



## General Description

The Model 50388 Real-Time Data Transmitter collects, processes, and transmits analog, digital, and serial sensor data on events and timed intervals, controlled by parameters programmed with the ScadaLynx Toolbox software. Sensor data can be transmitted using multiple communication paths with mixed formats and protocols. All power and I/O lines use blade fuses and are protected against over-voltage, short, and reverse polarity.

Standard memory includes 16 MB nonvolatile FLASH, 256 KB battery-backed SRAM, a battery-backed RTC, and a micro SD card up to 16 GB for data logging and file storage. The transmitter is programmed through the USB-B port or any of four RS232 serial ports, directly or remotely.

The 50388 supports up to 16 analog inputs (16-bit A/D, 8 programmable gains from 25 mV to 5 VDC), 16 digital status inputs, 4 low-speed up/down counters, 4 high-speed counters, 8 digital outputs, and 5 SDI-12 connections. Four RS232 ports support ALERT2 HDR, ScadaLynx, ASCII, and MODBUS. USB-A, USB-B, Ethernet, and micro SD round out the I/O. ALERT2 technology is licensed by Blue Water Design LLC.



*Model 50388 Real-Time ScadaLynx System*

## Specifications

### PCOS Processor

|                      |                    |
|----------------------|--------------------|
| <b>Processor</b>     | Atmel AT32UC3A0512 |
| <b>Clock Speed</b>   | 14.75 MHz          |
| <b>Bus Size</b>      | 32 bits            |
| <b>FLASH Memory</b>  | 16 MB              |
| <b>RAM Memory</b>    | 256 KB             |
| <b>Micro SD Card</b> | 16 GB              |

### Communications

|                     |  |
|---------------------|--|
| <b>Serial Ports</b> | 4 RS232 standard                           |
| <b>USB Ports</b>    | 1 USB-A (data), 1 USB-B (program)          |
| <b>Ethernet</b>     | 1 for data transmit                        |
| <b>Protocols</b>    | ALERT2 HDR, ScadaLynx, ASCII, MODBUS, GOES |

### Analog Inputs

|                     |                                 |
|---------------------|---------------------------------|
| <b>Inputs</b>       | 16 (14 available)               |
| <b>Resolution</b>   | 16-bit                          |
| <b>Input Ranges</b> | 0 to 5 Vdc down to 0 to 25 mVdc |

### Counters & Digital

|                            |                                    |
|----------------------------|------------------------------------|
| <b>Up/Down Counters</b>    | 4 (max 100 Hz)                     |
| <b>High-Speed Counters</b> | 4 (max 2 kHz)                      |
| <b>Digital Inputs</b>      | 16                                 |
| <b>Digital Outputs</b>     | 8 (open drain, 150 mA)             |
| <b>SDI-12</b>              | 1 on canister, 5 on terminal strip |

### Power

|                     |                       |
|---------------------|-----------------------|
| <b>Fully Asleep</b> | 10 to 16 Vdc, < 20 mA |
| <b>Fully Awake</b>  | 10 to 16 Vdc, < 40 mA |

|                    |              |
|--------------------|--------------|
| <b>Radio Power</b> | 10 A maximum |
|--------------------|--------------|

#### General

|                        |                              |
|------------------------|------------------------------|
| <b>Operating Temp.</b> | -40 to 85 °C                 |
| <b>Humidity</b>        | 0 to 95%, non-condensing     |
| <b>Canister Size</b>   | 8 in. dia. x 23 in. high     |
| <b>Battery</b>         | 12 Vdc, 22 Amp-hour gel cell |

#### Ordering Information

|                    |   |
|--------------------|---|
| <b>50388-90</b>    | Round Canister: 1 Precipitation, 1 Up/Down Counter, 2 Analog, 1 SDI-12, USB-B |
| <b>50388-81</b>    | Round Canister: 1 Precipitation, 1 Counter, 7 Analog, 1 Wind, 1 SDI-12, USB-B |
| <b>50388-B</b>     | Transmitter in 12 x 10 NEMA 4X Enclosure                                      |
| <b>50388-N</b>     | Transmitter in 16 x 14 NEMA 4X Enclosure                                      |
| <b>50388-K</b>     | Transmitter in 4U Rack Mount Enclosure  |
| <b>50388-Panel</b> | Transmitter on metal panel for metal box enclosure                            |

#### Options

|                  |                                |                   |                         |
|------------------|--------------------------------|-------------------|-------------------------|
| <b>RTR</b>       | Radio Link (Specify frequency) | <b>50388-OP14</b> | Network Connector       |
| <b>5073TBX</b>   | ScadaLynx Toolbox Software     | <b>50388-OP21</b> | Cellular Gateway Radio  |
| <b>50388-OP6</b> | Internal Power Supply          | <b>50388-OP22</b> | Iridium Satellite Radio |
| <b>50388-OP8</b> | ScadaLynx Radio                | <b>50388-OP23</b> | WiFi Gateway Radio      |

#### Radio Options

|                  |  |
|------------------|--|
| <b>Default</b>   | Maxon 5W with Enclosure  |
| <b>Supported</b> | Ritron 5W with or without Enclosure; Ritron 30W with Enclosure |