Iris 800 SERIES IP ADAPTERS FOR SECURITY ALARMS

Analogue (POTS) port

ALARM PANEL WITH PSTN INTERFACE

Serial data port

ALARM PANEL WITH SERIAL DATA INTERFACE, VIDEO SURVEILLANCE ETC.
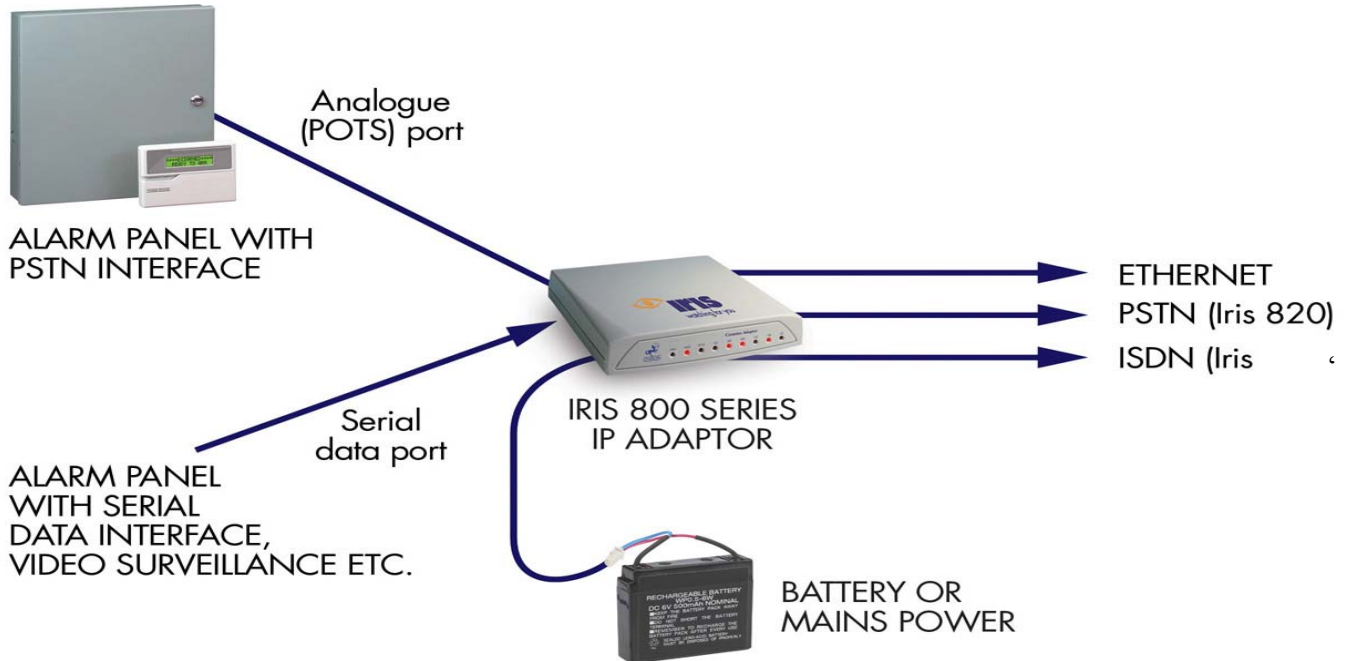
IRIS 800 SERIES IP ADAPTOR

ETHERNET
PSTN (Iris 820)
ISDN (Iris

BATTERY OR MAINS POWER

The *Iris 800* range of IP Adapters are part of Chiron's comprehensive **Iris Alarm Over IP System** for IP security. A wide range of Iris 800 adapters is available which offer a cost effective way to connect legacy alarm equipment across IP networks. With the Iris 800's most alarm systems with a standard PSTN dialler can now be connected across all IP networks including corporate LAN's; ADSL and even GPRS. With this simple approach alarm equipment can be easily migrated away from dial-up links to IP networks thus offering significant communications cost savings. Within the Iris 800 range options also exist for alternative backup communications paths with alarm messages being transmitted over PSTN, ISDN, GSM or GPRS.

An integrated IP Polling mechanism within in the Iris 800 range provides regular confirmation of integrity of the unit and of the communications paths, including backup communications routes. All Iris 800's have this Polling feature, which is part of the total Iris IP system from Chiron.

In combination with Chiron's IRIS IP Management Suite the Iris 800 offers ARCs and Security Managers a flexible, easy to use and cost effective migration to IP. The major features of the Iris 800 series of IP Diallers are:-

➢ All communications across the IP network are protected and secured with a high level of authentication and encryption.

➢ Support calls can be made over the IP network for remote alarm system management and maintenance, using alarm manufacturers standard management software as used on PSTN and ISDN.

➢ Each unit in the Iris 800 range also has a data port that supports Hayes modem commands and can be used by equipment such as Video Surveillance units for connection over the IP network.

➢ Outgoing SMS messages can be generated on alarm panel activity, communications path failures and pin activations. Incoming SMS messages can be used to activate relay outputs. *(Only available on some 800 versions)*

➢ Installation and configuration of the Iris 800 range is very simple in most cases requiring no special knowledge of IP networks or direct access to the Iris 800. For more complex installations (e.g. with SMS) configuration console software for a PC is available.

The Iris 800 range is provided in a boxed unit or PCB format for installation within the protected alarm housing where it can benefit from battery backed power supply and tamper protection.

Models

- Iris 800 – Ethernet interface plus analogue 2-wire 'POTS' port for connection to the dialler and serial data port.
- Iris 820 – As above, with PSTN and ISDN backup routing for alarm transmission.
- Iris 850 – As above, with GPRS and GSM backup routing for polling and alarm transmission and SMS messaging.

For further information please also refer to the Chiron IRIS IP Management Suite documentation

Compatibility With Most Alarm Panels

By connecting to the alarm panel via a standard PSTN dialler interface and with support for several industry standard alarm protocols, the Iris 800 series is compatible with virtually all alarm systems. The Iris range supports Fast Format (Scancom), Contact ID and SIA (Level 3) protocols with automatic detection of the protocol in use.

High Reliability

With a wide range of back-up communication paths available, the Iris 800 range allows highly reliable alarm transmission systems to be installed. The installer has complete flexibility in selecting which primary and backup routes to use. End-end acknowledgement, even over IP, ensures reliable delivery of alarms messages.

Constant Monitoring

Polling over the IP network, with backup over GPRS if required, can be set from 10s for high security sites down to 40 minutes for less sensitive installations. Polling monitors the integrity of the alarm installation and the status of all communications paths (including backups) in use.

Security

The Iris 800 range uses a unique security key to protect against substitution by other devices and to encrypt the alarm messages transmitted. Key lengths up to 256 bits give a very high level of security and the key management procedure does not require the installer to have any access to the key.

Choice of IP Networks

The Iris 800 range uses Ethernet as the interface to the IP network and is compatible with industry standard routers, switches or xDSL modems etc. Connection can be across a private network, public network and even through gateways between private and public networks. Dynamic IP addressing (DHCP) is supported so in most cases the user's IT department does not have to make any special network settings and the installer does not need to have any knowledge of IP networks.

Support for Remote Alarm Management

The Iris 800 range allows the installer to connect remotely to the alarm panel for maintenance purposes, providing this is supported by the panel itself. This can be achieved even across IP networks using the same management tools as are used with traditional PSTN or ISDN connections.

SMS Messaging

The Iris 850 adds a range of SMS messaging features that can be used in association with the standard alarm transmission. Outgoing messages can be used to give site managers etc information simultaneously as alarms are transmitted to the ARC or to provide information not normally sent to the ARC. Secured incoming messages can activate relay outputs for control of on-site equipment.

Ease of Installation

The Iris 800 is designed for anyone familiar with alarm panel installation. No special cabling is required and the installer does not need to have detailed knowledge of IP networks and protocols. In standard installations no special tools are required.

For more complex installations, e.g. where fixed IP addressing is required or where SMS messaging is in use, Chiron can provide configuration console software to run on a lap-top PC and which is connected to the Iris 800 via a standard modem cable.

The Iris 800 series can also be offered as 'desk top' units for applications where there is insufficient room within the main alarm housing or as modules for direct integration by a manufacturer into an alarm system.

Technical Details

Analogue POTS Interface to Alarm Dialler
- Standard 2-wire POTS interface via RJ11 socket
- 60V on-hook with 20mA line feed off-hook
- Emulates standard analogue PSTN line with:
    on/off hook detection
    local dial and ring tone generation
    DTMF tone recognition
- Ring signal generated on incoming call

Ethernet Interface
- 10Mbps and 100Mbps (10/100BaseT) with auto-negotiation
- UTP
- Standard RJ45 socket
- Auto-sensing of Ethernet 802.2, DIX and SNAP formats
- ARP (Address Resolution Protocol) support
- Dynamic IP addressing (DHCP)

PSTN interface (Iris 820, 850)
- RJ11 socket to accept existing PSTN wiring
- Interface conforms to European TBR21 specification

ISDN Interface (Iris 820, 850)
- Basic rate 2B+D, Q.921 and Q.931 Euro compliant
- Standard RJ45 socket
- 'S' bus compatible, Point-Multipoint or Point-Point
- Conformance to European TBR3 specification
- Voice and data calls supported

GSM and GPRS Interface (Iris 850)
- Dual band (900/1800 MHz) for compatibility with majority of GSM networks
- MMCX socket for external aerial connection for optimum aerial location
- GPRS data calls for polling and alarm transmission
- Incoming and outgoing SMS messaging

Data interface
- Standard 9 way D type connector
- Control via 'Hayes' commands
- Baud rates up to 115200 bps
- RTS/CTS flow control
- Data calls over ISDN and Ethernet supported

Polling
- Configurable polling interval (10s to 40mins) set by ARC
- IP receiver address and account number automatically picked up from alarm dialler
- Alternative primary and backup numbers can be loaded by ARC
- Status of all communications links reported to ARC

Alarm Transmission
- Routing of alarm calls over IP/GPRS or PSTN/ISDN determined by dialled number from alarm system
- Alarm messages acknowledgement by receiver to ensure reliable transmission
- Fast Format (Scancom), Contact ID and SIA (to Level 3) supported

Security
- Protection against substitution on IP networks by authentication using CHAP/MD5 algorithm
- Alarm messages over IP encrypted with RC4 cyphering
- Key length up to 256 bits
- Key loaded by ARC – installer does not need to see key

Alarm System Management
- Management of attached alarm system via incoming or outgoing modem call over PSTN, ISDN or Ethernet.
- For calls over Ethernet, another Iris 800 is used to connect remote modem to the IP network.

SMS Messaging
- Four active low inputs generate SMS messages
- Four active high inputs generate SMS messages
- Two normally open relay outputs activated by incoming SMS messages
- Two normally closed relay outputs activated by incoming SMS messages
- Optional validation of caller number for incoming SMS messages

Status Indicators
- LED indicators for:
    ETHERNET connection activity
    GSM/GPRS connection activity
    ISDN status
    PSTN status
    Data port activity
    POTS port activity
    Polling successful

Power
- Supply voltage 12V

Physical
- 150mm x 140mm x 35mm
- Cables provided