# siteCOMMANDER

## Remote Monitoring, Alarm and Control

The siteCOMMANDER is an affordable, low-power device that allows effective site monitoring, using a radio network for data backhaul. The siteCOMMANDER is ideal for sites without AC power, where a battery and solar panel must be utilized. The siteCOMMANDER provides field personnel with the information needed to proactively determine a problem at a site, and to eliminate the need for costly unplanned site visits.

An unused conventional channel can be used for backhaul, or for single channel sites, a voice channel can be used.  Data from the siteCOMMANDER is transmitted only when the voice channel is not in use.  The radio interface options for the siteCOMMANDER are four-wire, or FFSK.  The siteCOMMANDER can be deployed in point-to-point and point-to-multipoint applications.

**Monitoring Applications**
The siteCOMMANDER can be deployed for a variety of applications including:

- Environmental
  - Temperature
  - Humidity
- Security
  - Enclosure Entry
  - Fire Alarm
- Equipment
  - Forward and Reflected Power
  - Summary Alarms
  - Voltage and Current Levels
- Supervisory Control
  - Turn On/Off Generator

**Site Integration**
The siteCOMMANDER has the following inputs and outputs:
- 8 digitial inputs capable of accepting a wide input voltage range (up to 60 VDC) from contact closures, passive switches, or solid state switching devices
- 8 analog inputs 10 bit A/D, capable of measuring 0 – 25 VDC
- 8 digital outputs capable of switching up to 50 VDC at 150 mA
- 8 temperature inputs (when equipped with optional indoor sensors)

Filters, hold times, qualifiers and multi-level thresholds are available to ensure I/O validity.

**Onsite Data Storage**
The siteCOMMANDER has a Data Logger feature that allows logging information for inputs to be stored at the siteCOMMANDER (onsite), and then retrieved at periodic intervals to Apex.  If a voice channel is being shared for backhaul, the transfer interval can be configured to a time of day when there is low radio usage.  The Data Logger can store:
- Log files, which can include:
  - Perodic snapshot of analog inputs and temperature inputs
  - Digital input changes, and upper/lower threshold crossings for analog and temperature inputs
  - Maximum and minimum values of analog inputs
- Onscreen timers, that show the length of time COS (FFSK interface only) and contact inputs have been on since last timer clear.

**Software Integration**
Apex provides native support for all TASC Systems remote monitoring platforms, including the siteCOMMANDER.  As an integrated command and control center for a network of TASC Systems monitoring platforms, Apex can monitor communication exceptions and provide real-time alerts to system administrators and radio technicians.

# siteCOMMANDER

| Motherboard | |
|---|---|
| Power | +11 to +20 VDC |
| Current Consumption | Maximum 80 mA @ +13.5 VDC; <15 mA current draw in low power mode. (1 second wake-up interval) |
| Weight | Less than 500 g |
| Operating Temperature | -40 to +65°C |
| Digital Inputs | 8 contact closures, switches, open collector or voltage inputs (0 to 60 VDC input) with individual hold timers |
| Digital Outputs | 8 'open drain' FET outputs, switching up to 50 VDC @ 150 mA each. Programmable pulse or latching output |
| Analog Inputs | 8 x 10-bit A/D, 0 to 5 VDC, 0 to 25 VDC, 0 to 100 VDC (external adapter) with individual hold timers and high/low trigger set points per input. |
| Temperature Monitoring | Up to 8 temperature sensors (option, see specification below) |
| Serial Ports | Two RS-232 asynchronous ports |

| Analog RF Interface | |
|---|---|
| Data Rate | 1200 & 2400 bps synchronous |
| Signaling Type | FFSK |
| Radio Interface | 50 K ohm level adjustable |
| COS | Programmable active high/low or input level detection. |
| PTT | Programmable active high/low switching up to 55 VDC @ 150 mA |
| PTT Delay | Programmable in 10 ms increments – maximum 1 second |

| 4-Wire Interface | |
|---|---|
| Data Rate | 1200 & 2400 bps synchronous |
| Signaling Type | FFSK |
| Output | 600 ohm transformer isolated |
| Protection | DC blocking to 60 VDC, secondary impulse protection |
| Signaling | Ear and Mouth optically isolated or input level detection |

| Enclosure options | Rack mount |
|---|---|

| siteCOMMANDER Configuration Utility (SCCU) | The SCCU is included with the siteCOMMANDER. The utility allows the user to configure the modules' operating parameters from a personal computer running Windows 10. |
|---|---|

| Apex Site Monitoring and Control Software | TASC Systems Apex is a fully configurable Windows 10 or Server 2012 based site monitoring and control software package for use with siteCOMMANDER hardware. This optional software package allows the user to graphically view detailed information about each site. Apex features simple drag-and-drop configuration, extensive event logging, audible alarm notification, and automatic polling. |
|---|---|

| Temperature Sensors | siteCOMMANDER can support up to a maximum of 8 temperature sensors per module. Requirements beyond this capacity can be supported by special order. |
|---|---|

**TASC : everything connects**