carbonTRACK®
INTELLIGENT ENERGY MANAGEMENT

Smart Gateway

Energy Management & IoT Gateway

Intelligent energy system

With carbonTRACK, you are in control. Welcome to the world of smart energy, where you can monitor, control and optimize how you use, store and share energy – all via an app or online dashboard.

Know your energy usage

Know how much energy you use and produce in real-time. Avoid bill-shock and use carbonTRACK app's bill prediction and comparisons, set bill goals and alerts to implement changes. Control and automate energy usage and save big.

Make the most of your solar system

Rooftop solar systems are a big investment. carbonTRACK shows your solar production, use, and export, and can notify you a fault does occur. For greater ROI for your solar, schedule appliances and circuits to run when the sun is shining and use excess energy to charge your battery or export to grid.

Be future-ready

With a carbonTRACK Smart Gateway, your energy ecosystem can be adjusted based on energy prices and your home automation needs. Control multiple IoT devices from the carbonTRACK app, schedule and automate devices inline to your energy usage, change your preferences in line with your evolving lifestyle.

BENEFITS

- Monitor how much energy your home or business is consuming.
- Control electrical circuits and individual appliances through scheduling or by switching them on/off through the smartphone app or online dashboard.
- Monitor your solar power generation, usage and export.
- Always know your system status with intuitive real-time alerts.

FEATURES

- App & online dashboard
- Big Picture & granular data
- Switch & smart load control
- Reliable, real-time data
- Cellular & Wi-Fi communications
- Solar & Battery maximisation
- Energy Autopilot
- Digital Essential Loads
- Control multiple SunSpec compatible & IoT devices
- ZigBee HA 1.2 compliant
- Google Home connectivity
- Safety & system alerts
- MDT data security

2021-09 CT-EXT-RAD-D-CT200-008

SPECIFICATIONS

Model	CT200-CAT-M1
Performance	LTE CAT-M1 / NB-IoT Power Class 3 +23dBm
Frequency Bands	Full Spectrum Radio
Processor & Memory	• 8-bit AVR Micro-controller with 131 instructions • 12 MHz (External Crystal) • 128KB Flash Memory • 16KB Data Memory • 4KB EEPROM
Radio Frequency ZigBee Power and Standard	2.4GHz Channels 11-26, +10dBm, ZigBee HA 1.2
Radio Frequency Wi-Fi and Power	802.11 b/g/n with WPA/WPA2, 2.4-2.4835 GHz Channels 1-14, +20 dBm
Monitoring Accuracy	2% +/- @ PF 1.0 to 0.6
Input Voltage and Current	100 – 240 V; 200 mA Maximum (Optional; 5 to 24 V DC)
Battery Type, Capacity and Run Time	Lithium ion, 3.7 V/ 1500 mAh, 5.55 Wh, 24 hours
Firmware Upgrade Method	Remote Over the Air (OTA) Firmware Upgradable
Connectors	
Monitoring Current Clamps	x4 (30A to 3000A each)
Circuit Relay Controls	x3 (30A each)
Cellular Antenna	Internal Antennal Cell 2dBi, Optional external antenna via Female SMA
Wi-Fi Antenna	Internal Antenna, Optional external antenna via Female SMA
SIM Socket	SIM / USIM (2FF)
Ethernet Port	10/100 MB Ethernet
RS-485 Port	Supports Half-duplex and Full-duplex
Physical Description	
Dimensions (W x L x H)	7.98” x 10.53” x 2.36” (202.73 mm x 267.45 mm x 60.00 mm)
Weight & Chassis Type	1.54 lbs (0.70 kg), Plastic
Environmental	
Operating Temperature	-20° to +55° C*
Storage Temperature	-40° to +85° C
Relative Humidity	20% to 90%, non-condensing
Warranty	
Warranty Term	12 months
Certifications	
EMC Compliance	SANS 222 / CISPR 22, SANS / IEC 61000-3-3, SANS / IEC 61000-4-2, SANS / IEC 61000-4-3, SANS / IEC 61000-4-4, SANS / IEC 61000-4-5, SANS / IEC 61000-4-6, SANS / IEC 61000-4-8, SANS / IEC 61000-4-11
Radio Compliance	ACMA Section 376 of the Telecommunications Act 1997, AS/CA S042.1: 2011, AS/ACIF S042.3: 2005, ESTI EN 301 908-2 V5.4.1 (2012-12), ESTI EN 301 908-2 V6.2.1 (2013-04)
Safety Compliance	AS/NZS 60950.1: 2011, ANSI/UL 60950-1-2014, CSA/CAN C22.2 No. 60950-1-07, IEC60950-1 / SANS 60950-1, IEC61010-1
Environmental Compliance	SANS 60529: 2013 Ed 1.2/IEC 60529: 2013 Ed2.2+

* Installation in outdoor locations or ambient temperature above 40° C or 70° C has not been evaluated by UL. UL Certification does not apply or extend to use in outdoor applications. Certification does not apply or extend to voltages outside certified range and has not been evaluated by UL for operating voltages beyond tested range.

+When incorporated with the “*CT20E2-010 Outdoor Weatherproof Enclosure*”

GENERAL INFORMATION

Functional Capabilities	
Digital Essential Loads	• Create and manage digital essential loads panel
Green Circuit	• Supports green circuit feature to maximize solar use
Peak Load Management	• Manage peak loads for an entire home
Device Control	• Remote control and monitoring of all appliances in the home
User Configurable Schedules	• User configurable schedule-based control
Data Transmission Protocol	• Secure MDT protocol
Electrical Parameters	
Electrical Phase Monitoring	• Single and three phases (3 phase 4 wire)
Power Direction	• Measures both import and export
Solar Support	• Yes (shareable among total of 3 current clamps)
Monitoring	
Active Power	• Both Watt and Watt-hour in all phases
Apparent Power	• Both VA and VAh in all phases
Power Factor	• Yes (0 to 1 PF) in all phases
Power Direction	• Measures import, export and net powers (kWh)
Product Compatibility	
Electric Hot Water Unit	• Support up to 2 electrical hot water/geysers • Manual control / configurable switch on timers • Peak load timer for efficient heating
Solar Thermal Controller	• Temperature differential based control • Circulation Pump switching based on user configurable upper and lower limits
HVAC (Heating, Venting, and Air-Conditioning)	• Support up to 3 HVAC systems, Temperature based control
Solenoid Valve	• Shut-off valve control for hot water units
ZigBee capability	• On-board ZigBee support
Future Expansion (wired)	• Any device supporting I2C or RS232 communication
Future Expansion (wireless)	• ZigBee router implementation
Relay Control	• Enabled through three (3) onboard relays
Relay Port Voltage and Rated Current	• 12 V DC, 1 A
Relay Output Voltage and Rated Current	• 240 VAC, 30 A
Wireless Device Control	• Enabled through ZigBee
External Sensors	
Voltage Sensor and Type	• 100 V to 240 V line-to-neutral, on-board
Current Sensor and Type	• 60 A standard sensor (60 A to 2000 A options), off-board
Temperature Sensor	• 2 Analog and up to 8 digital, -55 °C to 125 °C
Water Flow Sensor	• 1 Litre/min to 60 Litre/min
Leakage Sensor	• Water leak detector, alert triggered
Earth Fault Alarm	• Supports electrical earth fault leakage

ORDERING INFORMATION

SKU	Description	Region
CT200i-509	CT200 Smart Gateway (CAT-M1 Modem)	All

RECOMMENDED ACCESSORIES

SKU	Description	Region
CT20E2-010	Outdoor Weatherproof Enclosure	All
CTSMPL-750	Smart Plug	All

Go to www.carbonTRACK.com.au for detailed product model numbers.

SERVICE & WARRANTY

carbonTRACK's comprehensive Support Service programs offer a full array of options to suit your specific needs. These services are aimed at protecting your investment and reducing the total cost of ownership.

TECHNICAL SUPPORT SERVICES

At carbonTRACK, we are committed to providing you with a quality service with a high attention to detail. Several options of support are available to choose from.

For additional information on Support Services as well as other service offerings, please contact your carbonTRACK representative or visit www.carbonTRACK.com.au

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