

## PAROCK1

*Modbus TCP/IP Client/Server, Serial Master/Slave for Rockwell PLCs*

### Description

Now a software solution is available for your Modbus (MB) needs in Rockwell/Allen-Bradley ControlLogix or CompactLogix (Clgx) family processors, instead of a traditional 3<sup>rd</sup> party hardware like Prosoft MVI-56, Molex SST-SR4-CLX-RLL etc. It is an Add-on instruction (AOI) for PLC/PAC firmware v16 or later, (other solutions are available for pre v16 systems). For hardware interface, use PLC's channel 0 (serial) or TCP/IP Interface module(s) to have as many MB TCP/IP devices or serial devices. (some limits apply based on system configurations, Comm. settings depending on HW used.) Connect any MB Client/Master or Server/Slave device(s) to your CLgx PLC, including flow computers, analyzers, VFDs, Power Monitors, Level gauges, Smart I/O, etc. All the MB public/native function codes are supported. 32-Bit integers/floats as single entity are supported with byte and word level swapping. A separate utility automates the data mapping to your PLC logic.



### Options

-Serial Master (BASIC required Option); TCP; Slave; Redundancy; More than 5000 accumulative registers; MB CFC (Custom/Private Function Code) Support; Data mapping too – Between PAROCK1 & your PLC logic; Packaged with Rockwell; TCP/IP Interface Module; Volume Discounts; Annual Support



### Requirements

- Rockwell/AB-CLgx processor with v16 or later. Contact PCI for earlier versions.
- If using CPU's Chan0, you cannot use Chan0 for any other user mode activity. You can use it for non-user mode activities
- TCP/IP Interface Modules from Rockwell/AB supported, are:
  - 1756-EN2xx ControlLogix® Ethernet/IP communication modules, firmware revision 5.007 or later
  - 1756-EWEB ControlLogix Ethernet/IP web server module, firmware revision 4.006 or later
  - 1768-EWEB CompactLogix Ethernet/IP web server module, firmware revision 1.002 or later
  - 1769-L30ER, 1769-L30ERM, 1769-L30ER-NSE, 1769-L33ER, 1769-L33ERM, and 1769-L36ERM CompactLogix controllers, firmware revision 20.011 or later
  - 1769-L24ER-QB1B, 1769-L24ER-QBFC1B, 1769-L27ERM-QBFC1B CompactLogix controllers, firmware revision 20.011 or later
  - 1769-L16ER, 1769-L18ER, 1769-L18ERM CompactLogix controllers, firmware revision 20.011 or later

### Other Related Services/Items

- Custom PLC Add-on instructions building
- PLC upgrades, troubleshooting, applications -PC Windows, iOS5, Linux, Mobile devices Comm. Drivers
- Custom development, Technology Transfer Services
- Other Non-AB communication drivers for serial or TCP
- Full control system integration, training, architecture design

**Comparing Parijat Solution's Features with the Competition:**

<b>PARIJAT PAROCK1</b>	<b>PROSOFT MVI56/E, Molex(SST-ESR2-CLX-RL)</b>
<b>COMMON</b>	
Software Solution	Hardware Solution
Required HW (native Rockwell) may already be in place	Requires buying new hardware from a 3 <sup>rd</sup> party
No PLC Management Logic required for most scenarios	AOI & PLC Management logic always required
Any # of serial ports supported via TCP/IP	Only two serial ports (on Serial model) supported
Data storage limited by PLC memory. Full 65535 Regs for each 6 data types available. Configuration Separate	Maximum of 5000 (P), 32k(M). No Data type granularity. Some of these consumed for configuration
Redundancy in Comm. Paths	Not available
One product for serial and TCP	Different products for Serial and TCP (Prosoft)
0-based or 1-based addressing support	Only 0-based supported
No need for 3 <sup>rd</sup> party HW like Prosoft, Molex. Uses native Rockwell hardware.	3 <sup>rd</sup> party HW with AOI is required. Each module consumes an extra PLC Rack slot.
Extensive on-line debugging built-in	Limited.
No impact on performance for debug	Impact on performance for debug
All MBTCP, embedded, serial supported	Either TCP or Serial.(P) Not both in one product
System Setup – Software only	HW setup jumpers used – Module plug-in/out required
Scan time overhead , typically .8 msec (varies with PLC model), and about 130k memory	Data Not Available

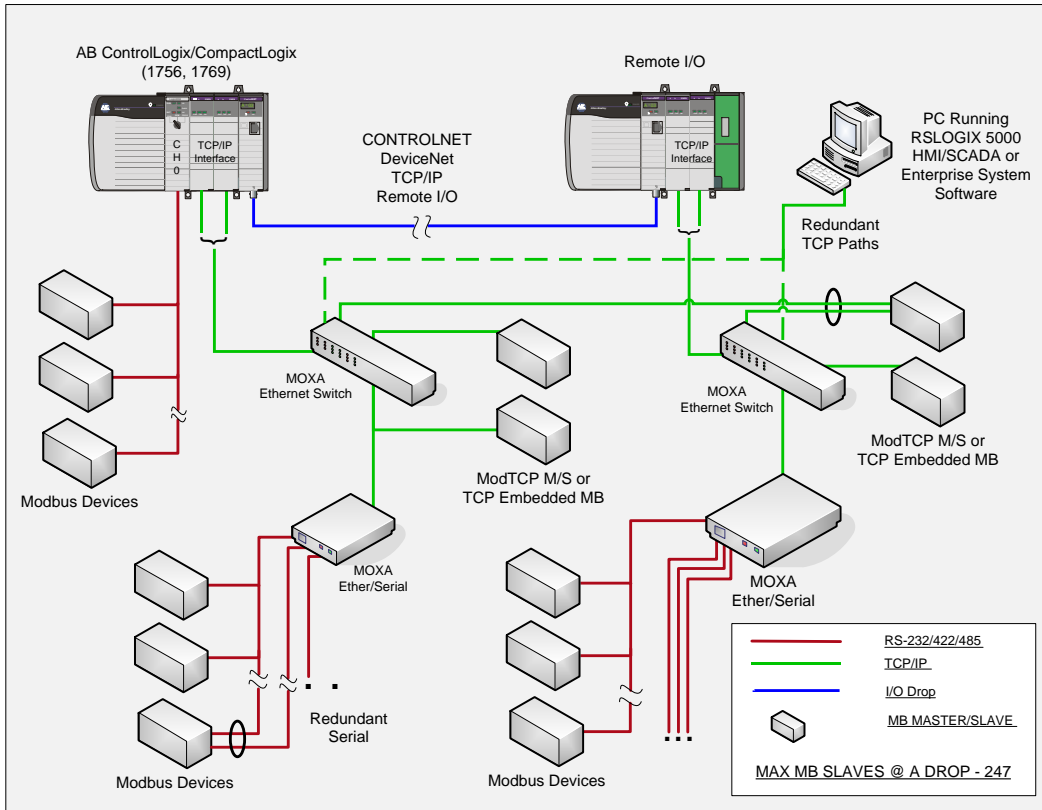


Multiple instances supported in a PLC	Requires buying additional HW modules
Diagnostics and Transactions – history & live	Not Available
Provides continuous Comm. & Time efficiency/history	Not Available
Automated tool to map data to/from your PLC App synchronous to PLC scan.	Not Available. Data Xfer asynchronous in 200 16-reg blocks.
Slaves have individual granularity.	Slave data is part of each polls.
Bidirectional Passthru of messages always available	Unidirectional on request only
0x, 1x,3x,4x,5x,7x data areas user configurable. 32-bit as 1 or 2 Regs. M,S data areas may or may not overlap.	0x,1x,3x,4x only & they overlap. Complex offsets are employed. 32-bit DINTs not available.
I/O Area not required	I/O Area required

<b>PARIJAT PAROCK1</b>	<b>PROSOFT MVI56/E, Molex(SST-ESR2-CLX-RLL)</b>
<b>SERVER/SLAVE</b>	
Up to 19 (EWEB) TCP Masters may connect & talk to a slave. (This limit is by Rockwell)	Maximum of 10(P), 15 (M) connections(P)
<b>CLIENT/MASTER</b>	
Unlimited polls	Only 100 polls as command lists (P)
User defined (Custom) Function codes (CFC) (up to 128)	CFC not supported. (Only basic FC)
Setup polls as FC's or action types	Only some basic Function codes supported
Configure multiple slaves with different	Not available
Priority & Event poll requests that can be dynamically set up/changed by user logic with no limits	Only 6 priority available

\*\*If you like to have some feature(s) not currently supported, please share with us and if appropriate, may be added. If you need support for any other protocol in Rockwell or any other PLC, please let us know. Coming Soon: Support for DNP3, GE-IP PAC/90 SRTP, Siemens S7 ISO-TCP.

**POSSIBLE CONFIGURATION OF PARIJAT AB-MODBUS INTERFACE:**



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