

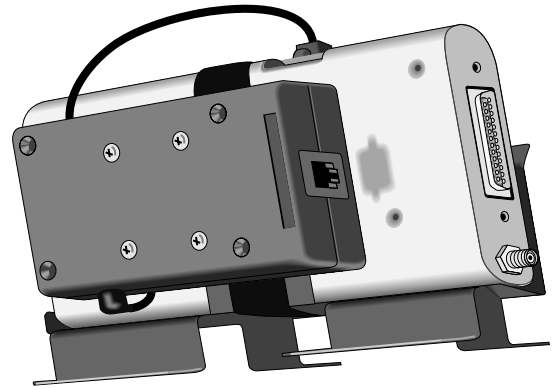
# Analog Cellular Telephone Package

## Model COM100

The COM100 Cellular Phone Package supports analog cellular communication between a remote or mobile datalogger site and a computer base station.

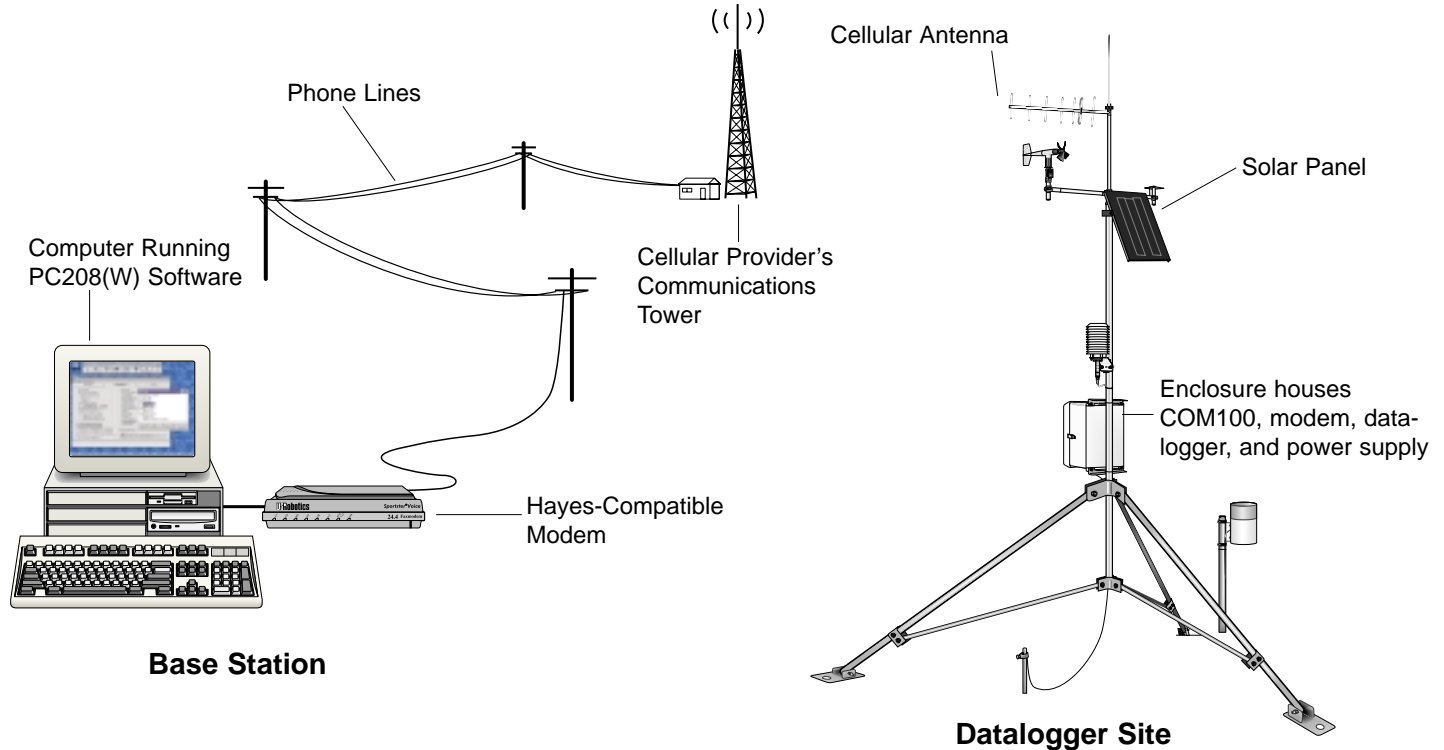
### Features

- COM100 provides a convenient cellular package suitable for use at urban sites, remote sites, or in mobile applications.
- Package is compatible with our CR510, CR10(X), 21X, CR23X, CR5000, and CR7 dataloggers.
- Wide operating temperature range and rugged construction enable the COM100 to be used in most industrial, water resource, and environmental applications.
- System can transmit both data and voice-synthesized messages.
- Power is conserved by switching power to the phone at pre-determined time intervals or when the datalogger is initiating an alarm call.



COM100 cellular transceiver with RJ11 interface and enclosure mounting bracket. Cabling not shown.

### Typical System



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## Base Station Requirements

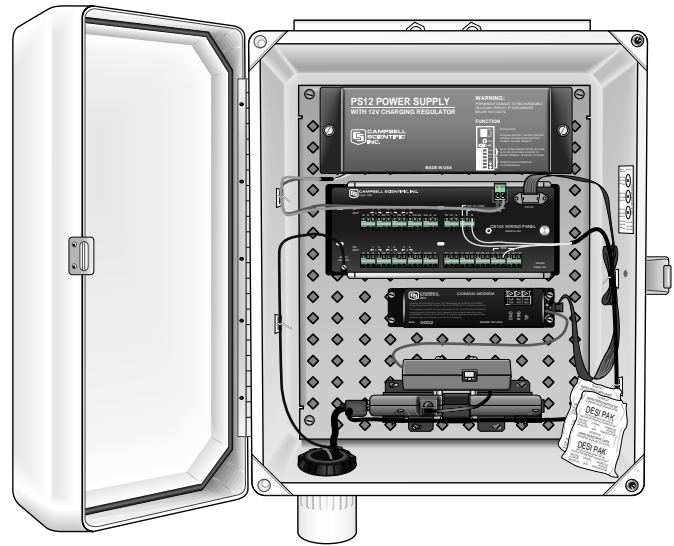
- IBM-compatible computer running our PC208(W) datalogger support software - PC208(W) provides automatic error checking between the datalogger and base station assuring data integrity.
- RS-232 serial cable (SC25PS or equivalent)
- Hayes-compatible phone modem
- Subscription to a cellular network with analog coverage at the datalogger site

## Datalogger Site Equipment

### General Equipment

- Datalogger - CR510, CR10(X), 21X, CR23X, CR5000, or CR7
- Environmental enclosure - ENC 12/14 or ENC 16/18
- Instrument mount (for stationary applications) - CM10 ten foot or CM6 six foot tripod, or UT10 10-foot, or UT30 30-foot tower.
- Application specific sensors
- Power supply

*An ENC 12/14 enclosure houses a PS12LA power supply, CR10X datalogger, COM200 phone modem, and COM100 cellular transceiver. Sensor cabling not shown.*



### COM100 Package and Options

- COM100 Cellular Phone Package - includes Motorola AMPS cellular connection transceiver, RJ11C interface, coaxial antenna cable with male mini-UHF and male type "N" connectors, power control cable with a built-in Crydom relay, and mounting bracket for enclosure backplate.
- Modem - COM200 Phone Modem for data communications such as transferring data files, monitoring real-time data, setting the datalogger clock, and uploading/downloading programs.

-or-

A CSI voice-synthesized modem for voice and data communications (CR510, CR10(X), CR23X, and CR5000 only). Voice communications allow you to use a phone to call the datalogger for a verbal report of site conditions and allow the datalogger to call you and recite a verbal warning if specified conditions occur. All COM200 data communications capabilities are also supported.

- Antenna and mounting hardware - Yagi ASP962 8 dB Antenna for stationary applications; contact an Applications Engineer to determine the best antenna for mobile applications.
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## ***Power Considerations***

Because of the on-line current drain of the COM100, you should consider the length and frequency of both incoming and outgoing calls when determining the best power supply for your system:

- Where pre-determined call intervals are short and infrequent (e.g., 10 minutes per day), the system can typically be powered by sealed rechargeable batteries supplemented by a charging source (ac power or solar panel).
- For longer calls or more frequent time intervals (e.g., 20 to 30 minutes every hour), a deep-cycle RV battery trickle-charged by ac power or a solar panel can often power the system.
- When communications between the datalogger and the computer must be available for long periods of time, ac power may be required.

For additional information on analyzing your system's power requirements, request a copy of our Power Supply brochure or application note, or contact an Applications Engineer.

## ***COM100 Cellular Telephone Package Specifications***

### **Motorola AMPS "Bag Phone"**

Dimensions:	1.0 x 3.9 x 8.4 in., 2.5 x 9.8 x 21.0 cm
Operating Temperature:	-30° to +60°C
Average Current Drain:	< 0.5 mA quiescent, < 0.17 A stand by, < 1.8 A on-line
Supply Voltage:	10 to 16 Vdc
RF Power Output:	3 Watts nominal

### **Control Relay Crydom D0061B**

Control Voltage:	1.7 to 9 Vdc
Control Current:	15 mA @ 5 Vdc

*Notes: Locations near heavy construction sites, tunnels, or power lines may be unsuitable for cellular communication.*

*Before purchasing, verify that the local cellular company provides analog (not digital) coverage and that the analog coverage will be supported in the future.*

*Bandwidth limitations of the Cellular Phone System prevent a reliable modem connection above 4800 bps.*

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Printed August 2001