The BradCommunications™ SST communications module connects your Rockwell Automation ControlLogix® controller with up to distinct Serial Modbus Master/Slave networks.

4 Serial Modbus Channels

For the Allen-Bradley® ControlLogix® Controller

Features

- Save money!
  4 RS232/RS485 Serial Modbus channels on a single slot - 1756 backplane compatible
- Save time!
  No ladder logic to write for configuration and data transfer between module and ControlLogix processor
- Boot user configuration and update firmware module through integrated USB port
- Data format: Bit, Byte, Word, Dword, Float
- RLL feature : configure and diagnose Modbus network remotely via A-B RSLinx®
- Advanced Windows configuration and diagnostics tools
- Up to 8 SST™ modules can be used in one ControlLogix rack
- Support local and remote chassis

Protocols

- Modbus Master (RTU / ASCII)
- Modbus Slave (RTU / ASCII)

Typical Applications

- SCADA / supervisory communication
- Integration of legacy Modbus devices
- Modbus data concentrator
- Bridge Rockwell networks to Modbus compatible devices

Rockwell Automation Encompass Product Partner Global

Overview

The BradCommunications™ SST™ Serial module connects Rockwell Automation® ControlLogix® controllers to Modbus networks. Each module has 4 Serial communication channels that act as independent Modbus Master or Slave protocols to exchange data with other Modbus compatible devices.

The SST module acts as a 1756 input/output module between the Modbus network and the ControlLogix backplane. The data transfer from the SST™ module to the ControlLogix processor supports 2 modes; a direct mode allowing mapping of Modbus data in I/O processor image (500 inputs bytes / 496 output bytes) and a messaging mode (based on CIP transaction) allowing access to Modbus data images stored in 32K registers of the SST™ module's memory.

The SST module has a USB port on the front panel which can be used for the startup of the module when the user configuration is stored to a USB key. This can also be beneficial if a breakdown occurs, allowing a very quick startup to occur with a new SST module.

Configuration and Diagnostics

Save your time, the SST module doesn't require any ladder logic programming to be used. The configuration is created using a PC-based Windows console software connected via RLL (Remote Link Library) functionality allowing a remote access to the SST module for the configuration and the diagnostics through Rockwell network architectures (Ethernet/ControlNet/DeviceNet™).

The SST console allows the user to define the network parameters, Modbus devices and the cyclic data exchanges. The console includes a user configuration manager offering services for download, upload, copy, and rename of user configurations. With this, a user can very easily and quickly create a new configuration to initialize and start a SST module.

The SST console includes diagnostic tools to help with the commissioning and monitoring of the Modbus connection. These tools allow access in read and write modes to the Modbus slaves or to monitor and modify the module's internal data shared bound for a Modbus Master. Thus, the user-friendly tools are available for controlling the communication in commissioning phase (PROG mode). This same information is also available in production (RUN mode) through status words making it possible for the user to manage the execution of the control application in its ladder logic.

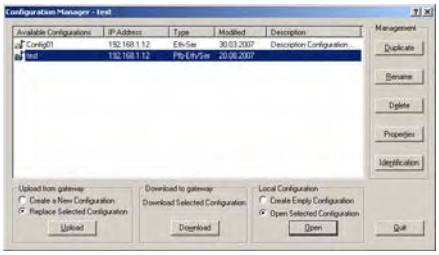
Woodhead

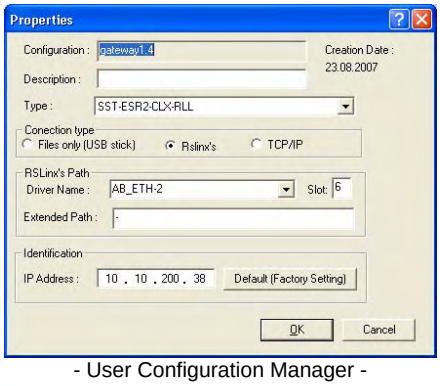
BradCommunications™

PLC Network Interface

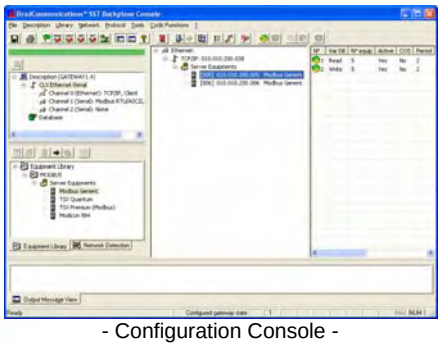
4 Serial Modbus Channels

Diagnostic & Software Tools

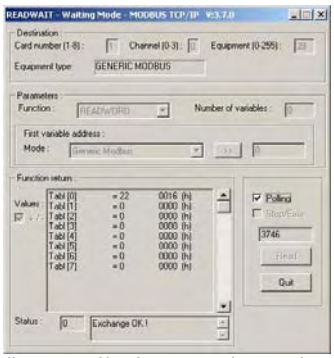




- User Configuration Manager -



- Configuration Console -



- Modbus Read/Write Data Diagnostic Tool -

Hardware Specifications

Bus Interface	• Allen-Bradley® 1756 ControlLogix® • Support multiple modules in a chassis • Local and remote rack
Memory	• 128 MB of onboard shared memory • 8 MB of flash memory (user configuration data and firmware)
Diagnostics	• 4 characters display • 3 LEDs indicator: 1 - health of the network (COMM) 2 - communication status (SYS) 3 - initialization complete and module is ok (OK)
USB Port	• Type A, USB 2 and 1.1 compatible • User configuration boot • Module firmware upgrade
Current Consumption	850 mA @ 5V or 1.75 mA @ 24V
Operating Temperature	0ºC (32ºF) up to +60ºC (140ºF)
Storage Temperature	-40ºC (-40°F) up to +85ºC (185°F)
Regulatory Approvals	CE, UL, CUL Class 1 Div 2 – UL 1604
I/O Mapping (for ControlLogix)	• Maximum 500 bytes input data • Maximum 496 bytes output data • Maximum 250 words status data
Shared Memory (for ControlLogix)	• 32K words and 32K bits • Read/write access • Ladder logic based on CIP messaging
Configuration/Diagnostics	Windows-based software tools through A-B RSLinx™

Network Specifications

Serial Communication Port	
Port: 4 distinct Serial ports Speed: 110 to 115200 bps Parity: none, even, and odd Data bits: 5, 6, 7, or 8 Stop bits: 1 or 2 Connector: RJ45 (DB9 male supplied cable) Electrical interface: RS232 and RS845, 500V galvanic insulation	Protocol: *Master* RTU or ASCII Mode Maximum slave: 127 slaves devices Function code: 0, 1, 2, 3, 4, 5, 6, 15, 16 Data format: Intel® / Motorola® *Slave* RTU or ASCII Mode 32K words / 32K bits shared memory Function Code: 0, 1, 3, 5, 6, 15, 16

Ordering Information

Part Number	Description
SST-SR4-CLX-RLL	BradCommunications™ SST™ 4 Serial ports PLC communications module for Allen-Bradley ControlLogix, includes Remote Link Library feature
Also available: SST-ESR2-CLX-RLL	BradCommunications™ SST™ 1 Ethernet and 2 Serial ports PLC communications module for Allen-Bradley ControlLogix, includes Remote Link Library feature

More Serial and Ethernet protocols available for Altus (AL2000 series), Alstom (Alspa C80-35 & C80-75), GE Fanuc (GE90-30 & 90-70), Mitsubishi (AnA, AnU, AnS, QnA, QnAS), Omron (Sysmac C, CV and CS1), Schneider (Premium, Micro, TSX/PMX), Siemens (S7-200/300/400, S5, TI-505). Please contact us for more information.

To contact us: www.woodhead.com Reference Number: DW2007212 Date Published: September 2007

North America: US: + 1 800 225 7724 – Canada: +1 519 725 5136
Europe: France: +33 2 32 96 04 20 – Germany: +49 7252 94 96 0– Italy: +39 010 59 30 77 – United: Kingdom +44 1495 356300
Asia: Shanghai, China: +86 21-5835-9885 - Tianjin, China: +86 22-23321717 Singapore: +65 6268-6868 – Yamato, Japan: +81 46-265-2428 – Nagoya, Japan: +81 52-221-5950

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