1   DESCRIPTION

The SNMP driver allows the FieldServer to transfer data to and from devices over Ethernet using the **SNMP version 1** protocol. The FieldServer can emulate either a Server (SNMP Agent) or Client.

The Client can be configured to read values specified by their SNMP Object Identifiers (OID's), which are defined in the MIB file (Management Information Base) of the target device. When acting as an SNMP Agent (Server), the driver makes the contents of specified integer data arrays available to any SNMP Client. The FieldServer MIB file sets out the OID's to use. The driver can send and receive SNMP traps.

The following SNMP data types are currently supported by SNMP version 1:

- INTEGER
- OCTET_STREAM
- TIMER_TICKS
- STRING

The maximum number of traps currently supported is **1023**.

The FieldServer Enterprise ID is 6347. MIB files are generated automatically from the FieldServer configuration files. A selection of standard MIB-2 OID's are supported to allow interaction with popular Network Management packages.

FieldServer Mode	Nodes	Comments
Client	Limited by hardware memory capacity	Each Node is specified by a unique IP address
Server	1	As a Server the SNMP driver can act as a single Node.

2   FORMAL DRIVER TYPE

Ethernet
Client (Active or Passive) or Server

3   COMPATIBILITY MATRIX

FieldServer Model	Compatible with this driver
FS-x2010	Yes
FS-x2011	Yes
FSx25	Yes
FS-x30	Yes
FS-x40	Yes
SlotServer	Yes
ProtoNode	Yes
QuickServer FS-QS-10xx	No
QuickServer FS-QS-12xx	Yes
ProtoCessor FPC-ED2	Yes
ProtoCessor FPC-ED4	Yes

4   CONNECTION INFORMATION

Connection type: Ethernet
Ethernet Speeds Supported: 10Base-T, 100Base-T[1]

5   DEVICES TESTED

Device	Tested (FACTORY, SITE)
MG-Soft MIB Browser and Trap Ringer	Factory
Visual MIBrowser Pro from NuDesign	Factory

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[1] Not all FieldServer models support 100BaseT. Consult the appropriate instruction manual for details of the Ethernet speed supported by specific hardware.

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6 COMMUNICATIONS FUNCTIONS - SUPPORTED FUNCTIONS AT A GLANCE:

6.1 Data Types Supported

FieldServer Data Type	Description (or Device Data Type)
INTEGER	
OCTET_STREAM	Character strings
TIMER_TICKS	Timer values in 1/100ths of a second

6.2 MIB-2 Variables Supported

Many Network Management systems poll these variables to connect to the SNMP Agent.

OID	Description (or Device Data Type)
1.3.6.1.2.1.1.1	sysDescr
1.3.6.1.2.1.1.2	sysObjectID
1.3.6.1.2.1.1.3	sysUpTime
1.3.6.1.2.1.1.4	sysContact
1.3.6.1.2.1.1.5	sysName
1.3.6.1.2.1.1.6	sysLocation
1.3.6.1.2.1.1.7	sysServices

6.3 Read Operations supported

FieldServer as a Client	FieldServer as a Server
SNMP Get Request	SNMP Get Request
SNMP GetNext Request / SNMP Walk	SNMP GetNext Request / SNMP Walk

6.4 Write (Control) Operations supported

FieldServer as a Client	FieldServer as a Server
SNMP Set Request	SNMP Set Request

6.5 Unsolicited Operations supported

FieldServer as a Client	FieldServer as a Server
Receive Traps specified by OID Data stored by matching	Send Traps specified by OID Trap sent based on data change rules, periodic or on

OID or by using OID string values to form lookup string.	source data update.

6.6 Unsupported Functions and Data Types

Data Types	Reason
Only the following SNMP Data Types are supported: INTEGER OCTET_STREAM TIMER_TICKS STRING	Further types will be implemented as required.
MIB-2 variables not specified above	The FieldServer primarily being a protocol converter, these variables are not necessary.

6.7 Unsupported Devices or Protocol Options

Protocol Versions	Details
SNMPv2, SNMPv3	Not supported

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