

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
- Connectivity to SunSpec enabled devices
- Switch & smart control
- Reliable, real-time data
- Solar & battery maximisation
- Control multiple IoT devices
- ZigBee HA 1.2 compliant
- Google Home connectivity
- Safety & system alerts
- MDT data security

SPECIFICATIONS

| Model | CT200-CAT-M1 | CT200-3G |
|---|--|---|
| Performance | LTE CAT-M1 / NB-IoT Power Class 3 +23dBm | HSDPA, UMTS, EDGE, GPRS (Class 12), GSM |
| Frequency Bands | Full Spectrum Radio | GPRS/EDGE: 1900/1800/900/850MHz WCDMA: 2100/850MHz |
| Processor & Memory | <ul style="list-style-type: none"> • 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, AS/NZS 60950.1: 2011, ESTI EN 301 908-2 V5.4.1 (2012-12), ESTI EN 301 908-2 V6.2.1 (2013-04) | |
| Safety Compliance | 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.

GENERAL INFORMATION

| Functional Capabilities | |
|---|---|
| Digital Essential Loads | <ul style="list-style-type: none"> Create and manage digital essential loads panel |
| Green Circuit | <ul style="list-style-type: none"> Supports green circuit feature to maximize solar use |
| Peak Load Management | <ul style="list-style-type: none"> Manage peak loads for an entire home |
| Device Control | <ul style="list-style-type: none"> Remote control and monitoring of all appliances in the home |
| User Configurable Schedules | <ul style="list-style-type: none"> User configurable schedule-based control |
| Data Transmission Protocol | <ul style="list-style-type: none"> Secure MDT protocol |
| Electrical Parameters | |
| Electrical Phase Monitoring | <ul style="list-style-type: none"> Single and three phases (3 phase 4 wire) |
| Power Direction | <ul style="list-style-type: none"> Measures both import and export |
| Solar Support | <ul style="list-style-type: none"> Yes (shareable among total of 3 current clamps) |
| Monitoring | |
| Active Power | <ul style="list-style-type: none"> Both Watt and Watt-hour in all phases |
| Apparent Power | <ul style="list-style-type: none"> Both VA and VAh in all phases |
| Power Factor | <ul style="list-style-type: none"> Yes (0 to 1 PF) in all phases |
| Power Direction | <ul style="list-style-type: none"> Measures import, export and net powers (kWh) |
| Product Compatibility | |
| Electric Hot Water Unit | <ul style="list-style-type: none"> Support up to 2 electrical hot water/geysers Manual control / configurable switch on timers Peak load timer for efficient heating |
| Solar Thermal Controller | <ul style="list-style-type: none"> Temperature differential based control Circulation Pump switching based on user configurable upper and lower limits |
| HVAC (Heating, Venting, and Air-Conditioning) | <ul style="list-style-type: none"> Support up to 3 HVAC systems, Temperature based control |
| Solenoid Valve | <ul style="list-style-type: none"> Shut-off valve control for hot water units |
| ZigBee capability | <ul style="list-style-type: none"> On-board ZigBee support |
| Future Expansion (wired) | <ul style="list-style-type: none"> Any device supporting I2C or RS232 communication |
| Future Expansion (wireless) | <ul style="list-style-type: none"> ZigBee router implementation |
| Relay Control | <ul style="list-style-type: none"> Enabled through three (3) onboard relays |
| Relay Port Voltage and Rated Current | <ul style="list-style-type: none"> 12 V DC, 1 A |
| Relay Output Voltage and Rated Current | <ul style="list-style-type: none"> 240 VAC, 30 A |
| Wireless Device Control | <ul style="list-style-type: none"> Enabled through ZigBee |
| External Sensors | |
| Voltage Sensor and Type | <ul style="list-style-type: none"> 100 V to 240 V line-to-neutral, on-board |
| Current Sensor and Type | <ul style="list-style-type: none"> 60 A standard sensor (60 A to 2000 A options), off-board |
| Temperature Sensor | <ul style="list-style-type: none"> 2 Analog and up to 8 digital, -55 °C to 125 °C |
| Water Flow Sensor | <ul style="list-style-type: none"> 1 Litre/min to 60 Litre/min |
| Leakage Sensor | <ul style="list-style-type: none"> Water leak detector, alert triggered |
| Earth Fault Alarm | <ul style="list-style-type: none"> Supports electrical earth fault leakage |

ORDERING INFORMATION

| SKU | Description | Region |
|------------|------------------------------------|--------|
| CT200M-508 | CT200 Smart Gateway (CAT-M1 Modem) | All |
| CT200i-505 | CT200 Smart Gateway (3G Modem) | All |

RECOMMENDED ACCESSORIES

| SKU | Description | Region |
|------------|---|--------|
| CT20E2-010 | Outdoor Weatherproof Enclosure | All |
| AN10D1-010 | 10dBi External Antenna | All |
| AN01M1-014 | 1m Antenna Extension Cable | All |
| AN05M1-016 | 5m Antenna Extension Cable | All |
| AN10M1-202 | 10m Antenna Extension Cable | All |
| CCJ011-100 | Insulated Cable Clamp 60 Amp | All |
| CCJ121-101 | Insulated Cable Clamp 120 Amp | All |
| CCJ201-102 | Insulated Cable Clamp 200 Amp | All |
| TSA2M1-205 | Temperature Sensor - Analogue - 20M - MTC10K | All |
| TSD201-215 | Temperature Probe - Digital - 20M | All |
| CB20A1-042 | Single Pole MCB 20 Amp/Bypass Switch - Internal | All |
| CB25A1-043 | Single Pole MCB 25 Amp | All |
| CTSMPL-750 | Smart Plug | All |

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

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