Spec Sheet Model 1550 Industrial Alarm Processor

HARDWARE FEATURES

- Alarm via Radio and Telephone
- Voice, Paging and Alphanumeric alarm messages
- Up to 72 Alarm inputs
- 8 Analog inputs with programmable levels
- 1 minute of factory prerecorded voice messages
- Up to 4 minutes of user recordable voice alarm messages
- Rugged NEMA 4X enclosure
- Space for 2-way radio or cellphone
- Back-up battery and charger
- Backlit display and status keypad
- Remote access via telephone or radio
- User controlled outputs
- Programmable via PC, DTMF and front panel

INTRODUCTION

SentriMax is a powerful full-featured, industrial voice and page alarm system. Users can monitor and control up to 64 digital inputs/outputs and 8 analog inputs via telephone or radio. Upon sensing an alarm condition, SentriMax automatically alarms through a user programmable list of phone or radio sources with specific user recordable voice messages stored in solid state memory or optional alphanumeric text messages. This provides a friendly interface that doesn't require special training for system operation.

The SentriMax comes in a rugged, waterproof NEMA 4X fiberglass case with integrated battery backed operation for reliable performance. Conventional and trunked mobile type radios and cellphones can be easily mounted within the SentriMax enclosure. The SentriMax has been carefully designed for easy installation and setup. Programming can be done via a PC running the included configuration program, over the phone with DTMF or from the keypad on the front panel.

Expandable Digital Inputs/Outputs

The SentriMax comes standard with 16 digital inputs that may be user programmable as outputs for control purposes. Up to three additional 16 digital input/output expansion cards may be added to an individual unit giving a total capacity of 64 digital inputs/outputs.

SentriMax Inputs/Outputs

Inputs/Outputs/Ports	
Digital Inputs (DI)*	16-64
Analog Inputs (AI)	8
Pulse Counters	First 16 Digital Inputs
Run Time Meter	First 16 Digital Inputs
Digital Outputs (DO)*	16-64
RS-232 Serial Ports	1
Alarm Outputs	
Voice Messages	100 Discrete
Voice Storage	1 - 4 Minutes
Analog Pages	Optional
Alphanumeric Pages	Optional
Radio Interface TX/RX	Standard
Phone Dial-up	Standard
TAP/IXO Modem	Optional

**Each can be configured as an input or output*

Pulse Counters

The first 16 digital I/Os have the ability to keep track of the number of alarm events detected on that input. If the input is set up as normally open, a transition from high to low causes the counter to increase by one, but a transition from low to high does not. For example, this can be used with a water meter that outputs a pulse every 10,000 gallons of water that flows through a pipeline. The counter allows the user to keep track of the total flow through the pipeline and alarm when the flow reaches a programmable level.

Run Time Recording and Alerting

The first 16 digital I/Os can be used as run time meters that keep track of the total time the input is in an alarm condition. The run time meters can accumulate up to 999 hours and 59 minutes. For instance, a pump may need to be serviced every 200 hours of use. The run time metering capability of the SentriMax allows you to keep track of the in-use time of the pump and alarm the user when it's time for service.

Scalable Analog Inputs

SentriMax comes equipped in the standard unit with 8 analog inputs. These analog inputs allow SentriMax to alarm according to changes in flow, temperature, pressure etc. The SentriMax directly supports transducers with 0 to 5 Volt or 4 to 20 mA outputs. The values of the transducers may be scaled according to the application. For example, a water level sensor might output 0 Volts when the water tank level is at 5 feet, and 5 Volts when the level is at 80 feet. SentriMax can alarm and report according to the values being monitored.

Remote Control and Status Inquiry

Users can access the SentriMax via telephone or radio equipped with a DTMF pad to control outputs connected to the system. The current status of an alarm or the status of an input is also available by accessing the system. Responses to status inquiries can range from the standard factory prerecorded voice messages to customized user recordable status messages. Users can choose to use a default message such as "digital input 1 ON" with the standard factory voice prompts or record "lower bay door open" with the user recordable prompts.

System Monitor Alarms

SentriMax features these additional system alarms that can help ensure worker safety and verify proper operation. A panic button is provided on the front panel of the SentriMax that can be used to summon help to a site in the event of an emergency. Discrete alarms for AC Power Loss, Low Battery condition and Internal High Temperature are included in the standard unit. An "All's Well" message can be enabled so that the SentriMax periodically notifies a list of people that the system is properly functioning.

ALARM NOTIFICATION: SENTRIMAX GETS THE WORD OUT

Alarm messages for each input are sent by text page or natural recorded voice over phone, radio or intercom. Ten call lists are available with up to 15 calls included in a call list. By using the optional Real Time Clock & Printer Interface, alarms can be directed to one of three different call lists dependent upon the time of day and day of the week (including holidays). For example, building or process alarms can be directed to the appropriate users off premise during evening hours versus local radio alarms during the day.

TAP Paging:
SentriMax's Gateway to Wide-Area Paging

Telocator Alphanumeric Protocol (TAP) is a standard format for sending text paging information to a paging terminal from a computer or other intelligent machine. This option allows the SentriMax to send text messages associated with an alarm condition through an on-site paging terminal or paging service. Individual alarm messages can be up to 40 characters long, allowing a detailed description of each alarm condition to be transmitted. These text pages can be freely mixed into a call list along with regular voice alarms.

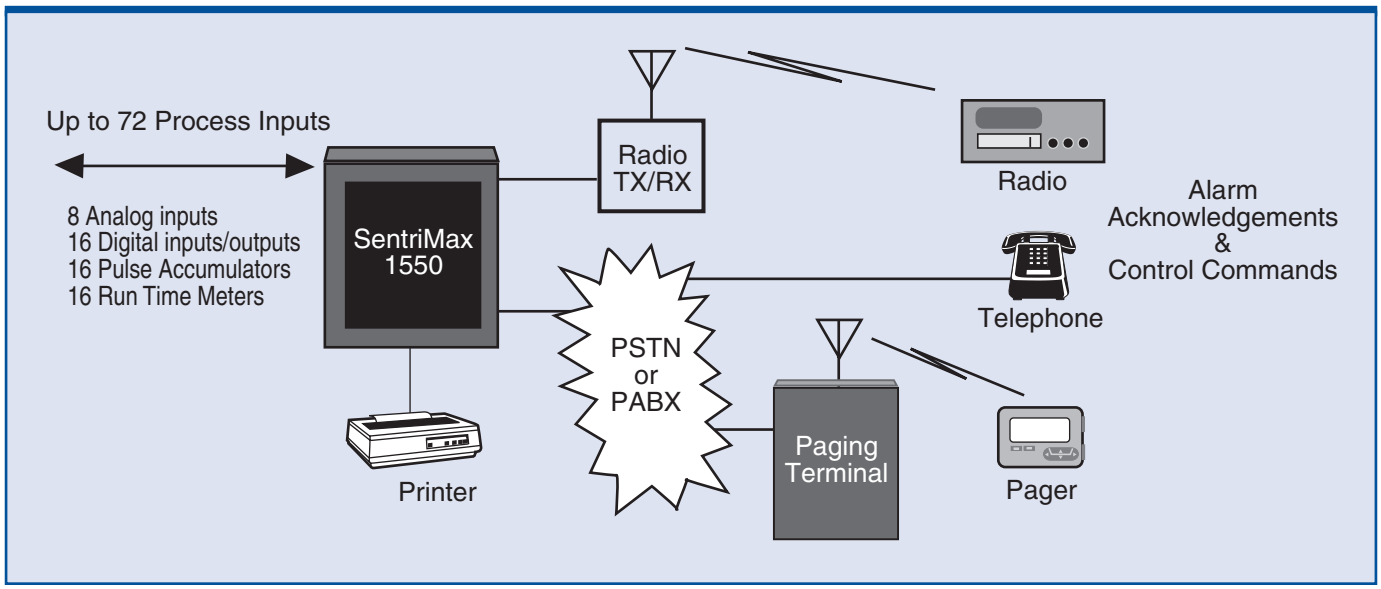
Radio Paging Formats:
Voice Message and Alphanumeric Display Paging

SentriMax can be equipped with the Radio Paging Option which enables it to directly generate and key a radio for paging. This option allows the SentriMax to support Two-Tone and POCSAG tone only, tone and voice, numeric and alphanumeric formats. Paging calls can be mixed into a call list along with regular voice alerts over the phone and radio.

Flexible Alarm Call Lists and Time Stamped Messages

The Real Time Clock option provides two effective features to the SentriMax: Call List Scheduling and Time Stamped Event Printing. These features give the SentriMax an even greater versatility to satisfy alarm requirements.

Call List Scheduling allows the SentriMax to process alarm calls based upon the time of day, day of week, and whether or not the date is a holiday. When installed, up to three call lists can be associated with each alarm source. When an alarm occurs, SentriMax compares the current time and date with the setting for each of the three call lists. If it finds a call list that is enabled, it uses that list to make the alert calls for the alarm. SentriMax provides the powerful combination of time of day alerting with the flexible ability to mix both telephone and radio alarm messages.



APPLICATIONS

Industrial

- Machinery Monitoring
- Environmental Remediation
- RF Tower Site Monitor
- Voice Fire System
- Voice Security System
- HVAC Systems
- Telephone Switch Monitor
- Cellphone Sites
- Computer Room Monitor
- Boilers

Oil, Gas, & Electric Utilities

- Electrical Substations
- Pumps, Valves & Compressors
- Petroleum Production Fields
- Engine Monitoring
- Hydro Stations
- Environmental Compliance

Fresh/Waste Water

- Lift Stations
- Pump/Tank Control
- Tank/Reservoir Level
- Well Monitoring
- Leak Detection
- Food Processing
- pH Monitoring

Agriculture & Food Processing

- Greenhouses
- Irrigation Control
- Poultry, Swine & Stock Housing
- Refrigerated Storage
- Fish Hatcheries

Time Stamped Event Logging enables SentriMax to send text descriptions of system events out the RS-232 serial port. The port can be connected to either a serial printer for a hard copy record or can be collected by a computer for later analysis.

Second Telephone Line

SentriMax can be equipped with an optional second telephone line that allows an operator to call in and take control even if SentriMax is busy with a call on the primary phone line or the radio. The second telephone line is never used by the system to make alert phone calls; it is used only to process user commands. This option helps ensure that complete control of the system is maintained at all times.

Integrated Microphone and Speaker

SentriMax includes an integrated Microphone and Speaker on the front panel to allow for programming of voice messages and verification of the alarm announcements. The microphone can also be used to monitor activity around the unit. For example, a building intrusion alarm might also include instructions to call the SentriMax and listen for activity in the area to confirm that someone has broken in to the facility or site.

SPECIFICATIONS

Inputs/Outputs:	16 discrete input/outputs, expandable to 64 & 8 analog inputs
Voice Capacity:	1 min. of prerecorded messages & 1 min. user recordable voice standard 3 minutes optional voice storage with up to 100 user recordable messages
Communication Interfaces:	PSTN telephone interface standard expandable to two telephone lines Radio interface standard
Programming Interfaces:	Front panel keypad and display RS-232 port via easy to use PC configuration software DTMF compatible radio PSTN phone
Enclosure:	NEMA 4X fiberglass/polyester
Approvals:	FCC part 15 and part 68 Industry Canada

Communication Specifications

Radio Interface:	PTT, COR, flat RXAUD & ground Input levels from 20mV to 3Vpp Input impedance > 30Kohms at 1KHz Output level 3Vpp maximum with 10K load Output impedance < 1Kohm at 1KHz Flat audio in and flat audio out COR adjustable from .1 to 4.5VDC PTT output relay to ground < 300mA max, NO or NC position DTMF signaling capable DTMF signal: 100msec on/100msec off
Telephone Interface:	2-wire (Tip/Ring) RJ11 connector Ringer equivalents .45B Automatic line seizure Maximum voice power output to PSTN, -10dBm DTMF power output to PSTN, -1dBm max DTMF signal: 100msec on/100msec off Tone or pulse dialing
RS-232 Interface:	Tx, Rx & ground (Zetron or PC compatible) 4800 baud 8 bit with one stop bit and no parity TTY No hardware or software flow control

Electrical Specifications

Limits:	45VDC max input into any input
Discrete Input Levels:	< 0.8V low > 2V high
Discrete Outputs:	Open collector type 100mA typical sink current 45VDC max collector voltage
Analog Input Levels:	0-5V or 4-20mA 20mV or 80uA resolution
Battery:	12V, 7-amp-hr, lead-acid gel-cell
Charger:	500mA float charge, 2amp max fast charge Short circuit protected, low battery voltage cutoff
AC Power:	115VAC, 0.8-amp typical (20-amp in rush current)
DC Power:	12W max at 13.8VDC

Physical Specifications

Size:	15.5” x 13.4” x 6.5”
Inside radio or cellphone space:	10” x 7” x 3”
Weight:	< 22 lbs.
Temperature:	Operating 0-60°C without battery and charger 0-40°C with battery and charger

Options

Expansion modules 16 input/output (limit of 3)
Real-time clock/printer
1 minute of user programmable voice storage (limit of 4 minutes)
2nd PSTN line
Radio cable for Motorola RNET radio
Radio cable for Motorola Radius radios
Paging option: 2-tone, POCSAG through radio and TAP/IXO for phone
DeadBolt Phone Line Lighting Arrestor
International power supply

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See Zetron price list for option pricing. Specifications subject to change without notice.

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