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Maximise network flexibility with SST™ Communication Modules for rapid connection of Rockwell ControlLogix systems to Modbus TCP or Siemens Industrial Ethernet and Modbus Serial networks

SST™ communication modules for Rockwell ControlLogix systems are the perfect choice for a wide range of applications including factory automation, process control and complex machines.

The ESR2 family module connects ControlLogix controllers to various non-Rockwell protocols such as, Modbus serial, Modbus TCP and Siemens Industrial Ethernet.. Each module such as, Modbus TCP and Siemens Industrial Ethernet has 1x Ethernet + 2x Serial channels protocols that act independently to perform powerful data exchange with industrial devices such as Modbus Masters or Slaves and Siemens S5/S7 PLCs.

Time-saving configuration and diagnostics can be achieved using the console software connected remotely via EtherNet/IP or RSLinx. Each module is delivered with its custom Add-On-Profile (AOP) for easy integration into the RSLogix 5000 software. The I/O data transfer supports 2 modes: a "Direct Mode" for sharing up to 248 Input words + 248 Output words without ladder logic, or a "Paging Mode" for sharing up to 32,000 I/O words.

CLXT modules withstand high-temperatures and perform in harsh, corrosive environments to meet a wider range of customer application demands. For additional information visit: www.molex.com/link/sstcommunicationmodules.html.

Features and Benefits

Fully integrated into Rockwell *Integrated Architecture Builder™* and *ProsposalWorks™*	Quickly configure a system and create a bill of materials
Simultaneously run Ethernet and Serial protocols: Modbus TCP and Siemens Industrial Ethernet (Simatic® S5/S7 PLCs)	Extremely versatile solution; perfect for concentrator or gateway applications
More communications channels and protocols supported on a single module compared to the competition	Reduce number of modules required; save space in the backplane and lower system costs
Direct I/O mapping; no ladder logic to write	Reduces programming time by over 90%; user trials shown time is cut from days to hours
I/O data refresh every PLC cycle, up to 255 Read/Write cyclic access per channel	Improves performance; faster system response and enhanced productivity
New user-friendly configuration tool with visual cyclic function screen	Benefit from faster configuration, reduced configuration errors and a short learning curve
Software package with advanced visual diagnostic tools included	Easy troubleshooting
Share up to 32K words of I/O process data with a Rockwell CPU using a single module	Suitable for large applications, no need to use multiple cards
Independent, electrically isolated serial channels	Improves reliability; prevents noise transfer to other channels
Simultaneously manage Ethernet protocols in both Client and Server modes	Module can receive unsolicited data from a remote PLC (such as critical alarm bits)
CLXT modules feature wider temperature ranges and conformal coated, harsh-duty components	Use with Rockwell ControlLogix XT PLCs Designed to operate in harsh, corrosive environments

Brad® SST™ Communication Modules for Rockwell ControlLogix

112073 Modbus Serial, Modbus TCP and Siemens Industrial Ethernet connectivity

MODBUS TCP

SIEMENS

Rockwell Automation **Encompass** Product Partner Global

ESR2-CLX Module: 112073-0001
1 Ethernet + 2 Serial Ports Supporting Modbus TCP, Siemens Industrial Ethernet + Modbus Serial supporting Modbus Serial, Modbus TCP and Siemens Industrial Ethernet

ESR2-CLXT Module: 112073-0003

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Applications

Factory automation and process control:

Oil and gas plants

Oil drilling rigs

Water, wastewater treatment

Pharmaceutical

Food and beverage

Consumer and packaged goods

Fibers and textiles

Automotive

Steel

Mining, minerals and cement

Chemical, petrochemical

Marine

Military

Automotive production lines

Water, wastewater treatment

Food and beverage

Oil and gas, chemical and petrochemical plants

Specifications

Hardware

BUS INTERFACE
Rockwell Allen-Bradley 1756 ControlLogix
Support multiple modules in a chassis
Local and remote rack

MEMORY
128 MB of onboard memory
8 MB of flash memory

DIAGNOSTICS
4 characters display
3 LED indicators

USB PORT
Type A, USB 2 and 1.1 compatible
User configuration boot
Module firmware upgrade

CURRENT CONSUMPTION
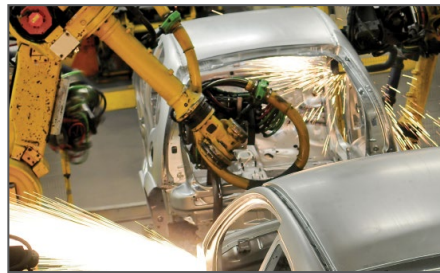850 mA @ 5V or 1.75 mA @ 24V

OPERATING TEMP
0 up to +60˚C

STORAGE TEMP
-40 up to +85˚C

REGULATORY APPROVALS
RoHS compliant
CE
FM approved, C, US
Class I Div 2, Groups A,B,C,D
Marine (RINA)
Korea CC

CONFIGURATION/ DIAGNOSTICS
Windows-based software tools
OS Supported:
   Windows XP, 7 (32, 64-bit),
   Vista, 8 (32, 64-bit)

Network – Ethernet Port

PORT
1 Ethernet port

SPEED
10/100 Mbps, auto-negotiation

PROTOCOL
Simultaneous Client/Server
Support TCP and UDP connection

Client mode
Siemens S7 (S7-1200, S7-200, S7-300, and S7-400) Client and Server modes
Siemens S5 Client and Server modes
Connect up to 128 Modbus, Siemens server devices
Support up to 4 simultaneous requests to a target device
Function code: 0, 1, 2, 3, 4, 15,16

Server mode
32K words / 32K bits shared memory
Function Code: 0, 1, 3, 15, 16
Connect up to 60 Siemens PLCs

Network – Serial Port

PORT
4 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)

ELEC. INTERFACE
RS232 and RS485, 500V galvanic insulation

PROTOCOL
Master
   RTU or ASCII Mode
   Maximum slave: 127 slaves
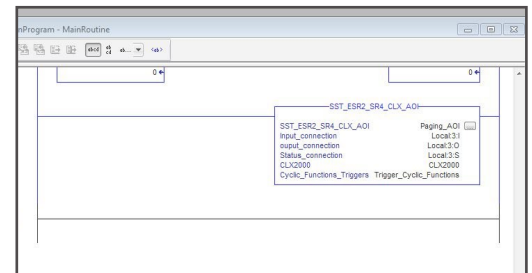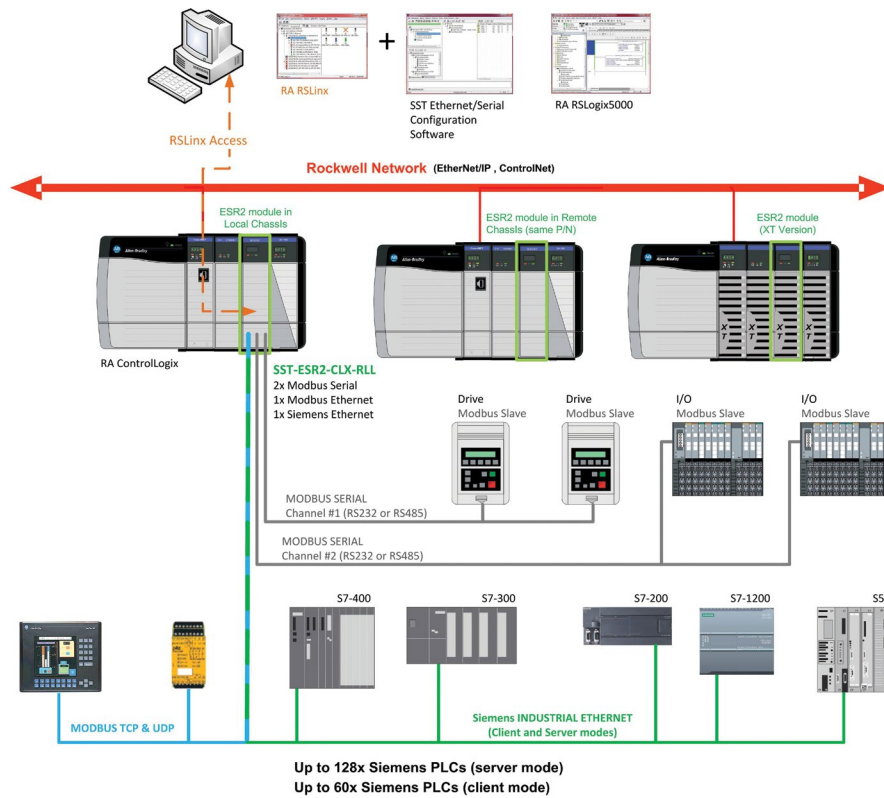   Function code: 0, 1, 2, 3, 4, 5, 6, 15, 16
   Data format: Intel® / Motorola®

Slave
   RTU or ASCII Mode
   32K words / 32K bits shared memory devices
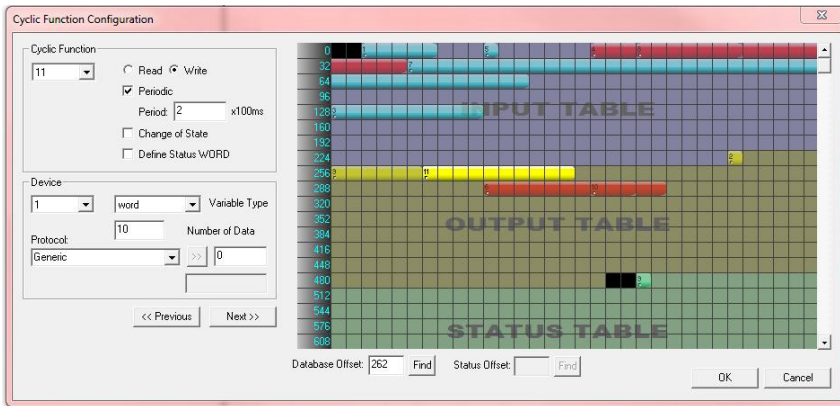   Function Code: 0, 1, 3, 5, 6, 15, 16
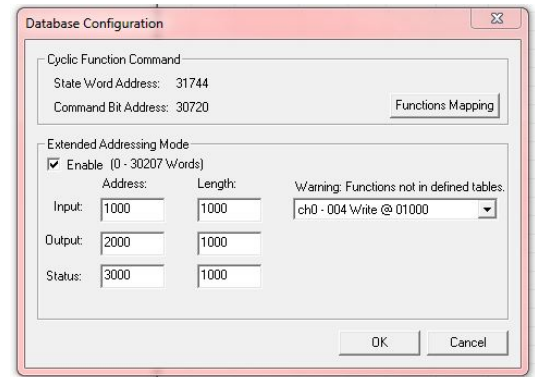
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Typical System Architecture

Simple to transfer data with Add-On Instructions

Additional Product Information

Visual Cyclic Function Configuration screen showing data-overlapping errors, data mapping, table areas and message details

Flexible Database Configuration options

Ordering Information

Order No.	Engineering No.	Ethernet Ports	Serial Ports	PLC Supported	Product Attributes
112073-0001	SST-ESR2-CLX-RLL	1	2	Rockwell ControlLogix	Remote Link Library (RLL) feature
112073-0003	SST-ESR2-CLX-RLL-CC				Remote Link Library (RLL) feature Conformal Coated
112073-0002	SST-ESR2-CLXT-RLL			Rockwell ControlLogix XT	Remote Link Library (RLL) feature Conformal Coated CLXT module components

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