



Crossfire™

Network input / output transponders

DESCRIPTION – Crossfire™ - network input / output transponders are a set of modules that provide a reliable, secure means to accept input points and to control output points.

APPLICATION – A selection of Crossfire modules are available for the system integrator to choose from. Crossfire modules can be housed in a rack-mountable open card cage for indoor applications or in a customer-provided sealed enclosure for outdoor applications for those modules that are outdoor related. Example uses include input monitoring of door-position switches and intercom call buttons and controlling the state of CCTV switchers and contact coils.

Features

- Modular design suitable for a few to a few hundred input and / or output points
- Supported by StarNeT™ 1000 Security Management System (SMS) and Crossfire Network Manager software
- Field proven in a wide range of applications around the globe

Benefits

- Compatibility with Senstar security management software reduces system integration time and risk
- Input / Output (I/O) points and perimeter sensors can be managed on the same field network
- Cost-effective for most sizes of systems

Markets

- Airports
- Government agencies and laboratories
- Correctional facilities
- Power generation sites
- Equipment and storage yards
- Electric and gas distribution
- Military bases

Markets (continued)

- Private estates / VIP residences
- Communications sites
- Petrochemical
- Sensitive government sites

How it works

Senstar's Crossfire field network is a powerful complement to any security system. It features dual physical data paths (fiber optic or RS-422), redundant communications paths for increased reliability, and bi-directional communications for remote sensor diagnostics and secure tamper detection. Redundancy ensures that intrusions are always reported, and control is always available. A Crossfire network can include up to 128 devices including input / output transponders and Intelli-FLEX™, IntelliFIBER™, and MPS-4100 sensor processors.

The main elements of a Crossfire Input / Output (I/O) transponder system include:

- Equipment to interface the Crossfire network to the controlling Windows® PC running either StarNeT 1000 or Crossfire Network Manager software
- I/O transponders
- Card cages
- Power supplies
- I/O cabling
- Field network wiring (typically customer supplied)

Technical Specifications

CROSSFIRE NETWORK INTERFACE PRODUCTS

A Crossfire network can be interfaced to the controlling Windows® PC with either one of two products:

- The Crossfire adapter kit which consists of two RS-232 to RS-422 converters and two 3 m (10 ft.) extension cables
- The redundant switcher / data converter which provides data conversion from RS-232 to either RS-422 or multi-mode fiber optic for both Crossfire channels, and provides a switching capability to allow for redundant control of a Crossfire network by two redundant PCs

PLC-420 INPUT / OUTPUT TRANSPONDER CONTROLLER

The PLC-420 supervises the PLC I/O transponders and reports their status on the Crossfire network. A single PLC-420 can monitor a maximum of 64 inputs and 64 outputs using any combination of input or output transponders described below. The I/O transponders are connected to the PLC-420 by a ten conductor ribbon cable which provides synchronous data and power. Separate in and out ribbon connectors are provided on each I/O transponder to simplify equipment installation. Both the PLC-420 and its associated I/O transponders can be mounted in a NEMA enclosure or in a 19 in. rack-mount card cage. The design simplifies retrofit installations by allowing the use of existing electrical enclosures. 24 VDC input power is required.

I/O-101 OPTO-ISOLATED INPUT TRANSPONDER

The I/O-101 monitors 32 optically isolated switch inputs, reporting their status to the PLC-420 controller. Typically it is used to monitor cell door position switches, intercom call buttons and door open request buttons. Optical isolation improves reliability by limiting the effects of electrical switching transients. Field connections are done via two DB-37 connectors with 16 inputs on each one.

I/O-102 HIGH SECURITY INPUT TRANSPONDER

The I/O-102 monitors 16 end-of-line resistor supervised sensor inputs providing both alarm and tamper supervision. Alarm and tamper status is reported to the PLC-420 controller using 32 input points. The tamper supervision is always active and is designed to prevent tampering with critical signaling switches such as armory door, duress call buttons, emergency equipment shut-down controls and alarm signals. Field connections are done via a DB-37 connector.

I/O-201 OPEN COLLECTOR OUTPUT TRANSPONDER

The I/O-201 controls 32 open-collector outputs, the state of which is controlled by the PLC-420 controller. Typically these outputs are used for triggering CCTV switchers, intercom controllers, telephone interfaces and relay coils where the I/O-201 can be wired to furnish 24 VDC to power the coils. Each output is provided with an LED indicator to indicate that the output is activated, providing a simple method of assessing output status at a glance. Field connections are done via two DB-37 connectors with 16 outputs on each one.

I/O-202 LOW CURRENT RELAY OUTPUT TRANSPONDER

The I/O-202 module provides 16 low current dry contact relay outputs, the state of which is controlled by the PLC-420 controller. Typically these outputs are used for triggering low current door openers, alarm signals, CCTV switchers, intercom controllers, telephone interfaces and contactor coils. Gold plated contacts permit the switching of very low current signals without pitting or resistance build-up. Field connections are done via two DB-37 connectors with 8 relay outputs on each one.

CARD CAGES

Two card cages are available for hosting the PLC-420 transponder controller and associated I/O transponders. One is 19 in. wide and capable of holding 15 modules. The second is 24 in. wide and capable of holding 20 modules.

PLC-430D AND PLC-430F I/O TRANSPONDERS

The PLC-430 is an advanced multiplex transponder designed for high security applications requiring alarm and tamper monitoring, hardware self-testing and remote control. It is controlled by an onboard microprocessor and can be used as an intelligent node in a distributed architecture monitoring system. Alarm, tamper, and remote control are performed by the PLC-430 and forwarded via the Crossfire network over redundant data paths. It is available in two models: the PLC-430/D with 8/4 relay inputs / outputs and the PLC-430/F with 8/8 relay inputs / outputs. 12 to 24 VDC input power is required. The PLC-430 transponder connects directly to the Crossfire network - no PLC-420 controller is required.

POWER SUPPLIES

Two power supplies are available for Crossfire I/O systems – a 24 VDC power supply for powering of the PLC-420 transponder controller, and a 9 V power supply for powering the redundant switcher / data converter.

I/O CABLING

Compatible ribbon cables with a variety of length options are available for connecting the PLC-420 transponder controller to the transponders. Extension cables with female DB-37 connectors at each end are available in lengths ranging from 8 in. to 9 ft.

Specifications are subject to change without prior notice.

Senstar is represented by dealers in over 80 countries.



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