CaraControl

MOBILE SMART HOME DATASHEET

LOW-POWER DESIGN

www.caracontrol.eu
info@caracontrol.eu

DATASHEET

NEXT GEN NB-IoT / LTE-M
GNSS ENABLED
SMART HOME ELECTROBLOCK
Art. No. CCA001

Technical data

Enclosure	ABS Flame Retardant, IP20
Dimensions and weight	110mm x 60mm x 220mm (w x h x d), 497g W/A
Operating temperature	-30°C to +60 °C
Power voltage and consumption	10–16 V DC, 0.6W idle, LPWA attached / GNSS active
Certifications and approvals	ECE-R10.06, EMC, RoHS, ISO 9001

Inputs

2x Water tank level	2x 5pin 3 or 4-level probe, 2x 0-2.2V / 2.5V linear probe
1x External temperature sensor	1-Wire, Dallas 18b20
5x Digital input of discrete switches	Lighting / Consumer discrete switch, GND PUSH mode
4x Alarm input	Alarm / Panic, Motion, Gas, Smoke (GND)
1x Digital mains input	Electricity plug signal input (max. 18V)
1x Analog solar panel input	Solar panel state (12–18V)
1x Analog input of car battery voltage	Car battery voltage measurement (0–16V)
1x Digital input of engine status	Ignition key or D+ signal (max. 18V)
1x Digital input of main switch	Main switch / 12V Battery relay state (max. 18V)
2x Analog input of fuel / LPG tanks	Analog inputs of external tank probes (0–18V)
2x 10A power relay input	Power input of water pump and tank heater (max. 10A)
10x Power input of lighting dimmer	5x 6A dimmer input and 5x 3A dimmer input (max. 16V)

Outputs

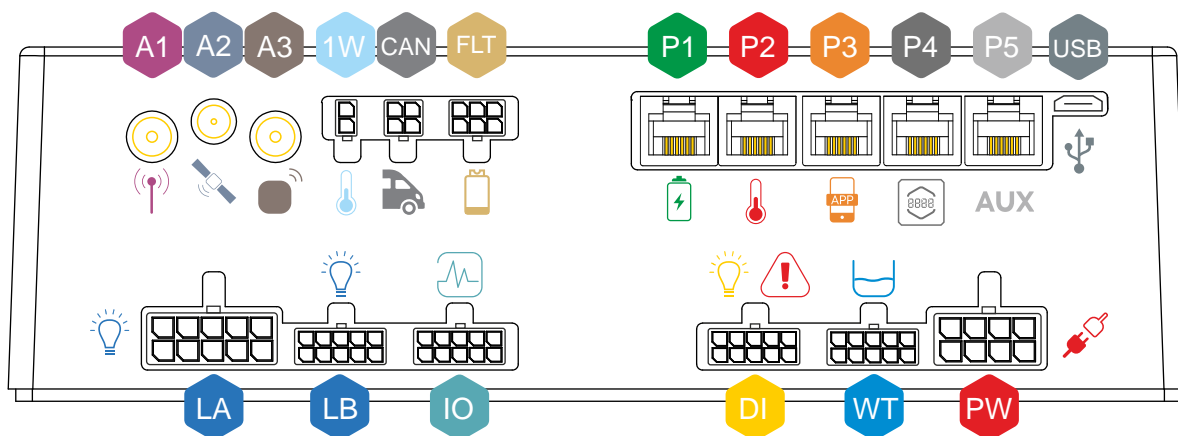|	
1x Main latching relay control	Main battery latching relay signals (GND, max. 200mA)
2x Signal output of water tanks	Measuring signal generator of step probes (Vcc)
1x 5V Power supply for ext. probes	Stabilized power supply for probes (5V, max. 200mA)
1x Siren output	Siren alarm output (Vcc, max 0.5 A)
1x PWM output for air exchanger	External roof fan with speed regulation (Vcc, max. 3A)
1x Electric door lock	Electric door lock A/B output (Vcc, max. 3A)
2x 10A power relay output	Power output of water pump and tank heater (max. 10A)
10x PWM output of lighting dimmer	5x 6A dimmer output, 5x 3A dimmer output (max. 16V)
4x Auxiliary output of external devices	Auxiliary heater / relays consumers (Vcc, max. 200mA)

Communication interfaces and peripherals

1x RF 2.4 GHz Bluetooth 4.0 LE	Communicaton with a smartphone App, int. antenna
1x LPWA / GNSS module	Access via NB-IoT / LTE-M, positioning, ext. antennas
1x ISM module 868 MHz	Communication with wireless accessories, ext. antenna
2x CAN-BUS	Connection to CAN based devices (battery, switches,...)
1x LIN-BUS heater	Connection to LIN based heaters (Truma iNet / Alde iNet)
2x LIN-BUS CI devices	Connection to LIN based devices using CI-BUS
2x UART 5V	Connection to UART based devices (heater, headunit)
2x RS232	Touch control panel connection, ext. RS232 devices
1x RS485	Connection to RS485 based devices
1x Micro-USB, 1x Micro SD card slot	USB-connection to service PC, Auxiliary data storage
1x 3D accelerometer	Tilt of a vehicle, tilt alarm function

A1 LPWA antenna, SMA(m), 698-2700 MHz

A2 GNSS antenna, SMB(f), Pre-Filter, 1.5–3.6 V

A3 ISM antenna, SMA(m), 868 / 915 MHz

1W 1-Wire temperature sensor, Molex Microfit 2p

CAN CAN-BUS 1/2, Molex Microfit 4p

FLT Fuel / LPG tanks, 5V output, Molex Microfit 6p

P1 Power supply port, RS485, LIN 1

P2 Heating port, UART 1, LIN 2

P3 Multimedia App port, UART 2, LIN 3

P4 Touch panel port, RS232-A, LIN 3

P5 Auxiliary port, RS232-B, LIN 3

USB Micro USB port

LA Light channels 6A, Molex Minifit 10p

LB Light channels 3A, Molex Microfit 10p

IO I/O connector, Molex Microfit 10p

DI Discrete switches / Alarms, Molex Microfit 10p

WT Water tanks, Molex Microfit 10p

PW Power connector, Molex Minifit 8p

LTE-M
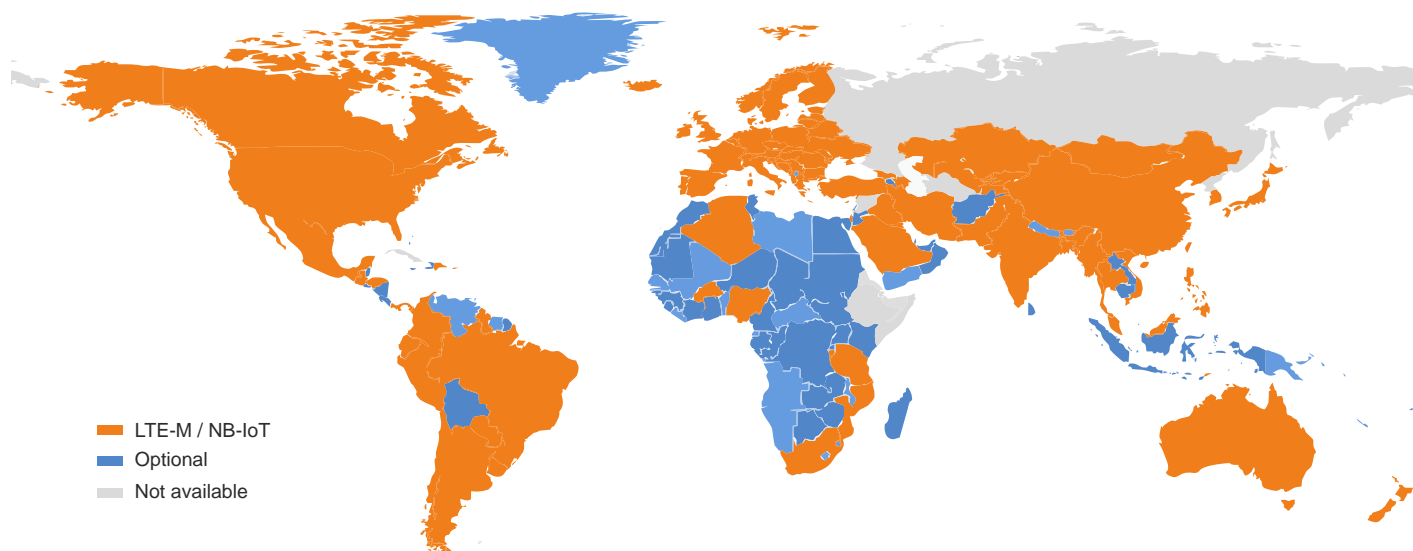
NB-IoT

Connectivity and security

Bluetooth Low Energy	Local access from user smartphone, PIN protected
Integrated LPWA eSIM	Access to Super network, 540+ networks, 180+ countries
LPWA access technology	Narrowband-IoT, LTE-M, GEO satellite fallback (optional)
Data transfer method	Cloud-free, per user request or device push message
Data transfer security	Private APN, IPSec VPN user-to-device, PIN protected
Data transfer consumption	51KB per month average, via LPWA
Firmware updates	Automatic via Bluetooth from user App or via service USB

Coverage map

- LTE-M / NB-IoT
- Optional
- Not available

The real coverage depends on actual coverage of the local carriers in the particular areas and correct antenna placement.

HMI PANEL

NEXT GEN TOUCH-FREE ACCESS PREMIUM GLASS CONTROL PANEL
Art. No. CCH001

Technical data

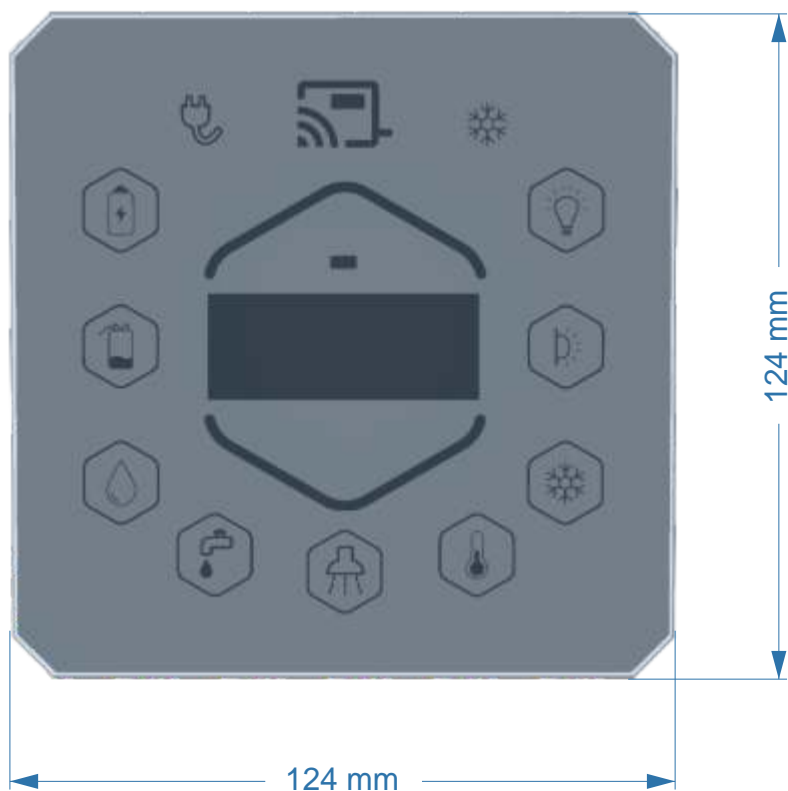|	
Rendering and backlighting	Tempered glass, RGB LED, 7-segment display
Dimensions and weight	124mm x 124mm x 25mm (w x h x d), 186g W/A
Operating temperature	-30°C to +60 °C
Power voltage and consumption	10–16 V DC, 0.12W stand-by, proximity sensor active
Certifications and approvals	EMC, RoHS, ISO 9001

Controls with App mirroring

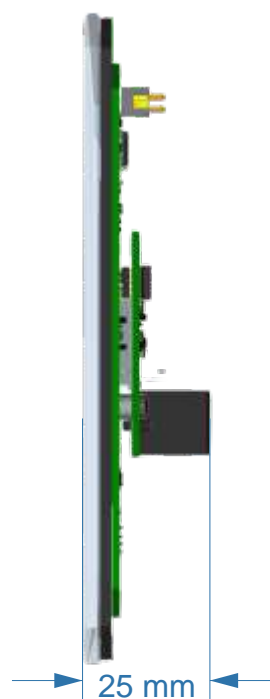|	
1x Proximity sensor	Shows statuses when in sleep by approximing a hand
1x Main battery relay touch symbol	Turns main battery latching relay on and off
1x Interior lights touch symbol	Turns the lights on and off
1x Awning light touch symbol	Turns awning light on and off
1x A/C touch sumbol, 1x A/C status	Switches between heating and cooling, shows A/C state
1x Thermostat, 2x Arrow touch symbol	Switches between temp. profiles (Off, Eco, Normal, High)
1x Boiler touch symbol	Turns boiler on and off
1x Water pump touch symbol	Turns pump on and off
1x Water tank touch symbol	Shows levels of fresh and waste water tank
1x Gas cylinder touch symbol	Shows level of up to 2 gas cylinders
1x Battery status touch symbol	Shows statuses of board and car battery (voltage / %)
1x External mains socket symbol	Shows status of electricity plug

HMI PANEL

FRONT VIEW

124 mm

124 mm

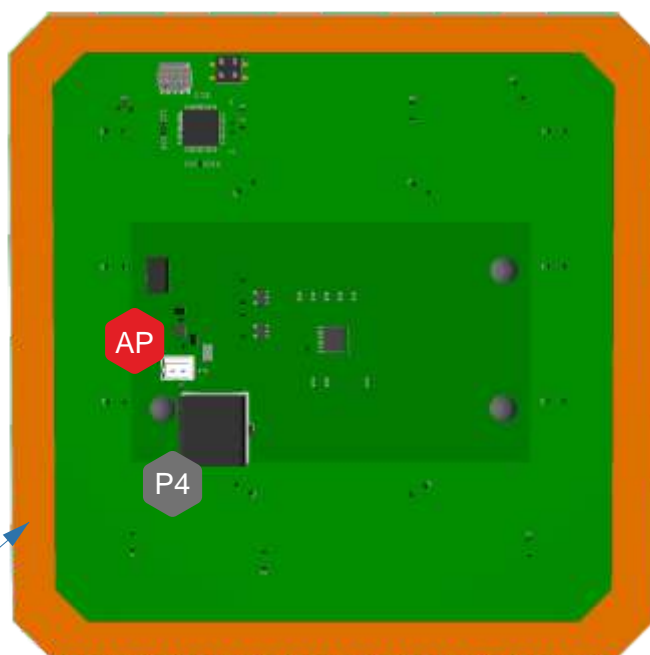### SIDE VIEW

25 mm

REAR VIEW

AP   Auxiliary power, JST PH 2.0

P4   Communication port, RJ-12 6p

Double sided tape mounting

6

ACCESSORIES

WIRELESS SECURITY SENSOR FOR WINDOWS AND DOORS
Art. No. CCS002

Technical data

Enclosure	ABS Flame Retardant, IP20
Dimensions and weight	35mm x 35mm x 15mm (w x h x d), 29g incl. battery
Operating temperature	-30°C to +60 °C
Power voltage and consumption	CR2450 battery, 420 days lifetime avg.
Certifications and approvals	EMC, RoHS, ISO 9001

KEYLESS GO FOB WITH NIGHT MODE
Art. No. CCS001

Technical data

Enclosure	ABS Flame Retardant, IP20
Dimensions and weight	68mm x 42mm x 18mm (w x h x d), 21g incl. battery
Operating temperature	-30°C to +60 °C
Power voltage and consumption	CR2450 battery, 395 days lifetime avg.
Certifications and approvals	EMC, RoHS, ISO 9001

WIRELESS IR TRANSMITTER FOR AIRCONDITION
Art. No. CCA009

Technical data

Enclosure	ABS Flame Retardant, IP20
Dimensions and weight	35mm x 35mm x 15mm (w x h x d), 13g
Operating temperature	-30°C to +60 °C
Power voltage and consumption	10–16 V DC, 0.054W stand-by
Certifications and approvals	EMC, RoHS, ISO 9001