

Application Story

Fire Alarm Management via SMS Direct

Overview:



Fire Alarm Control Panel (FACP), or Fire Alarm Control Unit (FACU), is the controlling component of a Fire Alarm System. The panel receives information from sensors designed to detect changes associated with fire, monitors their operational integrity and provides for automatic control of equipment, and transmission of information necessary.

Most FIRE panels have a serial port output as this is required by law in some European countries. Usually large organizations have intervention teams for fire alarm management: ALARM/FAULT message are sent to professional personnel.

Many alarm systems have modem included (for connection to monitoring center). The particular fire-alarm may have RS232/RS485 serial port. When a general ALARM/FAULT message is generated, M1000 will send an SMS message with the information from the fire-panels display. All data on the display is sent, so one can see where the alarm has taken place or what fault type has occurred.

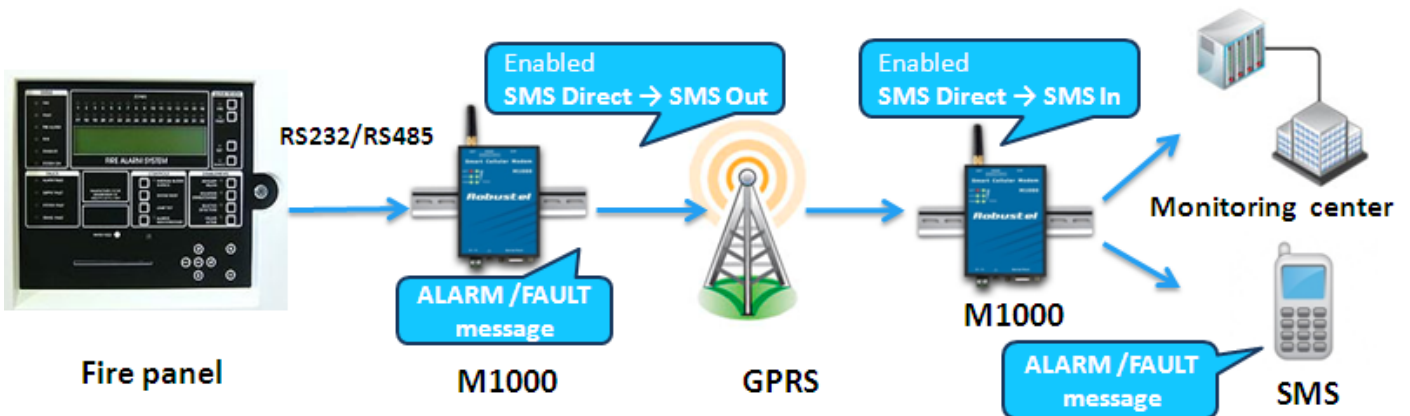
Objective: send ALARM or FAULT message from fire-panels

Typical fire alarm management includes:

- Transparently converts serial data to short message or vice versa **without using AT Commands**.
- Receive updated operating status information by verifying integrated information and power status.
- Detect fire panel malfunctions, notify related personnel and monitoring center for immediate response.
- ALARM/FAULT messages may include: site name, building name, detector location, fault type, alarm or fault.

Solution:

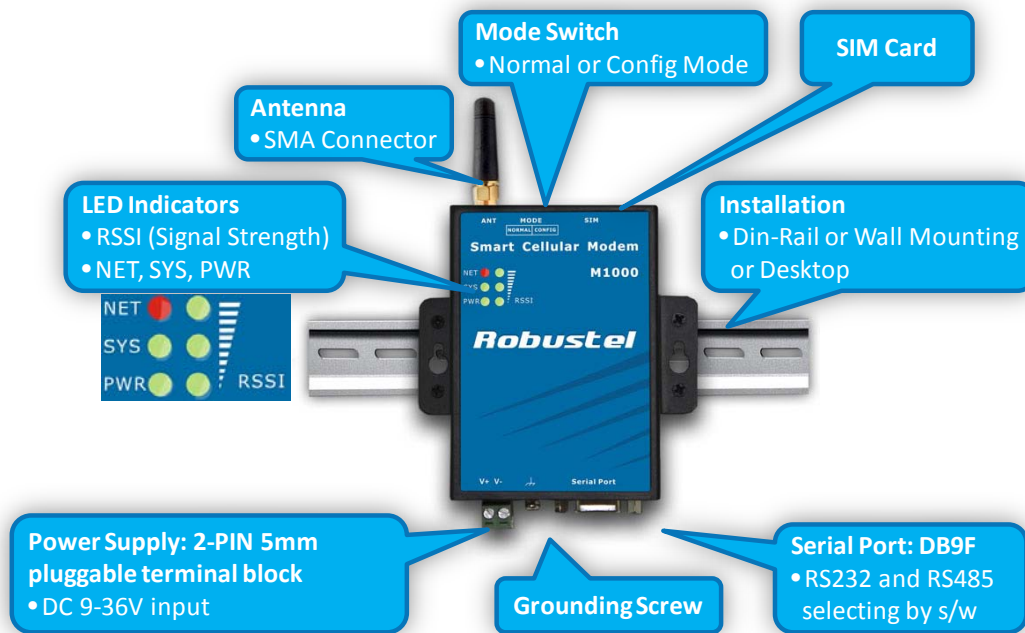
Each Fire Alarm Control Panel is connecting to a M1000 Industrial Cellular Modem via serial port by using GPRS



Procedure:

1. At remote site, M1000 connects to fire panel via serial port. When fire panel trigger ALARM or FAULT data, M1000 will transparently convert serial data to SMS or ASCII/Unicode characters w/o AT commands.
2. At monitoring center, PC connects to M1000 via serial port. When M1000 receives the ASCII/Unicode characters, it will auto convert the characters to SMS and send to preset mobile numbers.
3. During sending/receiving SMS, no AT commands needed.

Why Robustel:



- **Featured SMS Direct mode which can transparently convert serial data to SMS or vice versa without using AT Commands. Verification of incoming Caller ID is implemented to block un-authorized users.**
- **Perfect EMC performance: compliant to IEC61000-4 series high level standard to meet harsh environment demand**
- **Wide operating temperature range from -25 to 70 degrees centigrade**
- **Built-in industrial grade Cinterion wireless module**
- Control via AT commands (Hayes 3GPP TS 27.007 and 27.005).
- GPRS, TCP/IP, SMS, CSD access via AT commands.
- RS232/RS485 selectable by software, additional one digital input and one digital output.
- Six LED indicators provide signal strength (RSSI) and status.
- The metal enclosure can be mounted on a DIN-rail or on the wall, also with extra ground screw.
- Supports Modbus RTU slave protocol, converts alarm to SMS without using AT commands.
- Auto reboot via SMS/Caller ID or during a preset time of a day.
- Remote configuration via SMS.
- Firmware upgrade via serial interface.

Robustel

➤ www.robustel.com ➤ info@robustel.com

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