



CR300-Series

Measurement and Control Datalogger

Compact Datalogger

Ideal for small applications



Overview

The CR300 is a multi-purpose, compact, low-cost measurement and control datalogger. This entry level datalogger, with its rich instruction set, can measure most hydrological, meteorological, environmental and industrial sensors. It will concentrate data, making it available

over varied networks and deliver it using your preferred protocol. The CR300 also performs automated on-site or remote decision making for control and M2M communications. The CR300 is ideal for small applications requiring long-term, remote monitoring and control.

Benefits and Features

- › Setup easily with PC software and USB connectivity
- › Measure with confidence, analog and digital sensors
- › Internet ready—Email, FTP, HTTP/Web, TCP
- › Trust in the Campbell Scientific quality including integral surge and ESD protection
- › Network wirelessly to another node or Internet gateway with integrated radio option
- › Communicate from anywhere when using a cellular or satellite peripheral
- › Save money and space using the integrated 12 V-battery solar-charge regulator
- › Measure smart sensors using RS-232 or SDI-12
- › Connect with PakBus, Modbus, DNP3, GOES, and other standard communication protocols
- › Analyze and control with programmability and multiple general purpose I/O
- › Notify with event driven communications and physical outputs

General Specifications

- › **CPU:** ARM Cortex M4, running at 144 MHz
- › **Internal Memory:** 10 MB flash for data storage, 5 MB flash for CPU drive / programs, 2 MB flash for operating system
- › **Clock Accuracy:** ± 1 min per month
- › **USB micro B** for direct connection to PC (limited power source during configuration), 2.0 full speed, 12 Mbps
- › **RS-232** for connecting RS-232 modems or serial sensors
- › **Battery Terminal Pair (-BAT+)** for regulated 12 V power input or rechargeable 12 V VRLA for UPS mode
- › **Charge Terminal Pair (-CHG+)** for 16 to 32 V from dc power converter or 12 or 24 V solar panel (10 W)

More info: 435.227.9120

www.campbellsci.com/cr300



CR300-RF407, CR300-RF412 Specifications

Frequency Hopping Spread Spectrum Radios (FHSS)

› Transmit

- Output Power: 5 to 250 mW, user selectable
- Frequency
 - ◆ RF407: 902 to 928 MHz (US, Canada)
 - ◆ RF412: 915 to 928 MHz (Australia, New Zealand)
- Channel Capacity
 - ◆ RF407: Eight 25-channel hop sequences sharing 64 available channels
 - ◆ RF412: Eight 25-channel hop sequences sharing 31 available channels
- RF Data Rates: 200 kbps

› Receive Sensitivity: -101 dBm

› Antenna Connector: RPSMA (external antenna required; see www.campbellsci.com/order/cr300 for Campbell Scientific antennas)

Average Additional Current Contribution @ 12 Vdc

- › **Transmit:** 45 mA
- › **Idle On:** 12 mA
- › **Idle 0.5 s Power Mode:** 4 mA
- › **Idle 1 s Power Mode:** 3 mA
- › **Idle 4 s Power Mode:** 1.5 mA

Compliance Information

› CR300-RF407

- United States: FCC Part 15.247: MCQ-XB900HP
- Industry Canada: IC: 1846A-XB900HP

› CR300-RF412

- ACMA RCM
- United States: FCC Part 15.247: MCQ-XB900HP
- Industry Canada: IC: 1846A-XB900HP

CR300-RF422 Specifications

F868 MHz SRD 860 Radio with Listen Before Talk (LBT) and Automatic Frequency Agility (AFA)

› Transmit

- Output Power: 2 to 25 mW, user selectable
- Frequency: 863 to 870 MHz (European Union)
- Channel Capacity: 30 channels (default), software configurable for meeting local regulations; 10 sequences for reducing interference through channel hop
- RF Data Rates: 10 kbps

› Receive Sensitivity: -106 dBm

› Antenna Connector: RPSMA (external antenna required)

Average Additional Current Contribution @ 12 Vdc

- › **Transmit:** 20 mA
- › **Idle On:** 9.5 mA
- › **Idle 0.5 s Power Mode:** 3.5 mA
- › **Idle 1 s Power Mode:** 2.5 mA
- › **Idle 4 s Power Mode:** 1.5 mA

Compliance Information

- › View the CR300-RF422 EU Declaration of Conformity at: www.campbellsci.com/cr300

