



## Maximise network flexibility with SST™ Communication Modules for rapid connection of Rockwell ControlLogix systems to Ethernet TCP and 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 Serial and Ethernet networks. Each module has 1x Ethernet + 2x Serial channels 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 RSLinx 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](http://www.molex.com/link/sstcommunicationmodules.html).

### Features and Benefits

Fully integrated into Rockwell *Integrated Architecture Builder™* and *ProProposalWorks™*

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

Variable I/O and status data size supported

Redundant applications using ControlNet are possible

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 Ethernet and Serial connectivity

MODBUS TCP

SIEMENS



ESR2 Module: 112073-0001  
1 Ethernet + 2 Serial Ports



ESR2-CLXT Module:  
112073-0003

## 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

## 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°C up to +60°C

#### STORAGE TEMP

-40°C 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



Automotive production lines



Food and beverage

## Brad<sup>®</sup> SST<sup>™</sup> Communication Modules for Rockwell ControlLogix



Water, wastewater treatment



Oil and gas, chemical and  
petrochemical Plants

### 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<sup>®</sup> / Motorola<sup>®</sup>

##### Slave

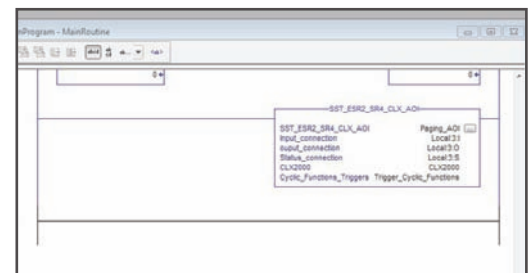
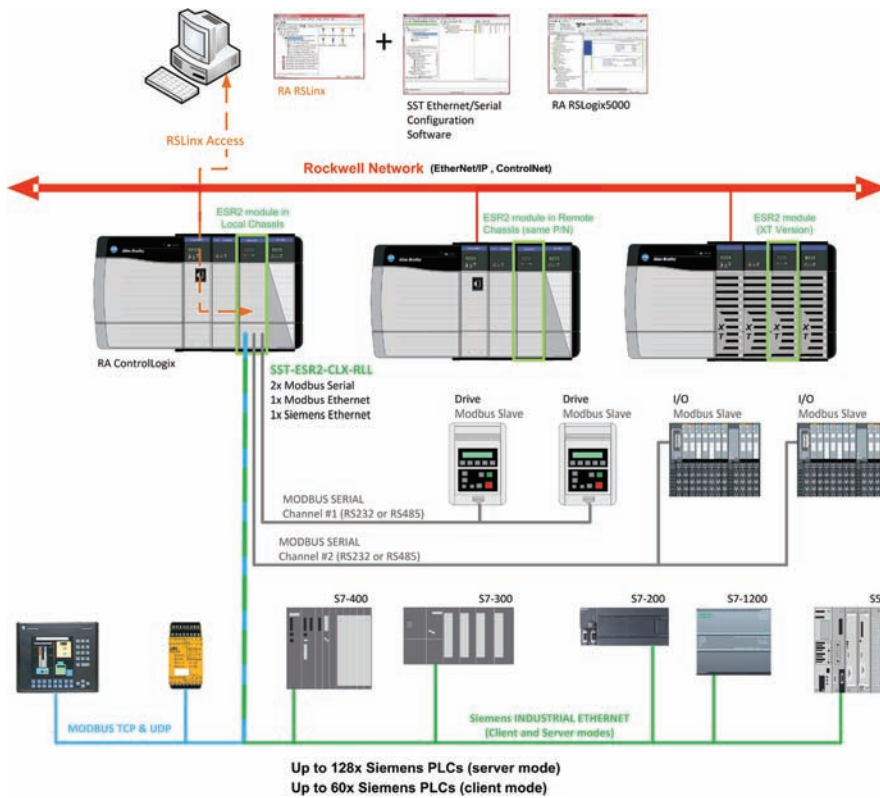
RTU or ASCII Mode

32K words / 32K bits shared  
memory devices

Function Code: 0, 1, 3, 5, 6, 15, 16

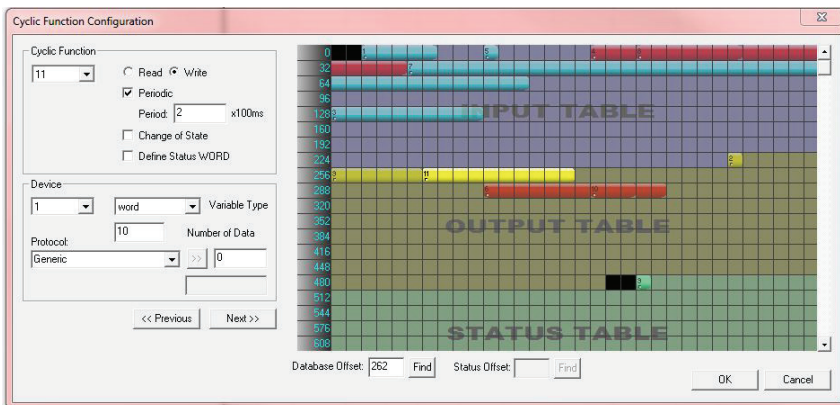
## Typical System Architecture

**Brad® SST™  
Communication  
Modules for Rockwell  
ControlLogix**

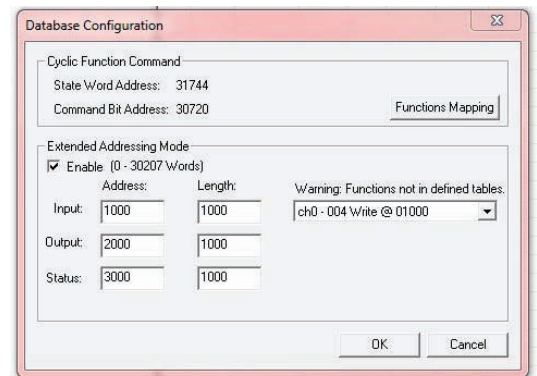


Simple to transfer data with Add-On Instructions

## 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

[www.molex.com/link/sstcommunicationmodules.html](http://www.molex.com/link/sstcommunicationmodules.html)