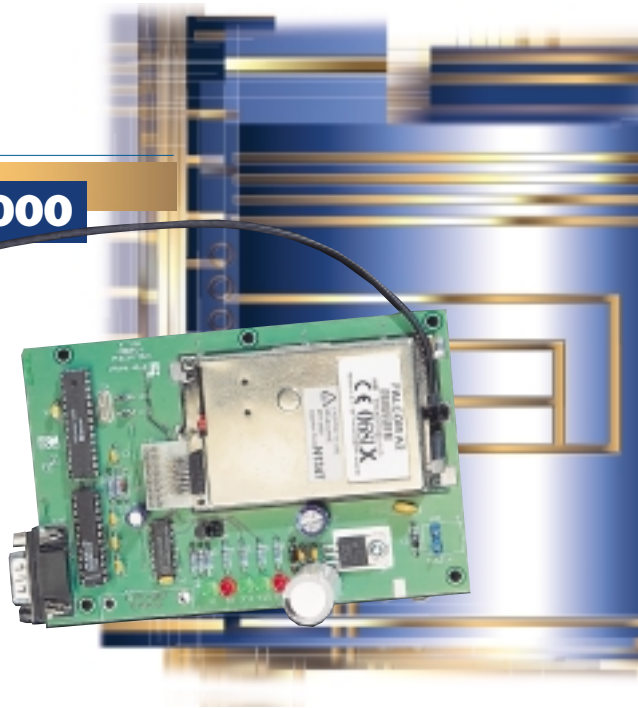
GSM Modem

New for 2000



The GSM Digital Mobile Network offers an alternate communication path for alarm transmissions, pager style alarm messages and PC Direct. By connecting an Inner Range GSM Modem to the Concept 3000 or Access 4000 system via a UART port and using the "GSM Data" Comms Task, the Concept system is able to use the GSM mobile phone network to:

- **Accept a data call from a PC running PC Direct and communicate at 9600 Baud**
- **Send IRFast to an FE100 Central Station Receiver as either the main communications path or as a backup task**
- **Send text alarm information to any GSM mobile phone using the GSM Short Message Service (SMS)**
- **Accept text commands sent from any GSM (with SMS) mobile phone to control areas, home auxiliaries and zone isolations and to report status changes back to the mobile phone**

The status and call progress of the GSM Modem can be followed or inspected via a comprehensive review log, including display of received signal strength to ensure installation is reliable.

Various GSM networks offer competitive rates for data calls and sms services, allowing the "GSM Data" Comms Task to be used as the primary communication path.

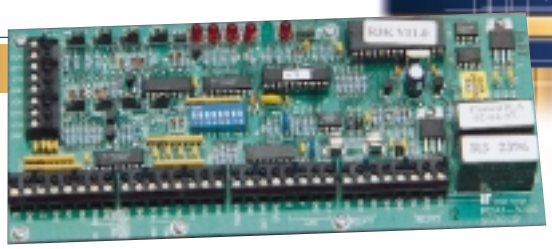
Controlling a Concept 3000 / Access 4000 via a GSM mobile phone

The GSM SMS can be used to send short text style commands to the Concept 3000 or Access 4000.

- Turn on/off a home auxiliary
- Turn on a home auxiliary for a specified time in minutes
- Turn on a home auxiliary for a specified time in seconds
- Turn on/off an Area
- Request the current name and status of 6 home auxiliaries
- Request the current name and status of 6 areas
- Isolate/Restore a zone
- Discard pending SMS messages waiting to be sent

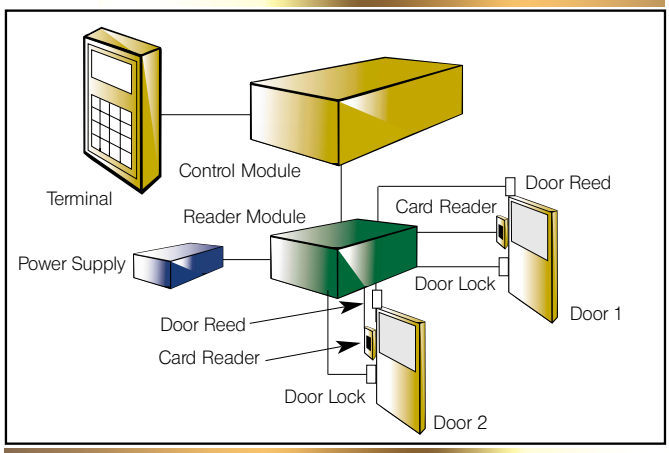
All actions are recorded to review and a message is sent back to the GSM mobile phone to confirm the action

Reader Module 993012



The Reader Module provides an interface for Card Reader Access Control and Security. The alarm system in specific Areas may be turned on and off upon presentation of a valid card at a Card Reader. In addition, Dual Card, Card plus PIN, and Anti-Passback requirements may be assigned on a "per door" basis when programming the system. Door Open Too Long (DOTL) and Tongue Sense inputs are also provided, as well as outputs for indication of Valid or Invalid requests for access.

- **Operates in Single Door or Two Door mode. (Programmable)**
- **Single Door mode allows Entry and Exit Readers on one door**
- **On-board Door Lock Relays provided**
- **Supplied in a plastic utility enclosure for easy mounting**
- **Inputs for monitoring of Door status plus spare Zones for detectors**
- **Compatible with 5 Volt or 12 Volt Readers (Selectable)**
- **"Backup Card" option provides stand-alone operation in the event of loss of communications with the Control Module**
- **Valid / Invalid indication outputs**
- **Separate Tamper connection**
- **On-board diagnostic LED's assist with troubleshooting**
- **Fuse protection for LAN and external Power Supply connection**
- **Request to Enter (REN) and Request to Exit (REX) inputs provided for local or remote Door release**
- **Operates with all common Magnetic swipe and Wiegand readers without the need for any additional interface**



SPECIFICATIONS		
Physical		
Cabinet Dimensions (mm)	238(L) x 118(W) x 72(D)	
PCB Dimensions (mm)	204(L) x 93(W)	
Installation Environment	0°-40°C @ 15% to 85% Relative humidity (non-condensing)	
Electrical		
Power Supply Input	11-14V DC (Typically from separate external power supply)	
Operational Current Min:	70mA (No Relays active & no external load)	
Max.	210mA with Relays & LED outputs active	
Fuse Protection	500mA LAN +, Reader+ 12V & T5 +ve	
Inputs		
Zone Inputs	7 (May have predefined functions depending on programming options selected)	
System Inputs	Cabinet tamper Door Forced Low Voltage Illegal Card - Reader 2	LAN communication status Door Open Too Long Illegal Card - Reader 1
Separate Cabinet Tamper Input	Yes	
Outputs		
Physical Auxiliaries	4 (Typically used for valid/Invalid indication)	
Max. switchable current per Aux.	200mA	
Relays	2 (Typically used for Lock control)	
Max. switchable current per Relay	2A	
Max. combined output current	LAN+, Reader +ve & T5 +ve must not exceed 400mA (LAN and Reader power may be sourced from a separate Power Supply if necessary)	
Ordering Options		
Standard	993012	

Flexibility Plus!

The versatile hardware and software design allows for each Reader to be configured independently, even allowing for mixed reader technologies to be used on the same module. Heavy duty relays are provided on-board for lock switching along with "Valid" and "Invalid" auxiliary outputs to control Reader LED's and/or Buzzers

Intelligent Reader Module 994012

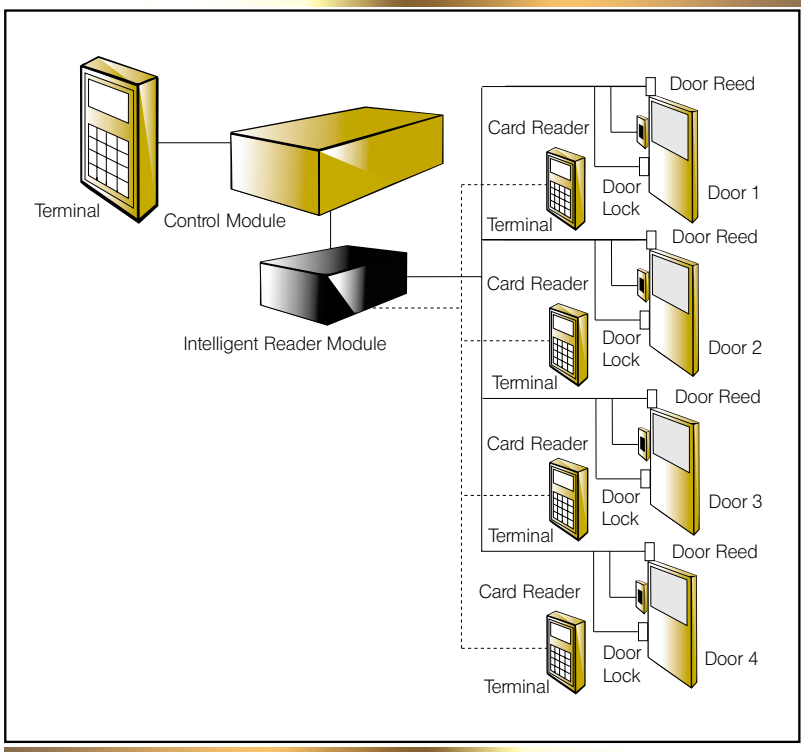
New for 2000

The Intelligent Reader Module provides an interface for up to 4 Doors using 4 Card Readers or, if used in conjunction with the Intelligent Reader Expander board (994013), up to 4 Doors with Card In / Card Out operation using 8 Card Readers. Not only does it offer door capacity in excess of the standard Reader Module, but incorporates a stand-alone operation feature. The Intelligent Reader Module downloads and maintains relevant data from the Control Module in order that it may continue to control door access in the event of LAN communication failure or damage to the Control Module etc.

The Intelligent Reader Module will also support a local network of up to 8 Terminals whilst "offline". Dual Card, Card plus PIN, and Anti-Passback features continue to operate on a "per door" basis.

Attached Terminals operate in an "Access Control" mode, whilst the Intelligent Reader is offline. An additional exciting feature of the Intelligent Reader Module is the inclusion of technology enabling these Terminals to perform the full range of programmed system operations whilst communication with the Control Module is intact, as if they are connected directly to the Control Module.

- **Access Control of 4 Doors via 4 Card Readers (Expandable to 4 Door Card In/Card Out operation via 8 Card Readers with the use of the plug-in Intelligent Reader Expander Card 994013)**
- **Access Control functions continue in the event of LAN failure or damage to the Control Module**
- **Normal User permissions, PIN's and Cards may be used whilst offline (Back up cards not required)**
- **Supports a local network of up to 8 Terminals whilst offline**
- **Terminals have full functionality whilst the system status is normal**
- **Events are recorded to review within the Intelligent Reader Module whilst offline and then down loaded to the Control Module when communication is re-instated**
- **On-board Door Lock Relays provided**
- **Supplied in a metal enclosure for easy mounting**
- **Inputs for monitoring of Door status plus spare Zones for security detectors**
- **Compatible with 5 Volt or 12 Volt Readers (Selectable)**
- **Valid / Invalid indication outputs**
- **System Inputs monitor LAN status, fuses, AC power, battery condition, cabinet tamper and lock fault problems**
- **On-board diagnostic LED's assist with troubleshooting**
- **Fuse protection for LAN and external Power Supply connection**
- **Request to Enter (REN) and Request to Exit (REX) inputs provided for local or remote Door release**
- **All Card Reader interfaces operate with common Magnetic swipe and Wiegand readers without the need for any additional interfaces**
- **Each Card Reader may be independently configured, thus allowing a combination of Card Reader technologies**
- **Door numbering need not follow any pre-determined sequence**



Intelligent Reader Expander Board 994013

The Intelligent Reader Expander Board allows the Intelligent Reader Module to control up to 4 Doors with Card In / Card Out operation using 8 Card Readers. The increased number of Card Readers in no way compromises the features or offline functionality of the Intelligent Reader Module. All Card Reader inputs can be configured independently to use any of the common Magnetic swipe or Wiegand technologies and do not require any additional hardware to do so.

On-board Intelligence & Flexibility

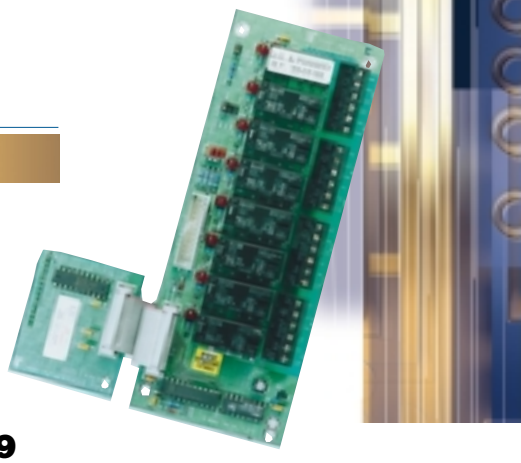
The Intelligent reader Module effectively combines LAN fault stand-alone operation with enhanced feature design. Terminals connected locally to the Intelligent reader module continue to serve their Access Control functions whilst the module is offline and then resort to full system functionality as soon as communication with the Control Module is restored. The intelligent reader Module has been specifically designed to appease those who demand the highest levels of system integrity and contingency planning

SPECIFICATIONS		
Physical		
PCB Dimensions (mm)	427(L) x 180(W) x 45(D) (Including Heat Sink)	
Installation Environment	0°-40°C @ 15% to 85% Relative humidity (non-condensing)	
Electrical		
Power Supply Input	18V AC from Transformer supplied	
Inputs		
Zone Inputs	8 General purpose Zone Inputs	
System Inputs	Cabinet tamper	LAN communication status
	Low Voltage	Lock Fault
	Battery Test	AC Fail
	Low Battery	LAN Fuse
	Detector Fuse	Illegal Card
	Door Tamper	Door Forced
	DOTL	
Door Inputs	Door Reed, REX, REN, Tongue Sense per Door	
Reader Ports	4 (Expandable to 8 using Intelligent Reader Expander 994013)	
Outputs		
Relays	4 (Typically used for door locks)	
Physical Auxiliaries	24 (8 General purpose; 16 dedicated)	
Ordering Options		
Standard	994012	

Important Note:

Opto-coupling provides 5KV isolation between the Intelligent Reader's local LAN and the main system LAN

Relay Boards



8 Relay Expander Board (Control Module) 993082C

The 8 Relay Expander provides low voltage, high current relay outputs, offering a general purpose interface in applications such as warning devices, air-conditioning, process control and access control including door locks, lift call and lift floor selection. One board can be connected to the Control Module via the Bus Latch PCB to provide 8 Relay outputs. If extra relays are required, they can be installed in Mini or Universal Expander Modules using an expander version of the 8 Relay Expander board 993082E.

8 Relay Expander Board (Expander Module) 993082E

This version of the 8 Relay Expander board has all the functionality of the Control Module version but is designed to plug into the Universal Expander. One Relay Expander board may be used on a Mini Expander and up to 3 Relay Expander boards can be "daisy chained" on a Relay Extension cable (605019), providing options of 8, 16 or 24 Relay outputs.

Relay Extension Cable 605019 (Suitable for the 993082C and 993082E)

This 44cm extension cable allows Relay boards to be mounted or housed away from their respective Control Module, Mini Expander or Universal Expander Module. Multiple sockets allow up to 3 relay boards to be connected to the one Universal Expander Module.

Relay Interface - DPDT 990020

This single Relay interface provides DPDT Relay Contacts for Auxiliary control and is activated by Concept 3000 / Access 4000 Auxiliary Open Collector outputs.

	993082C	993082E
Physical		
PCB Dimension	180(L) x 68(W)	180(L) x 68(W)
Installation Environment	0°-40°C @ 15% to 85% Relative humidity (non-condensing)	
Electrical		
Power Supply Input	11-14V DC from Host Module or Separate External Power Supply	
Operational Current Min:	60mA per relay when energized	
Max:	480mA with all Relays energized	
Relays	8	
Max. switchable current per Relay	10A @ 30V DC (Resistive Load)	
Max. switched output current	To be included within the constraints of the Host Module or other Power Supply Source	
Ordering Options		
Standard	993082C	993082E

Also Available	
2 x 10 Amp Relay Board Connected strip of 8	993083M
2 x 10 Amp Relay Board	993083S
8 x 5 Amp Passive Relay Board	993084
1 X 2 Amp DPDT Relay Interface	990020

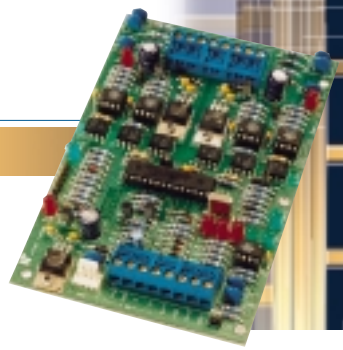
Important Note:

Relay boards plus other devices powered from the Expander Module must not exceed the maximum Auxiliary current allowed. Expander current is exceeded if more than 16 relays are energised at the same time.

A separate external power supply can be connected to terminal T2 of the 8 Relay Expander board whenever the Relay board power requirements exceed the current available from the Expander.

If an 8 Relay Expander board is connected to a Mini Expander that is powered from the LAN, a separate external power supply must be used

LAN Isolator 993080



Installation of the LAN Isolator within a Concept 3000 or Access 4000 system provides opto-isolation of the LAN cabling with an optional LAN "loop" wiring feature. The result is elimination of any physical connection between isolated sections and the ability for the unit to suspend communications in any section where cable faults and tamper conditions are detected.

Earth loop problems may be overcome, while surge protection, signal strength and LAN cabling distances are enhanced. Outputs are provided for connection to Zone inputs on a system module to provide indication of the status of individual LAN "loops" and "branches", allowing alarms to be activated and reported as required.

- **Opto-coupling provides 5kV isolation between LAN sections**
- **Eliminates Earth loop problems**
- **Improved anti-surge protection**
- **Improved signal-to-noise performance over longer cable runs**
- **Two downlink ports on each unit allow monitored "Loop" wiring or two separate downlink "branches"**
- **Protects sections of LAN from faults or tampering in other sections**
- **"Loop Fail" and "Branch Isolated" alarm outputs can be wired to any standard Zone input**
- **Plastic enclosure supports base and cover tamper switches**

Fig 1 "Branch" Mode

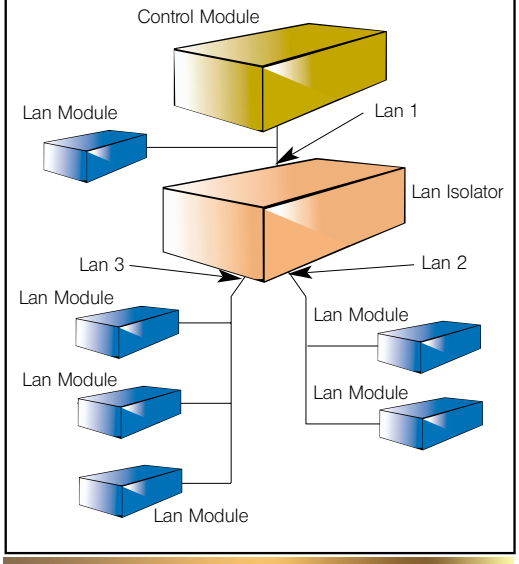
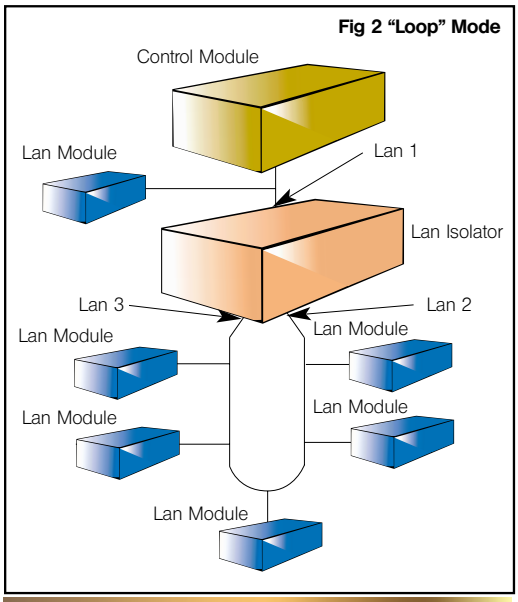


Fig 2 "Loop" Mode



SPECIFICATIONS	
Physical	
Cabinet Dimensions (mm)	238(L) x 118(W) x 72(D)
PCB Dimensions (mm)	140(L) x 92(W)
Installation Environment	0°-40°C @ 15% to 85% Relative humidity (non-condensing)
Electrical	
Power Supply Input	11-14V DC (Typically derived from the individual LAN sections connected)
Operational Current Standby:	LAN 1 section: 28mA LAN 2 or 3 section: 15mA
Busy:	LAN 1 section: 65mA LAN 2 or 3 section: 30mA
Isolation LAN1 - LAN2	5kV
LAN1 - LAN3	5kV
Alarm Outputs	"Loop tail" & "Branch Isolated"
Ordering Options	
Standard	993080