

## A complete Central Monitoring Station (CMS) on a single PC

### General

**SENTINEL is a sophisticated PC card hardware accompanied with a unique driver and software that together combine a complete Central Monitoring Station. The same PC card with a different driver can be installed as a "Smart" Repeater System. The SENTINEL is a dual telephone radio monitoring card and when acting as a repeater it can be used with a wide range of communication medias, including long-range radio, telephone, GSM, Internet, etc. SENTINEL is ideal for Monitoring Stations, Communities, Campuses, Industrial Complexes, Medical Help, etc.**

SENTINEL hardware consists of a Radio/Telephone Decoder (SENTINEL CMS), and a Smart Repeater Station (SENTINEL SRS). The SENTINEL Management Application is a window-based monitoring software called ANDROMEDA. The whole system can be installed on a single PC (for small monitoring stations) as well as on a TCP/IP PC network (for large monitoring stations).

The two main components of the system, the SENTINEL PC card and the ANDROMEDA software, are fully integrated with each other, but still can be separately purchased.



The SENTINEL CMS is expendable, allowing customers to start with as little as two telephone lines and purchase more telephone lines and/or radio-receiver links. The SENTINEL Smart Repeater Station (SRS) utilizes PIMA unique bi-directional communication with the CMS for efficiently relaying events minimizing transmissions air time. Each SENTINEL card is driven by PIMA's proprietary MCard™ technology that incorporates multi-protocol support for the monitoring station. The MCard™ enables upgrading and expanding the number of inputs/links and the supported protocols without any hardware changes.

### SENTINEL Card Features

- A PCI card; up to eight cards can be installed in a single PC without the need for additional hardware and software
- Support of most popular reporting formats including PIMA proprietary improved reporting format PAF™; each line/link can support several formats
- Proprietary MCard™ driver technology for easy on-site upgrades and updates
- Automatic testing of telephone lines and/or radio channels (as specified by user) with an internal watchdog circuit alerts any failure; When acting as a repeater, failures and status reports are sent to the SENTINEL CMS



### ANDROMEDA Software Features

The following ANDROMEDA features assist the CMS operator to have a smooth and efficient working environment:

- Window-based application with an optional network installation for numerous shift operators
- Multi-language support: English, Spanish, Russian, Turkish, Greek, Chinese, etc.
- Reception, logging and display of alarms from SENTINEL CMS
- Powerful Report generator with built-in report designer

- Bi-directional communication (i.e., 'Acknowledge' handshake between the SENTINEL CMS and SRS)
- A single card with a sophisticated decoder, supporting both long-range radio and telephone channels
- Support of even very weak radio signals by decoder's improved noise filtering
- Test Report
- Working in different radio network topologies (star, serial, and combination of the two)
- Events are displayed at the repeater (RMS) while being sent to the SENTINEL CMS

The SENTINEL CMS interfaces to PIMA's ANDROMEDA Monitoring Management application (as well as similar applications, e.g., FBII, Surgard, SIMS and SIS).

- Event colors for visual indication and sound notification
- Sound notification of alarm events
- Displays customer event history and map (bmp/jpg) linked to alarm event
- Password protection for login/logout
- Shows shift operator action history on alarm
- Configurable event description and reaction
- Query/search capability

### PIMA Solution Advantages

PIMA offer a complete solution that includes the intruder alarm control panel, the communicator, the receiver, and the monitoring management application. PIMA solution is an integrated one and it has been tested world-wide to perform as described. SENTINEL is a unique solution that incorporates both telephone and long-range radio in a single card.

The complete PIMA solution helps any monitoring station (small as well as large) save in setup expenses and operational costs. There is an answer to any typographic and/or network requirements for main and backup channels. PIMA control panels incorporate telephone, GSM, and long-range radio communication. SENTINEL repeaters support telephone, GSM, and long-range radio communication as main and backup channels while other backup options, as special leased lines, internet etc., are also available per request.

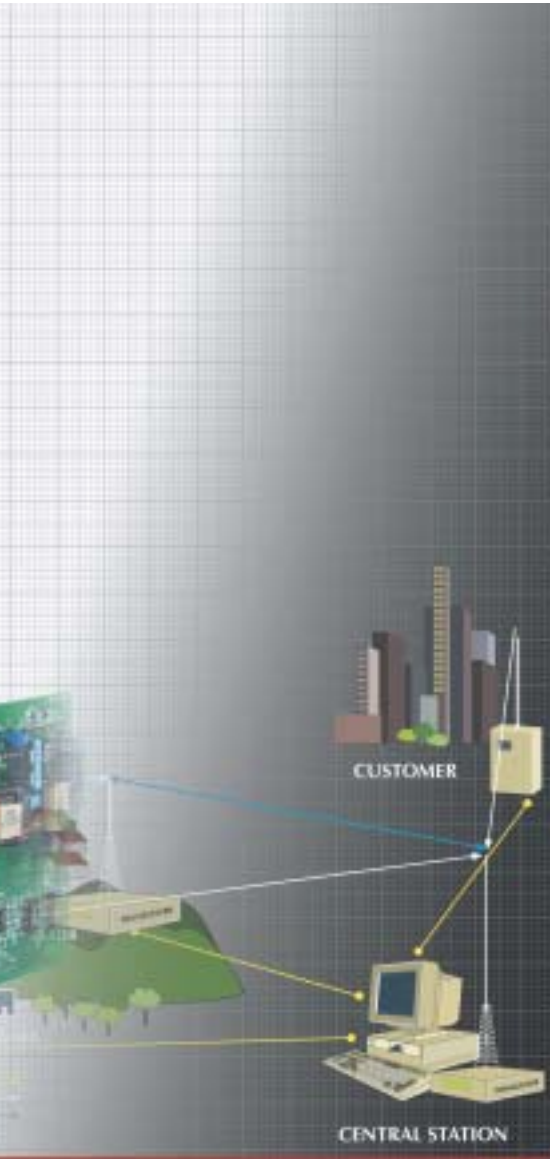
### Minimum PC Requirements

#### SENTINEL Receiver/Repeater

Any PC compatible desktop computer with: PCI free slot, keyboard, screen, floppy disk drive, DOS or Windows 95/98SE/ME operating system

#### ANDROMEDA

- A Pentium III 1000MHz PC
- keyboard, mouse, SVGA screen
- Windows 98 or later operating system
- 128 Mb RAM (memory)
- Sound card
- CD drive (for installing the software)
- 1GB hard disk capacity
- a free RS-232 COM port



## Technical Specifications

### Inputs

Each SENTINEL CMS card supports 4 telephone lines and 2 radio channels

### Outputs

**Computer Printer Output:** PC's Parallel interface  
**Data Output:** PC's Serial interface RS-232

### Supported Dialing Methods

#### Pulse:

**Formats:** 4-2, 4-1, 3-2, 3-1  
**Frequency:** 1800Hz/1900Hz  
**Reception Speed:** 10, 14, 20, and 40 pps  
**Error Checking:** Double round / check-sum  
**Handshake and Kiss-off:** 1400Hz/2300Hz Hi/Lo

#### DTMF:

**Formats:** 4-2, 4-1, 3-2, 3-1, Contact ID  
**Reception Speed:** 10, 20, and 40 pps  
**Error Checking:** Double round / check-sum  
**Handshake and Kiss-off:** 1400Hz/2300Hz Hi/Lo

#### FSK Format:

PAF™ - Pima Advanced Format,  
 NPAF™, SIA, D.e.s.k

### Radio

**Radio Reception Formats:** PAF™, NPAF™ Intrak2000, Milcol D, D.e.s.k., other vendors formats and variations of these formats

### Event logging during Monitoring

**Management failure:** SENTINEL CMS shall buffer last 200 events with full details

### Dimensions

**Size:** 340 (L) x 107 (W) x 22 (H) mm  
**Weight:** 570 gr (including wires)

**PIMA** ELECTRONIC SYSTEMS LIMITED



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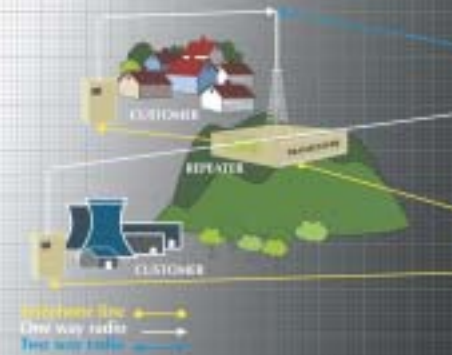
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All specifications are subject to change without prior notice



# SENTINEL ALARM MONITORING SOLUTION

A complete  
Central Monitoring  
Station (CMS)  
on a single PC



**PIMA** FOR BETTER PROTECTION