FS-8705-20 – SMA Solar Technology AG – SUNNY WEBBOX

DATASHEET – Rev 1

DESCRIPTION

The Ethernet driver polls for rectifier, weather and other data from an SMA Sunny Webbox. The MSA Sunny WebBox provided is provided by SMA to provide a human interface to current operation and to provide a portal for remote system monitoring.

This driver can be configured to read data from one or more Webbox's. The Webbox monitors and collates information from attached SMA rectifiers, weather stations and other devices.

QS-1XX0

QS-2XX0

QS-3XX0

CONNECTION FACTS

FIELDSERVER MODE	NODES	COMMENTS
Client	Many	The FieldServer will be able to poll multiple SMA Web Boxes
Server	0	Not supported or documented.

FORMAL DRIVER TYPE

Ethernet
Client

COMPATIBILITY

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

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CONNECTION INFORMATION
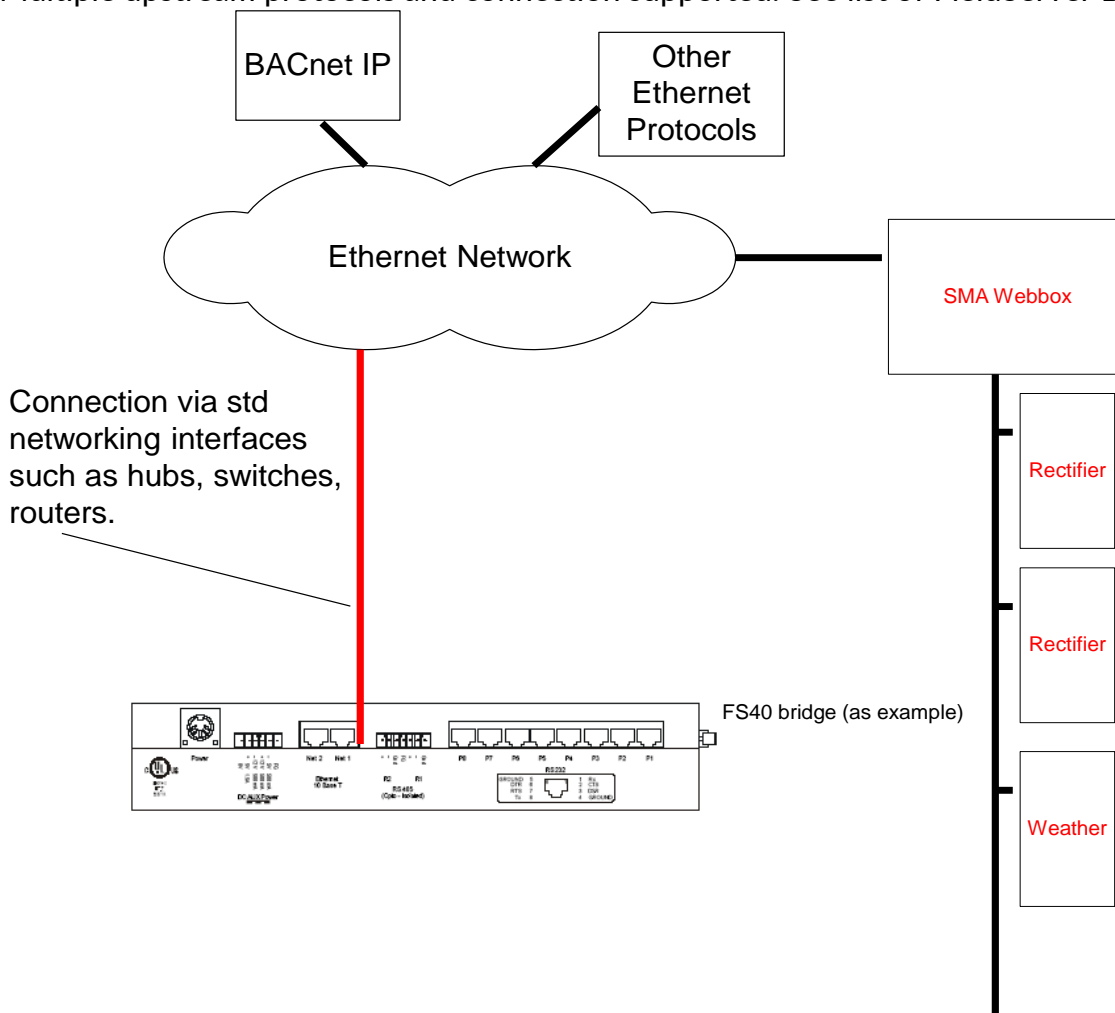
Connection Type:	Ethernet TCP/IP
Hardware Interface:	FieldServer Ethernet Adapters (N1 / N2 as available)
Multidrop Capability:	No
Target Port:	80

DEVICES TESTED

DEVICE	TESTED (FACTORY, SITE)
SMA WebBox	Customer Site, Sept 2011

CONNECTION CONFIGURATIONS

Multiple upstream protocols and connection supported. See list of FieldServer Drivers.

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DRIVER FUNCTIONALITY

The driver is configured to read data from SMA devices. A single gateway devices can read data from many SMA devices (connected via the Sunny Webbox). To configure the driver the device ID (eg. WR6KU009:2001459879 eg. SENS0522:3230) must be known. We are able to provide a procedure to learn this directly from your Webbox in cases where the installer/vendor has not provided this information)

Depending on the device, it reports back the current values of the variables associated with the device. Not all variables are available via the Webbox but most are. The driver is configured to recognize the variable names and uses that match to learn where to store the data in its internal cache. That cache is mapped onto objects of the 2nd protocol (eg bacnet) and that is how the gateway serves the SMA data.

The list of recognized variables is user editable so the driver config can be updated to handle to new devices and variables introduced by SMA

In the event that the driver cannot read data from the Webbox, the old data in the gateway will age out. When it has expired the gateway will, if possible report this to you using the 2nd protocol. (eg In bacnet, the driver will mark the points as unreliable.)

Typical Points from a Weather Station

(Any point served by the JSON interface on the WebBox can be mapped)

```
ExlSolIrr          ,AI        ,01          ,watts-per-square-meter
IntSolIrr          ,AI        ,02          ,watts-per-square-meter
OpTm               ,AI        ,03          ,No_Units
TmpAmb F           ,AI        ,04          ,Deg-F
TmpMdul F          ,AI        ,05          ,Deg-F
TmpAmb C           ,AI        ,06          ,Deg-C
TmpMdul C          ,AI        ,07          ,Deg-C
WindVel m/s        ,AI        ,08          ,meters-per-second
WindVel mph        ,AI        ,09          ,miles-per-hour
Backup State       ,AI        ,10          ,No_Units
Balancer           ,AI        ,11          ,No_Units
CO2 saved          ,AI        ,12          ,Pounds-mass
Error              ,AI        ,13          ,No_Units
E-Total            ,AI        ,14          ,kWh
Event-Cnt          ,AI        ,15          ,No_Units
```

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Typical Points from a Rectifier

(Any point served by the JSON interface on the WebBox can be mapped)

```
CO2 saved            ,AI        ,16         ,pounds-mass
E-Total              ,AI        ,17         ,kwh
Fac                  ,AI        ,18         ,Hz
Grid Type            ,AI        ,19         ,No_Units
h-On                 ,AI        ,20         ,Hours
h-Total              ,AI        ,21         ,Hours
Iac                  ,AI        ,22         ,Amps
Ipv                  ,AI        ,23         ,Amps
Mode                 ,AI        ,24         ,MO_units
Pac                  ,AI        ,25         ,Watts
Power On             ,AI        ,26         ,No_Units
Temperature          ,AI        ,27         ,deg-C
Vac                  ,AI        ,28         ,Volts
Vpv                  ,AI        ,29         ,Volts
```

CUSTOMER SUPPORT

OPCUA 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

This table summarizes the update history for this protocol data sheet. Please contact Chipkin by phone or email for an updated version of this document.

DATE	RESP.	DRIVER VERSION	DOCUMENT REVISION	COMMENTS
18 Oct 2011	PMC	0.00	0	Created document
11 Jun 2021	YC	0.00	1	Updated to latest template