



*****CASE STUDY** **CASE STUDY*****

Alpha Micro Components and GE Security Design Award Winning GPRS/GSM Remote Alarm System

BRIEF

Securitas, a security company founded in Sweden, approached GE Security, one of the leading suppliers of Security and Life Safety Technologies, to design a new alarm system that could be deployed throughout Scandinavia and the rest of Europe, where access to wired communications is limited. GE Security chose Alpha Micro Components as their technology partner for its expertise in GSM and GPRS, technologies.

Securitas wanted to offer their existing and future customers remote monitoring of their Alarm systems, so they approached GE Security to develop a new system with this capability. The system would be able to send alarm alerts and video alerts from remote sites, speeding up response times and reducing unnecessary responses to false alarms from more than 10,000 network installations. For this, GE Security needed to develop a GSM and GPRS reporting module.

SOLUTION

GE Security with help from Alpha Micro designed a complex communication module called the CS7002 - a multifunctional GPRS,



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GSM, SMS communication unit, designed to transmit information triggered by an alarm system to a mobile phone or an Alarm Reporting Centre (ARC), using a GSM wireless network. The module, a first of its kind, is primarily for residential and small office use, but can also be adapted for commercial applications.

BENEFITS

The alarm system is equipped with different sensors including a camera capturing video clips of the event which triggered the alarm. These video feeds are processed by a special video unit (VVMIQ) and sent through the GPRS module to the monitoring centre helping the operating team of the system to distinguish between a

false alarm and a real emergency. This new function helps to reduce the costs of the companies using such systems as they no longer need to attend false alarms in person. The time for recognition of a real emergency is shortened and the police or other services can be alerted quicker, whilst being provided with exact information about the situation at the property. The security team is able to recognise the nature of the alarm through the different categories such as fire alarm, burglary alarm, medical alarm, panic alarm etc...

Alarm reporting can be done using the audio channel in all supported protocols or in SIA and Contact ID format using TCP/IP connection over GPRS to a compatible Osborne Hoffman network receiver. Alarm reporting can also be done through the audio channel in combination with a CS535 voice module or via SMS to an SMS compatible monitoring station. Furthermore, the GSM can be used to provide remote system operation and 2-way audio with the CS534 module.

The CS7002 can report an SMS directly to an end-user's mobile phone using the same text indication and language as displayed on the keypad. This is useful when end-users want to monitor their own installations or just need to be kept informed about the report sent to the central station. A central station can also work with the GSM network operator to receive the messages directly from the SMS server.

GE Security was looking to design in-house a new TCP/IP module for the alarm system, which would have taken up much time and effort. Through working with Alpha Micro, they were able to use Alpha's own module as a base from which all necessary programming and testing could be carried out. This significantly reduced the time-to-market of the project, which, for such a complex device, is normally protracted. GE Security greatly benefited from Alpha Micro's close partnership with SAGEM, using their secured laboratory testing facilities and engineers based in France, where they conducted a number of tests.

Wired communications are becoming harder to access in remote locations and new connections are often GSM. The CS7002 offers the voice reporting function for those people who no longer have a PSTN line, or for security backup reasons. The CS7002 can report via all reporting protocols available in the panel, such as SIA, CID, Fast Format and even pre-recorded messages from the CS535 voice module. It's easy to install and by simply inserting a SIM card the network connection happens automatically.

GPRS allows the CS7002 to report all events over an IP network to an OH2000-NETREC IP receiver. The advantage of the technology is that it can remain continually connected to a network. The CS7002 will get an IP address from the DHCP pool available at each GSM cell and the network will then allow to exchange data whenever needed. A configured poll message can then monitor the connection between CS7002 and the receiver. The CS7002 fully supports remote up/downloading of all the panel settings by connecting to the IP address assigned to the CS7002.

The CS7002 GPRS as part of the GE Security's video verification module (VVMIQ) was nominated 'Best New Product' in the Detektor International Awards ceremony in Sweden.

CS7002 Technical Specifications

- SMS, Voice and Data communication over GPRS and the GSM data channel.
- Remote control of the intrusion system via SMS
- Compatible with the latest technology.
- Primary reporting as well as dual and backup reporting available.
- Easy to install.
- Can report to 16 different end-user telephone numbers.
- End-users receive simple text messages in their local language.
- Supports low credit and expiry control for pre-paid SIM cards.
- Full replacement of analogue PSTN connection.
- Supports Audio listen-in and DTMF control via CS534.
- Supports SIA/CID format over TCP/IP to central station.
- Instant GPRS connection or connect only when reporting modes.
- High Speed Up/Download (9600 baud).

Further information can be obtained from:
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