

XE-8000 SMS Controller

Product Overview

Data-Logging to EEPROM
Data-Logging to Web
Alarm Notification
Remote Control
GPS



Product Overview

The Advanced Information Networks XE-8000 SMS Controller is a communications device that connects to a GSM Modem to allow wireless, Data-Logging, Alarm Monitoring and Control of remote and mobile systems. The XE-8000 provides logging of data to internal memory and to a web-based database for secure access through a web browser. Multiple users can interrogate the XE-8000 or be notified on configurable events.

Online Demonstration

Visit the online demonstration of SMS to Web Technology at: www.advancedinformation.net/sms_solutions.html. In this demo the XE-8000 SMS Controller logs the local temperature on an hourly basis. It then sends this data to the web server at midnight each day where it can be viewed online.

Key Features

Data-Logging

Inputs, Outputs, Temperature, and GSM Network Signal Strength can be logged to the 256K of internal memory and to the Advanced Information Networks web-based logging system. Data may be accessed via the Client Area of the Advanced Information Networks Website as online graphs, reports and CSV downloads. There is a monthly access fee for this service.

Inputs can be scanned up to every 30 seconds. Logging can be as frequent as every 30 seconds. Different logging rates can be applied when an alarm is present. Instantaneous or averaged values can be logged.

Inputs

The XE-8000 has four inputs that can be independently configured as:

- 4-20mA 10 bit Analog Inputs
- 0-5 Volt 10 bit Analog Inputs
- Voltage-free Clean-contact Digital Inputs

Alarming, and user notification settings can be set for each input.

Logging settings for each input can be set to:

- Logging Disabled
- Log to EEPROM
- Log to the Internet
- Log to EEPROM and the Internet

Input one can be used for Power Supply Monitoring (see below).

Temperature Monitoring

In addition to the four inputs, an optional Digital Temperature Sensor can be connected to the Temperature Sensor Port of the XE-8000. The sensors are proprietary and are only available from Advanced Information Networks. The temperature can be logged, and it can trigger alarms based on user-defined setpoints. The sensor has an accuracy of 0.5°C from -10 to +85°C.

Outputs

The XE-8000 has four 1-Amp open-collector Outputs. These may be controlled with SMS messages from approved users. Outputs states can be logged.

Power Supply

The XE-8000 operates from a 10-30VDC power source. It draws less than 250mA.

Power Supply Monitoring

The first input of the XE-8000 can be used to monitor either Input One (IN1) or the Power Supply Voltage. An internal jumper must be changed to select either option. The factory default is Power Supply monitoring. The Power Supply can be logged and it can trigger alarms based on user-defined setpoints.

Users

The XE-8000 supports up to 10 users. Each user can interrogate the device for the current I/O status. Users can be notified based on changes to each input or output. Configuration tables allow inputs and outputs to be allocated to specific users.

Alarms

SMS messages can be sent to users when an input reaches an alarm state or when an output changes. The following setpoint configurations are available:

- Alarm when above set point. A reset point is used.
- Alarm when below set point. A reset point is used.
- Alarm when inside set and reset points.
- Alarm when outside set and reset points.

Security

The XE-8000 has a number of in-built security features. Caller ID security and User-specific PIN numbers provide authentication for device interrogation and control.

Web Configuration

The XE-8000 SMS Controller can be remotely configured from the Client Area of the Advanced Information Networks website. Configuration options include Alarm Message Content, System Settings, Users Phone Numbers, and Alarm and Data-Logging Settings. This saves the time and money involved with on-site reconfiguration. Multiple devices can be configured in geographically remote or distant locations all from your web browser.

Through-Mode

Through-Mode allows a user to make a modem connection to the GSM Modem and communicate through the XE-8000 to a device connected to the RS-232 Port of the SMS Controller. This allows a tightly integrated monitoring or control system to be created by providing a wireless link to the XE-8000 and to a PLC or another specialised instrumentation device through a single GSM Modem.

SMS Command Mode

A third party controller can use the XE-8000 to send SMS messages by sending it a simple command from its serial port. This gives an existing system the ability to send any SMS message to any phone number. For example it may allow a PLC to send an SMS alarm message if a primary communications channel fails.

Options

Expansion modules

The following devices can be connected to the XE-8000 expansion port. These expansion modules will allow the system to be expanded to a maximum of 20 inputs. They are currently in development. Planned release date: Q4 2003.

- XE-8100 8 x 4-20mA 24 bit Analog Input Module
- XE 8200 8 x Voltage-free Clean-contact Digital Inputs

GPS

The XE-8000 is GPS enabled for mobile applications. The standard XE-8000 can accept NMEA-0183 data from an external GPS device. Alternatively the XE-8000 can be ordered with an internal GPS module (note that the GPS aerial is external). GPS Co-ordinates are added to Alarm Messages and to Status Response Messages.

GPS co-ordinates can be logged to EEPROM and to the Internet.

OEM Options

Contact us for details on integrating the XE-8000 functionality into your product.

XE-8000 technology has been used as the basis for an SMS controlled mobile LED Display Sign. This allows the messages on the sign to be programmed and changed from a mobile phone. This is currently used for road safety campaigns.



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