Cresnet/IP

Description

The Cresnet/IP driver allows the FieldServer to transfer data to and from devices over Ethernet using Crestron TCP CIP protocol. This driver allows the FieldServer to communicate with Crestron Control systems or any other device supporting Crestron TCP CIP protocol. Crestron Control systems are gateways to various other Crestron or 3rd party devices e.g. touch panels, keypads lighting controls etc.

This driver is based upon Crestron's TCP_CIP Protocol Specification (OEM Version 1.17 10/6/06) and Cresnet II packet Formats 11/18/2008.

The FieldServer can be configured as a Client or Server.

Connection Facts

FieldServer Mode	Nodes	Comments
Client	252*	Crestron Control systems can control a maximum of 252 devices.
Server	255*	FieldServer can emulate up to 255 Nodes.

* Further restricted to the maximum number of sockets on any FieldServer model.

Formal Driver Type

Ethernet, Client or Server

Compatibility

FieldServer Model	Compatible
ProtoCessor	No
ProtoCarrier	No
ProtoNode	No
ProtoAir	No

FieldServer Model	Compatible
QuickServer FS-QS-10xx	Yes
QuickServer FS-QS-12xx	Yes
QuickServer FS-QS-20xx	Yes
QuickServer FS-QS-22xx	Yes
QuickServer FS-QS-3x10-F	Yes

Connection Information

Connection Type: Ethernet

Ethernet Speeds Supported: 10Base-T, 100Base-T

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

Devices Tested

Device	Tested (Factory, Site)
Crestron CP2E	Factory

Communication Functions

Data Types Supported

FieldServer Data Type	Description (File Type)
Register	16 bit Analog Join
Flag	Digital Join

Propel Item: T28604-21
Revision: 1.B
Protocol Number: FS-8704-21

Read Operations Supported

FieldServer as a Client	FieldServer as a Server
Send HeartBeat Request	Provide HeartBeat Response

Write (Control) Operations Supported

FieldServer as a Client	FieldServer as a Server
Send/Accept Analog Join Update	Accept/Send Analog Join Update
Send/Accept Digital Join Update	Accept/Send Digital Join Update

Functions Described

Analog Registers (Join): Crestron Control systems can accept or send analog join numbers and their values in various formats e.g. 8 or 16 bit join numbers and 8 or 16 bit values. The FieldServer can accept these various formats. The FieldServer will always send analog values in 16 bit format and the analog register number (join number) as 8 bit unless the number is greater than 255 in which case the 16 bit format will be used.

Digital Join: Digital joins are transferred as a single 16 bit value which incorporates both join number and join status.

No Write (Join Update) Confirmation: FieldServer will send join (Analog or Digital) updates to Crestron Control systems, but there is no specified way for join update confirmation from Control systems. Since it is not possible to read back from the control system, the FieldServer will be unaware whether new data has been successfully processed by control system or not. Check with Crestron how to program Control system to provide a separate data update as feedback.

Unsupported Devices or Protocol Functions

Device	Details
Crestron TCP CIP Level	
UDP/IP communication	Not required for current applications
SSL (Secure Socket Layer)	Not required for current applications
Data Packets with Cresnet ID (0x10)	Not required for current applications
Disconnect packets	These will be ignored, standard TCP protocol can detect disconnection
Cresnet Level	
Analogs in super short form	Could conflict with other control packets
Control System Program Restart Message	It will be ignored as 0x10 packets not supported
Sleep (force time) message	Debugging functions
Wake (reset timeout)	Debugging functions
Time/Date	It will be ignored
Multi-Channel Serial Variation	Not required for current applications
Packet Encapsulation	Not required for current applications

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