

SMA Data Protocol Serial Master Driver v1.0

Information Sheet for Crimson v3.0+

Compatible Devices

SMA Devices (RS485 option installed) supporting SMA data protocol.

Verified Device

Sunny Island 2224

Overview

Please review the following information to achieve successful communications.

Upon system start or download of a new configuration, information must be collected from the SMA device in order to obtain the requested data. This process may take a few minutes for each device (including fallback) to realize SMA data. The actual time is dependent on baud rate and number of parameters in the SMA device. Only channel data can be accessed in each SMA device.

Device Configuration

A Fallback Address is included in the configuration for redundancy purposes. In the event that the primary device becomes unavailable, data will be obtained from the Fallback or secondary device. Data will revert back to the primary device if the secondary device fails.

A Polling Interval field is also provided. Here the minimum time between polls can be defined. This feature allows the user to control data access of each SMA device in systems where many devices exist.

It is possible to create tags directly using a Sunny Online Data (*.suo) file or a CSV file. From the device configuration, click on Create Data Tags and select the desired file. This operation will create parameters for this device as well as a tag for each parameter. Tags can be found in the Data Tags category in a folder that bears the device's name. All tags are

created as signed integers. The tags Treat As field can be changed to Floating Point should the expected data be a real number.

Otherwise, parameters for each device will need to be created before they can be selected in the Data Tags area. Several tools have been provided in the Communications area for this purpose.

- 1) Manual Entry - Parameters can be manually entered by clicking on the "Manage..." button in the Parameters group within the device settings. Parameters entered must match the parameters in the SMA device. Please note that all entries are case sensitive. Here parameters can also be deleted (Shift + Del) or renamed (F2 Key).
- 2) Import – Parameters can be imported by clicking on the "Import..." button in the Parameters group within the device settings. Please note that importing will replace any existing parameters. The import operation can be performed using a Sunny Online Data (*.suo) file or a CSV file.

In addition to the Manage and Import tools an Export tool is also provided in the Parameters group within the device settings. This allows the user to export finalized device parameters to a CSV file, so that it can be imported to another device.

Accessing Data

Parameters are available for data access provided that parameters have been configured in the Communications area as described in the Device Configuration section of this information sheet.

At this time parameters have read only access. If an application requires parameter write access please contact Red Lion technical support.

Cable Information

G3 RS485 Port	SI 2224 RS485 Port ComOut/CommIn
TxA - 8	6 – Data-
TxB - 7	3 – Data+
COMM - 6	2 - GND

Revision History

11/09/11 – Created

11/17/11 – Added data tag creation and manual delete/rename info.

12/13/11 – Overview update.