

## 1 DESCRIPTION

The Canatal Satchnet Protocol Driver allows the FieldServer to transfer data to and from devices over either RS-232 or RS-485 using Canatal Satchnet Protocol Driver protocol. The FieldServer can emulate either a Server or Client.

This driver provides support for the Canatal International implementation of the “Satchwell Network (Full) and Net2 (Reduced)” protocol.

The Canatal Satchnet Protocol Driver can act as a Satchnet Master.

- Any Satchnet device on any serial port (P1-P8, R1-R2<sup>1</sup>) can be polled
- Data from Series 2, 4, 5, 6,8, 9 devices can be polled.
- Data from any 'Table' can be read.
- Data in 'Tables' with “write permission” can be written to by the driver.
- The driver can read/write Bit, Byte, Word, BCD and Float Data.

The Canatal Satchnet Protocol Driver can act as a (passive) Server.

- The driver can be polled by a Satchnet Master and return data from the FieldServer's data arrays.
- The driver can emulate Series 2,4,5,6,8,9 devices.
- All “Tables” can be read/written in accordance with their read/write capability

FieldServer Mode	Nodes	Comments
Client	63	Expansion above 32 nodes normally requires a repeater
Server	63	Expansion above 32 nodes normally requires a repeater

## 2 FORMAL DRIVER TYPE

Serial

Client or Server

<sup>1</sup> Not all ports shown are necessarily supported by the hardware. Consult the appropriate Instruction manual for details of the ports available on specific hardware.

### 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
ProtoCessor FPC-FO2	Yes
ProtoNode	Yes
ProtoCessor FPC-FD2	Yes
QuickServer FS-QS-1010	Yes
QuickServer FS-QS-1011	Yes

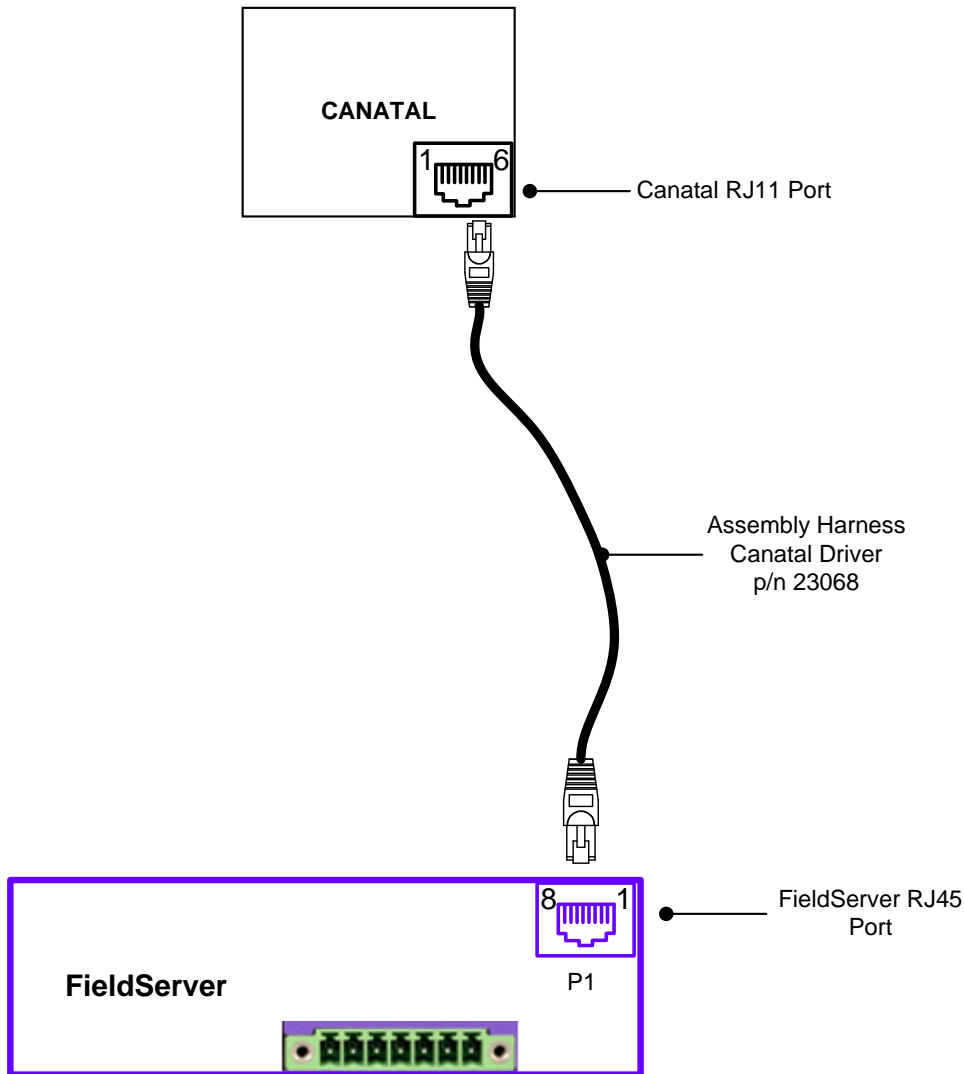
### 4 CONNECTION INFORMATION

Connection type: RS-232 or RS-485 (Two wire, Half-Duplex)  
 Baud Rates: 2400,4800,9600 (Vendor limitation)  
 Data Bits: 7 (Vendor limitation)  
 Stop Bits: 1 (Vendor limitation)  
 Parity: Even (Vendor limitation).  
 Multidrop Capability: Yes

### 5 DEVICES TESTED

Device	Tested (FACTORY, SITE)
Canatal Series 9	Factory
Canatal Series 6,8	Site

## 6 CONNECTION CONFIGURATIONS



### Pinouts

From RJ11	To RJ45	Color
1	6	White
2	1	Black
3	8	Red

### 6.1 Connection Notes

Set Jumper 16, 17 and 18 on the board to position 2-3

### 6.1.1 Interconnecting Cable Characteristics

The interconnecting cable may be composed of twisted or untwisted pair (flat cable) possessing the characteristics below.

- **Conductor Size:** The interconnecting cable shall be composed of two wires of a 24 AWG or larger conductor for solid or stranded copper wires, or for non-copper conductors with sufficient size to yield a DC wire resistance not to exceed 30 ohms per 1000 feet per conductor.
- **Mutual Pair Capacitance:** The capacitance between the two wires in the wire pair shall not exceed 20 picofarads per foot and the value shall be reasonably uniform over the length of the cable.
- **Stray Capacitance:** The capacitance between wires in the cable sheath, with all wires connected to ground shall not exceed 40 picofarads per foot and shall be reasonably uniform over the length of the cable.
- **Pair-to-Pair Balanced Crosstalk:** The balanced crosstalk from one wire pair to any other pair in the same cable sheath shall have a minimum value of 40 decibels of attenuation measured at 150 kilohertz.

An interconnecting cable meeting these specifications will result in a transmission line with nominal characteristic impedance in the order of 100 ohms to frequencies greater than 100 kilohertz and a DC series loop resistance not exceeding 240 ohms.

## 7 COMMUNICATIONS FUNCTIONS - SUPPORTED FUNCTIONS AT A GLANCE:

### 7.1 Read Operations supported

FieldServer as a Client	FieldServer as a Server
Read all Tables for Series 2, 4, 5, 6,8, 9	Provide Data from all Tables for 2, 4, 5, 6,8, 9 series.

### 7.2 Write (Control) Operations supported

FieldServer as a Client	FieldServer as a Server
Write Data in tables with write permission	Store Data in tables with write permission