

1 DESCRIPTION

The Convia driver uses XML syntax to communicate with the Convia Global Gateway device. As a Client the Convia driver reads specified data points from the Convia gateway and stores the data in the FieldServer Data Arrays. The Client driver achieves this by using XML element and attribute syntax. As a Server the Convia driver allows the Convia Global Gateway to use the FieldServer XML Schema syntax to read data from the FieldServer Data Arrays.

FieldServer Mode	Nodes	Comments
Client	20	The Convia driver places no restriction on how many Global Gateways can be accessed. For practical reasons, this number should be kept to approximately 20
Server	1	The Fieldserver as a Server device will appear as a single Server device to the Convia Global gateway

2 FORMAL DRIVER TYPE

Ethernet
Client or Server

3 COMPATIBILITY MATRIX

FieldServer Model	Compatible with this driver
FS-x2010	No
FS-x2011	No
FSx25	No
FS-x30	Yes
FS-x40	No
SlotServer	No
ProtoCessor	No
ProtoNode	No

4 CONNECTION INFORMATION

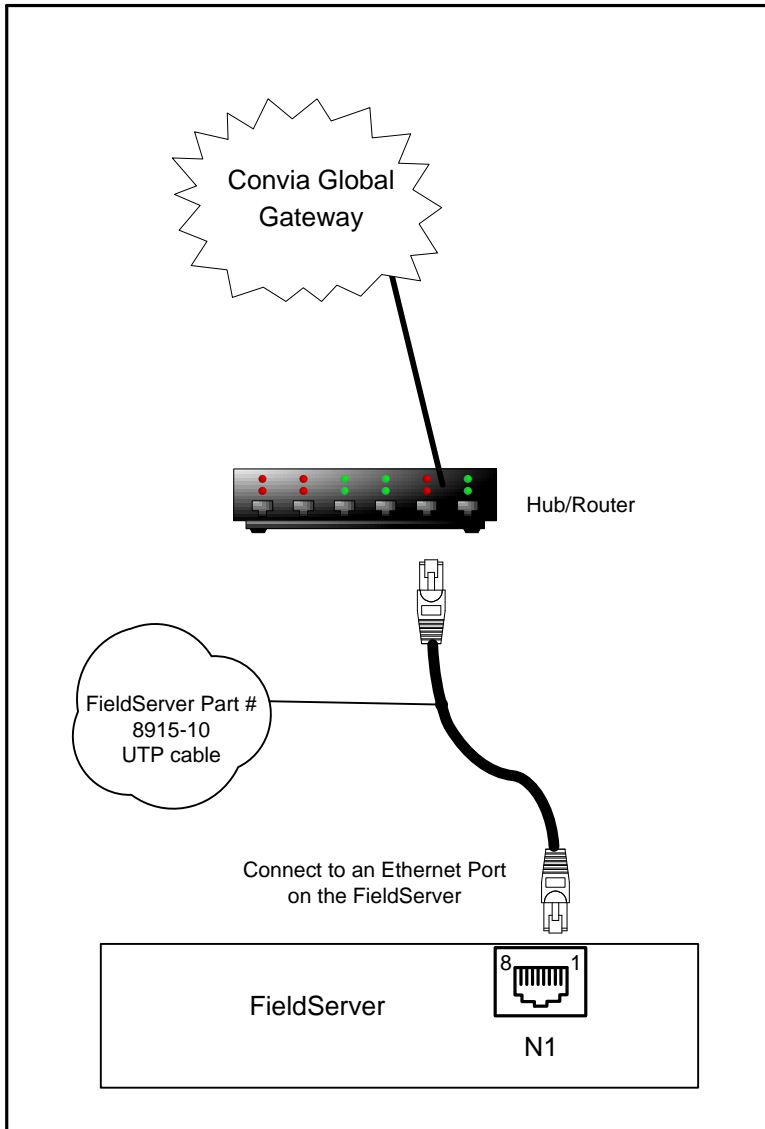
Connection type: Ethernet
Ethernet Speeds Supported 10Base-T, 100Base-T¹

5 DEVICES TESTED

Device	Tested (FACTORY, SITE)
Global Gateway 5200	Factory and Site

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

6 CONNECTION CONFIGURATIONS



6.1 Connection Notes

The Ethernet connection can be achieved using a switch or crossover cable. The Convia driver will support all Ethernet connections on a local area network (LAN) or wide area network (WAN) including internet connections and crossover cable connections.

7 COMMUNICATIONS FUNCTIONS - SUPPORTED FUNCTIONS AT A GLANCE:

The Convia driver supports the GET and POST commands on the Client and Server side to send and receive XML data.

7.1 Data Types Supported

Data Format	Description
FLOAT	Support Data Arrays with floating point format
BIT	Support Data Arrays with binary format

7.2 Read Operations supported

7.2.1 Server Side

The FieldServer XML schema provides for the ability to read any number of Data Array elements. A single Data Array, or multiple Data Arrays can be requested. This is performed by issuing the HTTP GET command with the Data Array name, offset and length

Example: To read the Data Array called DA_AI_01 and the Data_Array DA_BI_01

HTTP GET Command

```
data_arrays.xml?NAME=DA_AI_01:10.4&NAME=DA_BI_01
```

XML Response

```
<data_arrays XML_VERSION="1.00a" BRIDGE_TITLE="Convia example config">
  <data_array NAME="DA_AI_01" FORMAT="FLOAT" LENGTH="10" INDEX="1" MAX_INDEX="4">
    <data OFFSET="4" DATA_AGE=45.34s STATUS="0">4.32 12.56 12.45</data>
  </data_array>
  <data_array NAME=DA_BI_01 FORMAT="BIT" INDEX="1" MAX_INDEX="3">
    <data OFFSET="0" DATA_AGE=23.34s>1 0 1 0 1 1</data>
  </data_array>
</data_arrays>
```

7.2.2 Client Side

When the Convia driver is configured as a Client, the XML tag to read is specified using the Element or the Attribute that must be read.

7.3 Write Operations supported

7.3.1 Server Side

The Convia Driver will accept HTTP POST commands of the following format:

HTTP POST parameters:

```
NAME=da_ai_01&OFFSET=0&VALUE=21
```

XML Response:

If write succeeded:

```
<HTML><BODY>Done</BODY></HTML>\n
```

If write failed:

```
<HTML><BODY>ERROR:Invalid Parameters for Command </BODY></HTML>\n
```

7.3.2 Client Side

The Convia driver allows for an specified string to be send to the Convia Global Gateway to perform a write operation. In the example below the tscontrol command is exeuted to set the dimmer value based on a Data Array entry.

```
/cgi-bin/tscontrol?Command=Control&What=DIM&Value=<DA_VOL_01:0>&dataitem=<DA_ID_01:0>
```