



S A M E X

Secure Alarm Multiplexed Encrypted eXchange

Exchange contact status data over an encrypted leased or PSTN line

SAMEX is a system that transmits and receives contact status data from either end of a leased or dialup line (PSTN) using encrypted communications. Each end point will mirror the others inputs on its own outputs. The boards can be mounted in a standard 19" rack.

ENCRYPTION

The encryption process conforms to the Data Encryption Standard (DES) as issued by the US Federal Information Processing Standards (FIPS) Publication 46-2. SAMEX is supplied as a matched pair, the master and slave will only operate together this is due to the initial encryption key stored in each of the CPU's. This 64 bit number is programmed into the actual microprocessor, this ensures that the key can NEVER be read by an external source and the security of the system compromised. The encryption keys are changed on a random time basis about every two hours, this ensures that any chance of record/playback is defeated.

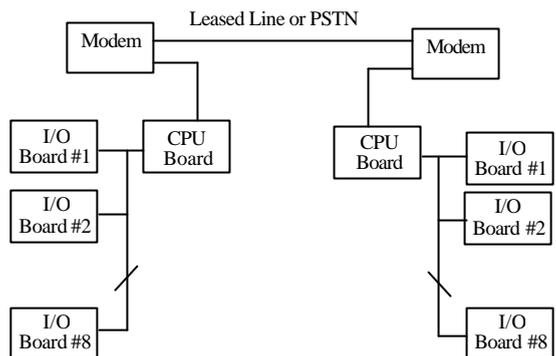
INPUT / OUTPUT

The inputs use opto-isolators and the outputs are by relay changeover contacts. The I/O boards are available in three configurations; input, output and input/output. With an input board at one end and an output board at the other then information can only be sent in **one** direction. If input/output boards were installed at each end then information could be sent **both** ways.

MODEMS

The modems are powered from the CPU board connection and operate at 14.4Kbps, they are available in either leased line or dialup configuration.

CONFIGURATION



SYSTEM STATUS

- There are three system status relays;
- TAMPER**—each CPU has a tamper input, this status is available at the TAMPER relay at each end.
- ENCRYPTION ALARM**—if an error occurs during the decryption process this relay operates.
- COMMS FAIL**—if the communications is lost this relay operates.

SPECIFICATION

- Operating Voltage: 10 to 18 volts DC
- Operating Current: 250mA (typ) per end
- Contact Inputs: min 8 - max 64
- Relay Outputs: min 8 - max 64
- Relay Ratings: 1pole 1A@24vDC
- Board Dimensions: 160mm(w) x 200mm(h)

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