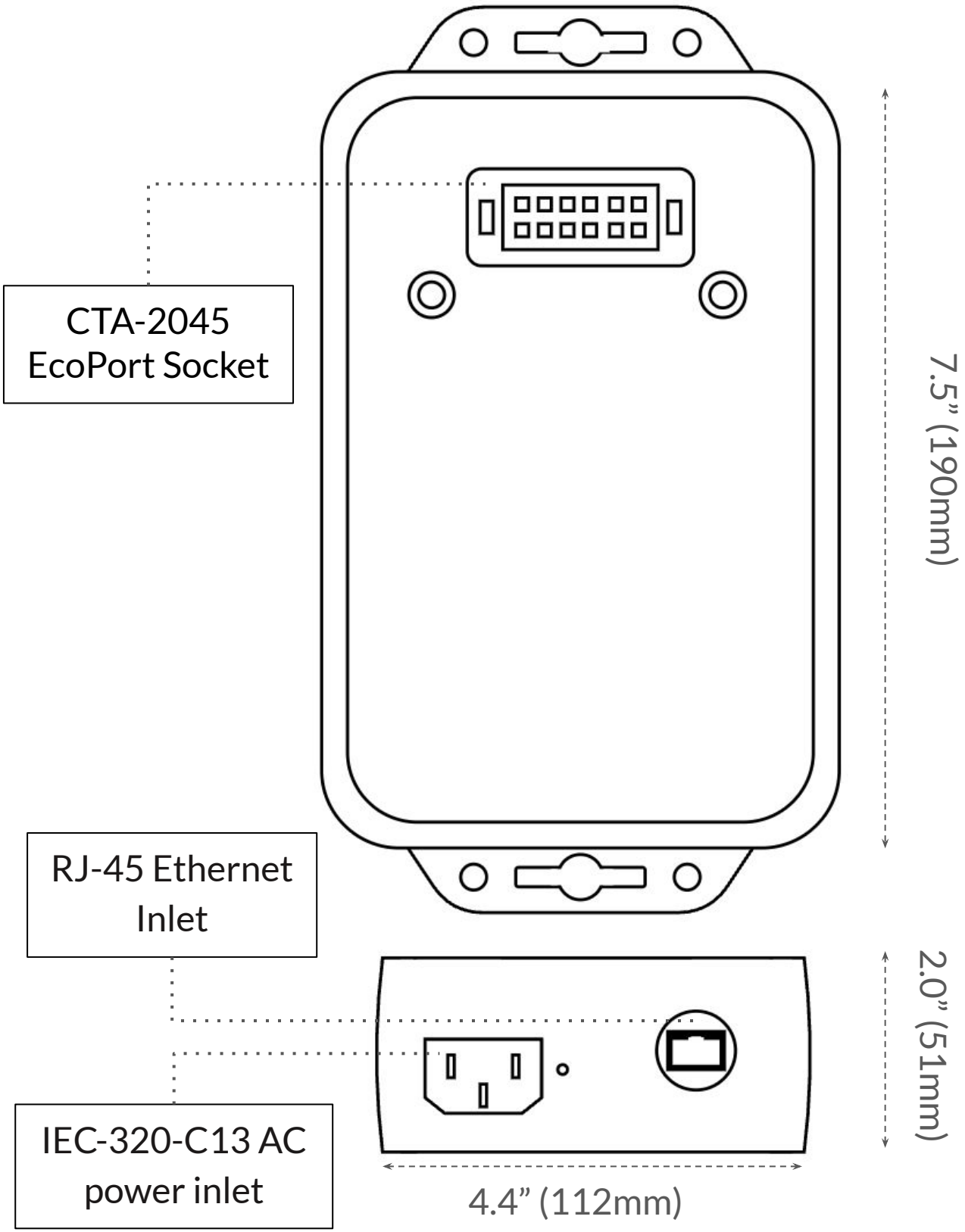
- Complies with Part 15 of FCC Rules (RF devices)

UL Certified

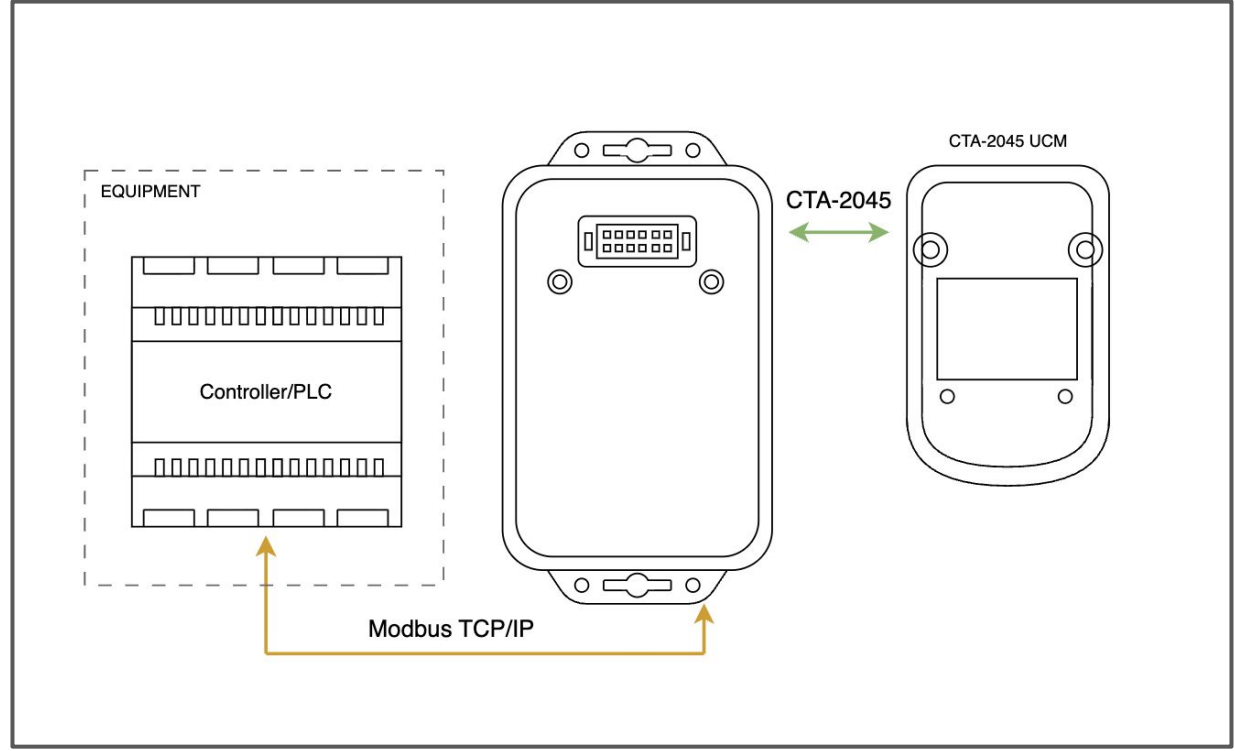
- Energy Management Equipment, E534126

Security:

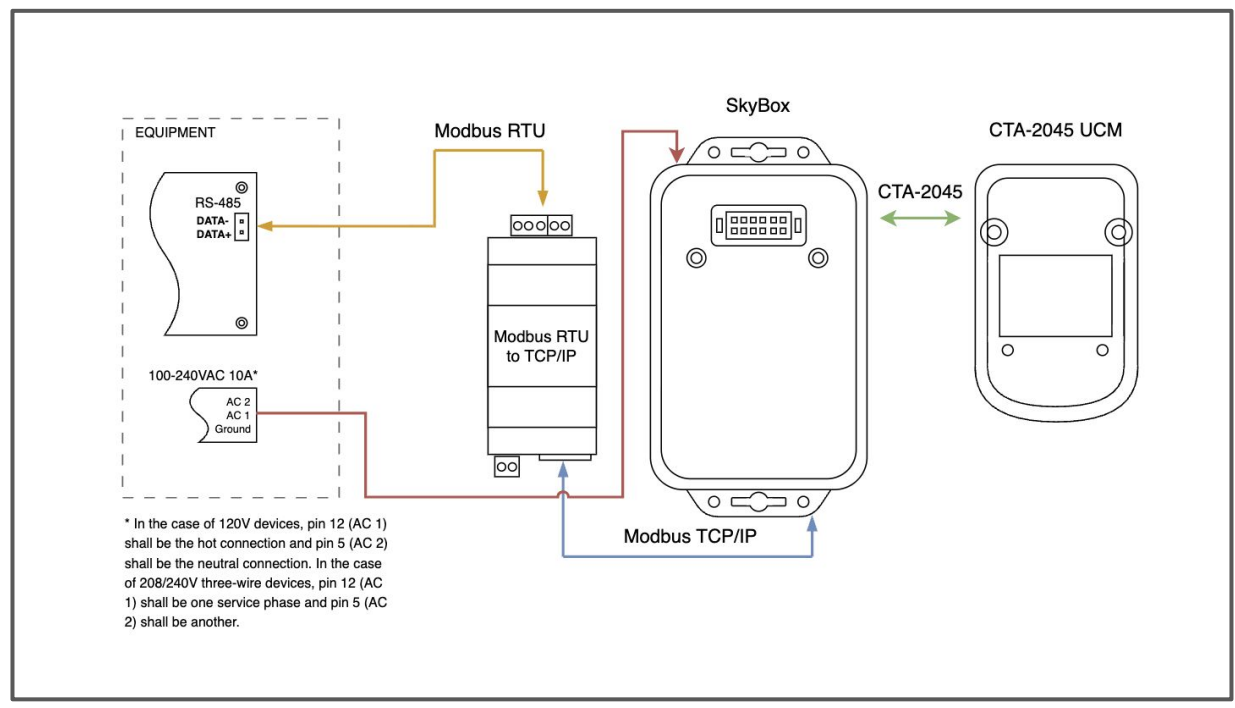
- TLS/SSL device to cloud
- VPN from cellular carrier to cloud



Modbus TCP/IP



Modbus RTU



Technical Specifications:	
UL File	E533642
UL Category	Energy Management Equipment Accessory - UL 916
Enclosure	NEMA Type 1, Indoor
Operating Temperature	-20°C to +50°C
Electrical Ratings	
Input Voltage	110–240 Vac, 60 Hz
Maximum Input Power	10 W
Power Supply	AC-DC isolated, 5 Vdc SELV
Maximum Voltage	240 Vac (277 Vac component rated)
Terminal Pinouts	
Power Input (J4)	Appliance Inlet
CTA-2045 RS485	Pin 1 RS485_P, Pin 7 RS485_N, Pin 8 GND
CTA-2045 Power	Pin 5 L1, Pin 12 L2, Pin 10 Ground
Ethernet	J1 - SELV 5 Vdc

Accessory 1: Cellular Communications Card

Category	Specification
SKU Availability:	MA01-EP-WBNA
Product Type	Cellular IoT system-on-module (SOM) acting as a device-to-cloud data pump
Primary Connectivity	LTE Cat-1
Fallback Connectivity	WCDMA (3G), GSM/EDGE (2G)
Target Region	North America (U.S., Canada, Mexico)
Data Transport Model	JSON-based message exchange between host MCU and cloud
Host Interfaces	I2C, UART (Serial), USB
Security	Integrated secure provisioning and encrypted data transport

Accessory 2: Modbus RTU adapter

Category	Specification
Product Type	Serial server, Modbus gateway, MQTT gateway
Basic Function	Bi-directional transparent data transmission between RS485 and Ethernet
Power Supply	9-24VDC screw-down terminal
Communication	Ethernet Network port to RS485
Communication Method	TCP/IP direct communication, VCOM
Operating Mode	TCP Server, TCP Client (coexisting with TCP server), UDP, UDP multicast
Operating Temperature	-40°C - 85°C
Dimensions	87 x 36 x 59 mm