

carbonTRACK SmartHub

Energy Management & IoT Hub



Intelligent energy system

With carbonTRACK, you are in control. Welcome to the world of smart energy, where you can monitor, control and optimise 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 Hub, 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.

SMARTHUB 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 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	
Input Voltage and Current	100 – 240 V; 200 mA Maximum	
Optional Input Voltage	5 to 24 V DC	
Battery Type and Capacity	Lithium ion, 3.7 V/ 1500 mAh, 5.55 wH	
Battery Running Time	24 - 48 hours (subjected to network signal strength)	
Firmware Upgrade Method	Over the air (OTA) Firmware Upgrade Programmable	
Connectors		
Antenna	Female SMA, Cell 2dBi (Qty 1) and Wi-Fi (Qty 1)	
SIM	SIM / USIM (2FF)	
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)	
Dimensions with standard cover (W x L x H)	10.55" x 8.03" x 2.20" (268 mm x 204 mm x 56 mm)	
Weight	1.54 lbs (0.70 kg)	
Chassis Type	Plastic	
Environmental		
Operating Temperature	-20° to +55° C*	
Storage Temperature	-40° to +85° C	
Relative Humidity	20% to 90%, non-condensing	
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

Model	CT200-CAT-M1	CT200-3G
Functions	<ul style="list-style-type: none"> Remote control and monitoring with debug features 	
Schedules	<ul style="list-style-type: none"> User configurable schedule-based control 	
Data Transmission Protocol	<ul style="list-style-type: none"> Secure carbonTRACK 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 Auto Smart Control (ASC) Peak load timer for efficient heating 	
Solar Thermal Controller	<ul style="list-style-type: none"> Improved energy efficiency with Holiday mode feature Temperature differential based control Anti-freeze protection technology activated below 5 °C 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 / Z-Wave capability	<ul style="list-style-type: none"> On-board ZigBee and external optional Z-Wave support 	
Green Circuit	<ul style="list-style-type: none"> Supports green circuit feature to maximize solar use 	
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 	
Control Capabilities		
Relay Control	<ul style="list-style-type: none"> Enabled through three 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 carbonTRACK Smart Hub (CAT-M1 Modem)	All
CT200i-505	CT200 carbonTRACK Smart Hub (3G Modem)	All

RECOMMENDED ACCESSORIES

SKU	Description	Region
CT20E2-010	IP55 Outdoor Weatherproof Enclosure	All
CTWIFI-521	CT200 Wi-Fi Module	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

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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