Overview

The CR300 is a multi-purpose, compact measurement and control data logger. This small, low-cost, high-value data logger offers fast communications, low power requirements, built-in USB, and excellent analog input accuracy and resolution. The CR300 can measure most hydrological, meteorological, environmental, and industrial sensors. It concentrates data, makes it available over varied networks, and delivers it using your preferred protocol. It 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.

The CR300 series includes Wi-Fi, cellular, or the following radio options for different regions:

- CR300-RF407: US and Canada
- CR300-RF412: Australia and New Zealand
- CR300-RF422: Europe

Note: Campbell Scientific does not recommend the CR300 for use as a PakBus router in networks with more than 50 devices. Large arrays or string variables may also reach memory limits. For such applications, a CR1000X Measurement and Control Datalogger is recommended.

Benefits and Features

- Connects directly to a computer’s USB port
- Differentiates even slight changes in data values with higher resolutions measurements (24 bit Adc)
- Provides simple serial sensor integration and measurement with SDI-12 and/or RS-232
- Supports full PakBus networking
- Includes embedded web page for direct connection via web browser

Specifications

- NOTE- Additional specifications are listed in the CR300-Series Specifications Sheet.

- Operating Temperature Range
  - -40° to +70°C (standard)
- Non-condensing environment
- Case Material
  - Powder-coated aluminum

For comprehensive details, visit: www.campbellsci.com/cr300
### Analog Inputs
6 single-ended or 3 differential (individually configured)

### Pulse Counters
8 (P_SW, P_LL, C1, C2, and SE1 to SE4)

### Voltage Excitation Terminals
2 (VX1, VX2)

### Communications Ports
- USB Micro B
- RS-232

### Switched 12 Volt
1 terminal

### Digital I/O
7 terminals (C1, C2, P_SW, and SE1 to SE4) configurable for digital input and output. Includes status high/low, pulse width modulation, external interrupt, and communication functions. Exception: The SE4 terminal doesn't do external interrupt.

### Input Limits
-100 to +2500 mV

### Analog Voltage Accuracy
- ±(0.04% of measurement + offset) at 0° to 40°C
- ±(0.1% of measurement + offset) at -40° to +70°C
- Accuracy specifications do not include sensor or measurement noise.

### ADC
24-bit

### Power Requirements
16 to 32 Vdc for charger input (CHG)

### Real-Time Clock Accuracy
±1 min. per month

### Internet Protocols
- Ethernet, PPP, RNDIS, ICMP/Ping, Auto-IP(APIPA), IPv4, IPv6, UDP, TCP, TLS, DNS, DHCP, SLAAC, NTP, Telnet, HTTP(S), FTP(S), SMTP/TLS, POP3/TLS

### Communication Protocols
- PakBus, Modbus, DNP3, SDI-12, TCP, UDP, and others

### Warranty
3 years (against defects in materials and workmanship)

### CPU Drive/Programs
80 MB serial flash

### Data Storage
30 MB serial flash

### Idle Current Drain, Average
1.5 mA (@ 12 Vdc)

### Active Current Drain, Average
- 5 mA (@ 12 Vdc for 1 Hz scan with 1 analog measurement)

### Dimensions
13.97 x 7.62 x 4.56 cm (5.5 x 3.0 x 1.8 in.)
Additional clearance required for cables and leads.

### Weight
242 to 250 g (0.53 to 0.55 lb) depending on communication option selected

### CR300-RF407 Option

<table>
<thead>
<tr>
<th>Radio Type</th>
<th>Frequency Hopping Spread Spectrum (FHSS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output Power</td>
<td>5 to 250 mW (user-selectable)</td>
</tr>
<tr>
<td>Frequency</td>
<td>902 to 928 MHz (US, Canada)</td>
</tr>
<tr>
<td>RF Data Rate</td>
<td>200 kbps</td>
</tr>
<tr>
<td>Receive Sensitivity</td>
<td>-101 dBm</td>
</tr>
<tr>
<td>Antenna Connector</td>
<td>RPSMA (External antenna required; see <a href="http://www.campbellsci.com/order/rf407">www.campbellsci.com/order/rf407</a> for Campbell Scientific antennas.)</td>
</tr>
<tr>
<td>Idle Current Drain, Average</td>
<td>12 mA (@ 12 Vdc)</td>
</tr>
<tr>
<td>Active Current Drain, Average</td>
<td>&lt; 80 mA (@ 12 Vdc)</td>
</tr>
</tbody>
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### CR300-RF412 Option

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</thead>
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<tr>
<td>Output Power</td>
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</tr>
<tr>
<td>Frequency</td>
<td>915 to 928 MHz (Australia, New Zealand)</td>
</tr>
<tr>
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