

# FS-8705-114 – Sparkplug

DATASHEET – Rev 2

## DESCRIPTION

The Sparkplug Driver allows the FieldServer to publish data received from downstream devices to a Sparkplug enabled server. The Sparkplug protocol uses MQTT with a specific set of topics and payloads. Data that the FieldServer receives from downstream devices can be configured as EdgeNode metrics or Device metrics. The Sparkplug Driver supports birth (NBIRTH and DBIRTH), data (NDATA and DDATA), and death (NDEATH) messages, as well as command messages (NCMD and DCMD).



The FieldServer is a Sparkplug node pushing requests to a configured URL endpoint. The FieldServer stores values to be mapped to other protocols or simply to be viewed. When configured, the FieldServer on bootup will send NBIRTH and DBIRTH data based on the configuration. As data is read and stored into the FieldServer data arrays, the driver will send NDATA and DDATA to the Sparkplug server. A keyframe of data is sent for all mapped data points based on the configured interval. If the Sparkplug server sends a command to the FieldServer, the FieldServer will store the commanded value and send it to the respective downstream device attempting to write or change the value.

## CONNECTION FACTS

This table summarizes the number of connections this driver supports for each of its modes.

FIELDSEVER MODE	NODES	COMMENTS
Client	*	The FieldServer can be configured as a client that can connect to multiple Sparkplug Servers. Usually it is only connected to 1.
Server	0	The FieldServer cannot be configured as a server with the Sparkplug Driver.

## FORMAL DRIVER TYPE

Ethernet  
Client

## COMPATIBILITY

FIELD SERVER 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-30xx	Yes
QuickServer FS-QS-32xx	Yes

## CONNECTION INFORMATION

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

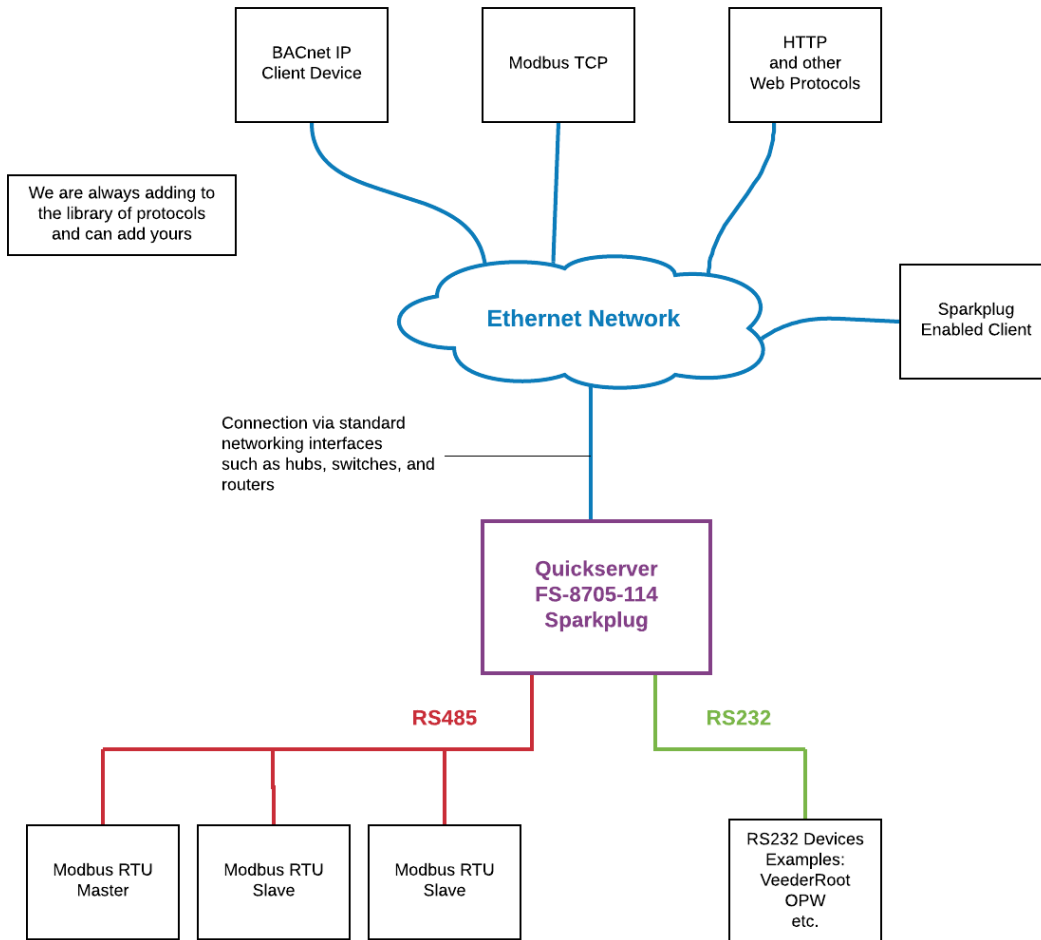
## DEVICES TESTED

This table summarizes the Sparkplug-enabled devices that have been tested. Other devices may be supported.

DEVICE	TESTED (FACTORY, SITE)
Ignition by Inductive Automation	Factory

## CONNECTION CONFIGURATIONS

This block diagram shows data being polled and collected using other protocols like Modbus® RTU/TCP, and BACnet®. The FieldServer can use the Sparkplug Driver to push the data to a Sparkplug enabled server.



### COMMUNICATION FUNCTIONS

The FieldServer is configured as an active client. This means that it sends out Sparkplug Data packets on data when data is updated as well as at key frame intervals. The FieldServer sends both NDATA (for edge node metrics) and DDATA (for device metrics) messages. As such, the FieldServer must be installed and configured to be on the same network, or connected to the internet, as the Sparkplug enabled server.

On boot-up, the FieldServer will send NBIRTH (for edge node metrics) and DBIRTH (for device metrics) to the configured Sparkplug server.

The Sparkplug Driver is a read/write driver that can also receive commands from the Sparkplug server, NCMD (for edge node metrics) and DCMD (for device metrics) that the driver will use to send write commands to the downstream devices using their respective protocols.

### SUPPORTED MESSAGE TYPES

The following is a list of the supported Sparkplug messages that the Sparkplug Driver uses:

- NBIRTH / DBIRTH
- NDATA / DDATA
- NDEATH
- NCMD / DCMD

### SUPPORTED VERSIONS

The following is a list of Sparkplug versions that the Sparkplug Driver supports:

- Version A - spAv1.0
- Version B - spBv1.0

## CUSTOMER SUPPORT

The Sparkplug 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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## REVISION HISTORY

DATE	RESP.	DRIVER VERSION	DOCUMENT REVISION	COMMENTS
12 Oct 2021	ACF	1.0.0	1	Created
15 Oct 2021	YC	1.0.0	2	Updated to latest template