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FS-8705-47 – 'Cad Comm Serial' Protocol

DATASHEET – Rev 1

DESCRIPTION

This driver is used to exchange data between a FieldServer and a '*Cad Comm*' system provided by Global Software Corporation.

The *Cad Comm* application is a passive listener that can receive appropriately formatted serial messages, parse them and take appropriate action based on the information contained in the message. Typically, it is used to log call records for security, safety and alarm systems. If the FieldServer is serving data obtained from a Fire Alarm panel, then the driver serves sufficient information for the *Cad Comm* system to determine the event type (alarm, trouble etc) and the event address (loop and point number).

The *Cad Comm* system does not acknowledge messages and hence the driver cannot determine that they were received and processed. However, the driver can (by configuration) send a heartbeat message on a time period so that the Cad Comm system knows if the FieldServer is still operational.

The driver is a serial driver using a RS232 / RS485 serial ports to connect between the FieldServer and the *Cad Comm* system. If RS485 is used then no other client / servers are allowed on the network.

The driver provides active server functionality. It cannot be used as a client to poll for data nor can it be used as a server to receive message from the *Cad Comm* system.

The driver is fully compatible with other FieldServer drivers and meets FieldServer's quality assurance standards. The driver was developed by Chipkin Automation Systems, an Approved FieldServer Integrator.

CONNECTION FACTS

FIELDSERVER MODE	NODES	COMMENTS
Active Server	1	Messages do not contain destination and source node addresses. Therefore only one Cad Comm system can be connected to each port.

FORMAL DRIVER TYPE

Serial
Active Server

COMPATIBILITY

FIELDSERVER MODEL	COMPATIBLE
FS-x2010	Yes
FS-x2011	Yes
FS-x40	Yes
FS-X30	Yes

CONNECTION INFORMATION

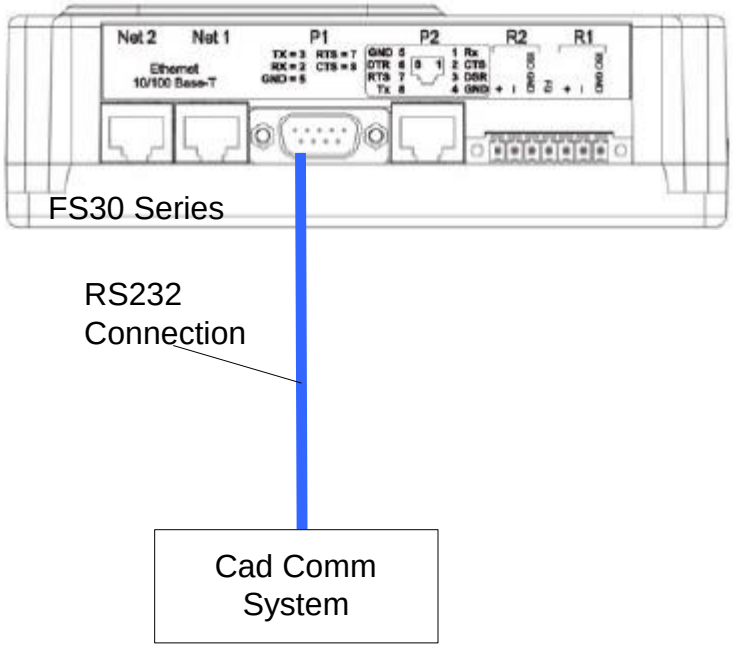
Connection type:	EIA485
Baud Rates:	Driver Supports : 110; 300; 600; 1200; 2400; 4800; 9600; 19200; 28800; 38400; 57600; 115200 Baud *Cad Comm* System supports: To be provided
Data Bits:	Driver Supports : 7,8 *Cad Comm* System supports: To be provided
Stop Bits:	Driver Supports : 1,2 *Cad Comm* System supports: To be provided
Parity:	Driver Supports : Odd, Even, None *Cad Comm* System supports: To be provided
Hardware interface:	N/A
Multidrop Capability	No

DEVICES TESTED

DEVICE	TESTED (FACTORY, SITE)
	Untested

CONNECTION CONFIGURATIONS

FS30 shown as representing FS20, FS30 and FS40



COMMUNICATIONS FUNCTIONS

Each time data in the FieldServer is updated by the downstream device such as the fire alarm panel, the driver will write data to the *Cad Comm* system using this driver.

The message sent are formatted as follows;

Byte	Field	Notes
0	STX	Start of Message
1	Message_Type	'H' Heartbeat 'E' Event (All non heartbeat messages)
2	Event_Type	'A' Alarm (or Fire) 'T' Trouble 'S' Supervisory V' Value
3	Loop_Number(tens)	Also known as 'Block Number' Printed in ASCII format. Values less than 10 are padded with
4	Loop_Number(units)	leading zero
5	Point_Number(hundreds)	Point or device number. Numbers are padded with leading zeroes
6	Point_Number(tens)	
7	Point_Number(units)	
8	Point State / Value	The state or value of the point
9	Point State / Value	Padded with leading zeroes
10	Point State / Value	
11	Point State / Value	
12	Point State / Value	
13	Point State / Value	
14	Point State / Value	
15	Point State / Value	
16	Point State / Value	
17	Point State / Value	
18	Engineering Units string	An ascii string. Spaces if none
19	Engineering Units string	
20	Engineering Units string	
21	Engineering Units string	
22	Engineering Units string	
23	Engineering Units string	
24	Engineering Units string	
25	ETX	End of Message

Sample:

Byte	Contents	Meaning
0	STX	Start of Message

1	E	Event
2	A	Alarm (or Fire)
3	0	
4	1	Loop=01
5	0	
6	1	
7	2	Point=012
8	0	The state or value of the point
9	0	Padded with leading zeroes
10	0	
11	0	
12	0	
13	0	
14	0	
15	0	
16	0	
17	1	Point is On(=1)
18		Spaces because no units
19		
20		
21		
22		
23		
24		
25	ETX	End of Message

RESPONSES

The driver is capable of processing a response to each message it sends. By default the driver does not require a response.

1. A message formatted as above xcept that the message_type='A' for Ack or 'N' for Nak. The remainder of the message can be blank.
2. A simple <ACK> (hex code = 0x06) or <NAK> (hex code = 0x15)

CUSTOMER SUPPORT

CAD Comm Driver for FieldServer was developed by Chipkin, and we are proud to provide support for our products. For technical support, sales and customer service, please call us at 1 (866) 383-1657.

Thanks for choosing Chipkin's products and integration services to meet your building and industrial automation requirements!

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Sales and Customer Service

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REVISION HISTORY

DATE	RESP.	DRIVER VERSION	DOCUMENT REVISION	COMMENTS
21 Mar 2006	PMC	0.00	0	Initial Draft issued for customer review
17 Jun 2021	YC	0.00	1	Updated to latest template