

## Description

This FieldServer driver can be used to poll a Siemens Fire Safety MXL or XLS system or to emulate a Siemens Fire Safety MXL or XLS system with attached modules. Either configuration supports remote monitoring as well as selected command and control functions.

**NOTE: This driver does not support MXL and XLS networked panels together.**

## Connection Facts

| FieldServer Mode | Nodes   | Comments   |
|------------------|---|--|
| Client           | 1 (Only 1 Client allowed. As a Client, the FieldServer can poll panel addresses 1-999). | Only 1 client node allowed on multidrop systems. |
| Server           | 1-99  | Panel numbers from 1 to 99 may be emulated.      |

## Formal Driver Type

Serial, Client or Server

## Compatibility

| FieldServer Model | Compatible | FieldServer Model        | Compatible |
|-------------------|------------|--------------------------|------------|
| ProtoCessor       | Yes        | QuickServer FS-QS-10xx   | No         |
| ProtoCarrier      | Yes        | QuickServer FS-QS-12xx   | Yes*       |
| ProtoNode         | Yes        | QuickServer FS-QS-20xx   | Yes        |
| ProtoAir          | Yes        | QuickServer FS-QS-22xx   | Yes        |
|                   |            | QuickServer FS-QS-3x10-F | Yes        |

\* FS-QS-121x is compatible with MXL Panel. FS-QS-122x is compatible with MXL & XLS Panel.

## Connection Information

**Connection Type:** MXL: RS-232 with NIM-1R configured for Foreign System Interface (FSI) by setting all the switches in SW2 to open (or OFF); RS-485 when using NIM-1W; XLS: RS-232 with connection to RPM module

**NOTE: NIM-1R is no longer supported by Siemens and is therefore considered to be legacy while NIM-1W is common.**

**Baud Rates:** 19200 (vendor limitation)

**Data Bits:** 7

**Stop Bits:** 1

**Parity:** Even

**Multidrop Capability:** Yes

## Devices Tested

| Device               | Tested (FACTORY, SITE) |
|----------------------|------------------------|
| MXL                  | In-house               |
| MXL-IQ               | Field tested           |
| XLS                  | In-house               |
| Cerberus Pro Modular | Factory                |

## Communication Functions

### Client Configuration File Structure

In FSI mode, the NIM-1R or RPM allows the FieldServer to gather data from up to 63 Siemens Panels connected on an MXL or XLS network. When configured according to the default, the FieldServer will monitor two panels (1 and 2) with 8 modules (1 to 8) each.

Two sets of data are collected by the driver. The first is a collection of 19 counters per panel. Each 16-bit counter is incremented whenever the corresponding event occurs. These counters can be read to determine if a new event has been reported to the server.

The counters occur in the following order:

| Event                   | Offset |
|-------------------------|--------|
| Fire Alarm In           | 0      |
| Fire Alarm Out          | 1      |
| Fire Alarm Acknowledge  | 2      |
| Trouble In              | 3      |
| Trouble Out             | 4      |
| Trouble Acknowledge     | 5      |
| Supervisory In          | 6      |
| Supervisory Out         | 7      |
| Supervisory Acknowledge | 8      |
| Security Alarm In       | 9      |

| Event                      | Offset |
|----------------------------|--------|
| Security Alarm Out         | 10     |
| Security Alarm Acknowledge | 11     |
| Status In                  | 12     |
| Status Out                 | 13     |
| Test In                    | 14     |
| Test Out                   | 15     |
| Audible Silenced           | 16     |
| Audible Unsilenced         | 17     |
| System Reset               | 18     |

The second is a collection of bit maps that can be queried to determine which device has reported the event. When an alarm from a device is received, two arrays are updated – one indicating the alarm and the other indicating that the alarm has not been acknowledged. An alarm clear will clear the bit in the alarm array, and an alarm acknowledge will clear the bit in the unacknowledged array. Each of these arrays is optional. To enable one, a Map Descriptor needs to be configured with a message type corresponding to the array as shown in this table:

| Array                      | Msg_Type    |
|----------------------------|-------------|
| Fire Alarm                 | Fire        |
| Fire Alarm Un-Acknowledged | Fire_Ack    |
| Trouble Alarm              | Trouble     |
| Trouble Un-Acknowledged    | Trouble_Ack |
| Supervisory Alarm          | Super       |

| Array                          | Msg_Type  |
|--------------------------------|-----------|
| Supervisory Un-Acknowledge     | Super_Ack |
| Security Alarm                 | Secur     |
| Security Alarm Un-Acknowledged | Secur_Ack |
| Status                         | Status    |
| Test                           | Test      |

### Server Configuration File Structure

The driver can also be used to emulate an MXL or XLS server. Other protocol drivers could then poll remote devices and access the local MXL or XLS server data to set or clear events. In this configuration, an existing Siemens Fire Safety MXL or XLS panel could be replaced with an emulation. Existing clients could poll the emulation driver on the FieldServer to get the same data as from a conventional MXL or XLS server.

Up to 100 panels can be emulated with the driver. Each panel has to be on a unique port and have a unique Node\_ID assigned. A Map Descriptor must be defined for each type of remote device. The following types can be used:

| Device Type             |
|-------------------------|
| Fire Alarm In           |
| Fire Alarm Out          |
| Fire Alarm Acknowledge  |
| Trouble In              |
| Trouble Out             |
| Trouble Acknowledge     |
| Supervisory In          |
| Supervisory Out         |
| Supervisory Acknowledge |
| Security Alarm In       |
| Security Alarm Out      |

| Device Type                |
|----------------------------|
| Security Alarm Acknowledge |
| Status In                  |
| Status Out                 |
| Test In                    |
| Test Out                   |
| Audible                    |
| System Reset               |
| System Date and Time       |
| Analog Volts               |
| Analog Sensitivity         |
| Analog Threshold           |

### Command and Control Functions

| Function                      |
|-------------------------------|
| Un(Silence) Audible           |
| System Reset                  |
| Set Date and Time             |
| Acknowledge Fire Alarm Event  |
| Acknowledge Trouble Event     |
| Acknowledge Security Event    |
| Acknowledge Supervisory Event |

### Analog Functions

| Function            | Description  |
|---------------------|--|
| Request Analog Data | Requests the present value of analog data from a loop of analog devices. The available data is limited to analog voltage, sensitivity voltage and alarm threshold voltage. |

### Unsupported Devices or Protocol Options

| Device         | Details                                  |
|----------------|--|
| Cerberus FC924 | Panel does not support the FSI protocol. |