VTScada
Software for Monitoring & Control

Updated: December 29, 2017

Communication Driver Library

Out-of-the-box, VTScada provides maximum flexibility when communicating with field devices and third-party programs by supporting most standard and many proprietary I/O protocols. Native VTScada protocols are included with VTScada Runtime and Development Runtime licenses. If you don't see a driver you need, we can create it for you (see page 4).

Devices that have been used with VTScada*

Manufacturer	Model(s)	Protocol	Notes
ABB	Variable Speed Drives, AC500 Series PLCs	Modbus	
	TotalFlow Family	Enron Modbus	
	AC500 Series PLCs	IEC-60870-104	
Allen-Bradley®	SLC 500, PLC-2, PLC-3, PLC-5, PLC-5-250 (Pyramid Integrator), Micrologix, CompactLogix®, ControlLogix®	DF1	MicroLogix 1400 can also be configured to DNP3.
Automation Direct	DL Family of PLCs, Click Family of PLCs, Productivity Family of PLCs	Modbus	VTScada driver allows native DL PLC addressing in our Modbus driver (e.g., V2105, C33, etc).
Cisco	Catalyst 2950 Series Switches	SNMP	
Control Microsystems / Schneider	Telesafe RTU Family, SCADAPack® RTU Family	Modbus	Supports to access time stamped data recorded by RTUs using the Data Logger (DL) functions.
	SCADAPack® RTU Family Using RealFLO®	Enron Modbus	
	SCADAPack® RTU Family	DNP3	
	Telesafe RTUs	DF1	
CSE Semaphore	TBox® RTU	Modbus	Supports to access time stamped data recorded by RTUs using Sample Tables and Chronologies.
	TBox® RTU Family Using TFlo®	Enron Modbus	
Davicom	DV-Mini, DV-208, DV-216	SNMP	
Digital Control Company (DCC)®	DCC Pump Controllers	Modbus	
Eaton	PW9155 UPS	SNMP	
Flygt®	MultiSmart Pump Controller®	Modbus	Previously branded as MultiTrode® MultiSmart.
		DNP3	
Foxboro®	C50 RTU	DNP3	
GE	D20/D200 RTUs	DNP3	
Modicon / Schneider	Modicon 984 Family of PLCs, Modicon Compact Family of PLCs, Modicon Quantum Family of PLCs, Modicon TSX Family of PLCs	Modbus	
MPE®	MPE Duplex Controller	Modbus	
Phoenix Contact	AXC1050	IEC-60870-104	
Power Measurement Ltd.®	ION Series Meters	Modbus	
	ION Series Meters	DNP3	
RuggedCom / Siemens	RX1000 Router	SNMP	
Schlumberger®	Q1000 Meters	DNP3	
Schweitzer Engineering Laboratories, Inc (SEL Inc)	SEL-2030 Communications Processor	DNP3	
Sixnet®	Micro-Versa TRAC, Sixnet SixTRAC	Modbus	
Surfline 9015	9015	Modbus	With firmware feature enabled.
Thero Fisher Scientific	AutoPILOT	Enron Modbus	
Woodward®	easYgen Series, EGCP-3, DTSC, DLSC-2, 723 PLUS, 733, 828	Modbus	

Native VTScada Protocols

Driver Tag Type	Protocol	Example Device	Native Serial	Dial up Modem	Native TCP/IP	TCP/IP Tunnel	Native UDP/IP	UDP/IP Tunneled	Connection	Virtual PLC	More Info
Allen Bradley DF1 Compatible PLC/RTU	Allen Bradley DF1	PLC2, PLC3, PLC5, SLC500	X	X		X		X	DH/DH+	X	DH/DH+ requires additional interface hardware. Supports Virtual PLC in PLC-2 compatible mode only.
	Allen Bradley PCCC	PLC5, SLC500			X						
BACnet Driver	BACnet	BACnet Compliant Devices	X	X		X		X			Separately available from Trihedral.
Bristol BSAP/IBP Driver & Network	Bristol BSAP	Bristol 33xx Series RTUs, ControWave RTUs	X	X		X		X			Separately available from Trihedral.
	Bristol IBP	Bristol ControWave RTUs					X				
CIP/ENIP Device	Allen Bradley CIP	CompactLogix®, ControlLogix®			X						
Campbell Scientific Array Driver	Campbell Scientific Array Protocol	CR10X and CR510 Data Loggers using array OS	X	X		X		X			
Campbell Scientific Pakbus Driver	Campbell Scientific Pakbus	CR200, CR800, CR850, CR1000, CR3000, CR5000 Data Loggers	X	X	X	X		X			Security features for native TCP/IP not implemented.
DDE Client	DDE (Dynamic Data Exchange)	MS Excel							DDE		Can act as DDE Client or Server.
Data Flow Systems RTU	DFS Protocol	Data Flow Systems® RTUs	X			X		X			Also works with DFS NIM.
Koyo DirectNET	Direct Net	PLC Direct® DL Family of PLCs	X	X		X		X			
DNP3 Compatible RTU	DNP 3.0	DNP 3.0 Compliant Devices	X	X	X	X	X	X			
Enron Modbus RTU	Enron Modbus®	Enron Modbus Compliant Devices	X	X	X	X		X			
Fisher ROC Driver	Fisher® ROC	ROC800, 800L, FloBoss™ 103, 107	X	X	X	X		X			
GE Series 90 Driver	General Electric® SNP, SNPX	GE Series 1 PLC, Series 5 PLC, Series 6 PLC, Series 90 PLC	X								No direct support for use on Ethernet to Serial converters.
	General Electric® SRTP	Series 90 PLC, RX3i PLC			X						
IEC 60870-5 Driver	IEC-60870-104	RTUs & PLCs from various manufacturers			X					X	
JSON/XML Driver	JSON	JSON Compliant Devices			X						Supports JSON retrieved over HTTP and HTTPS. Also supports XML (Read only).
Modbus Compatible Device	Modbus ASCII	Modbus ASCII Compliant Devices	X	X		X		X		X	
	Modbus PLUS	Modbus Plus Compliant Devices							Modbus Plus		Modbus PLUS requires additional interface hardware.
	Modbus RTU	Modbus RTU Compliant Devices	X	X		X		X		X	
	Open Modbus/TCP	Open Modbus/TCP Compliant Devices	X	X	X	X	X	x		X	See example devices on page 2.
Motorola ACE RTU	Motorola® Ace Gateway API	Moscad RTU Family, ACE Family			X						Requires MDLC IP Gateway.
NMEA 0183 Driver	NMEA 0183	Serial GPS	X	X		X		X			Functions as talker and listener.
Omron FINS Driver	Omron® FINS	CS Series PLC, CJ Series PLC			X						
Omron Host Link PLC	Omron® Hostlink	C Series PLC, CS Series PLC, CJ Series PLC	X	X		X		X			
OPC Client	OPC® DA Client	OPC Servers for various Products							OPC		Supports hundreds of 3rd party OPC servers.
Opto22 Mux Driver	Optomux	Opto 22 Analog & Digital I/O Boards	X	X		X		X			Beta release. Separately available from Trihedral.
Siemens S7 PLC	Siemens® ISO over TCP	S7 Series PLCs			X				ODBC		

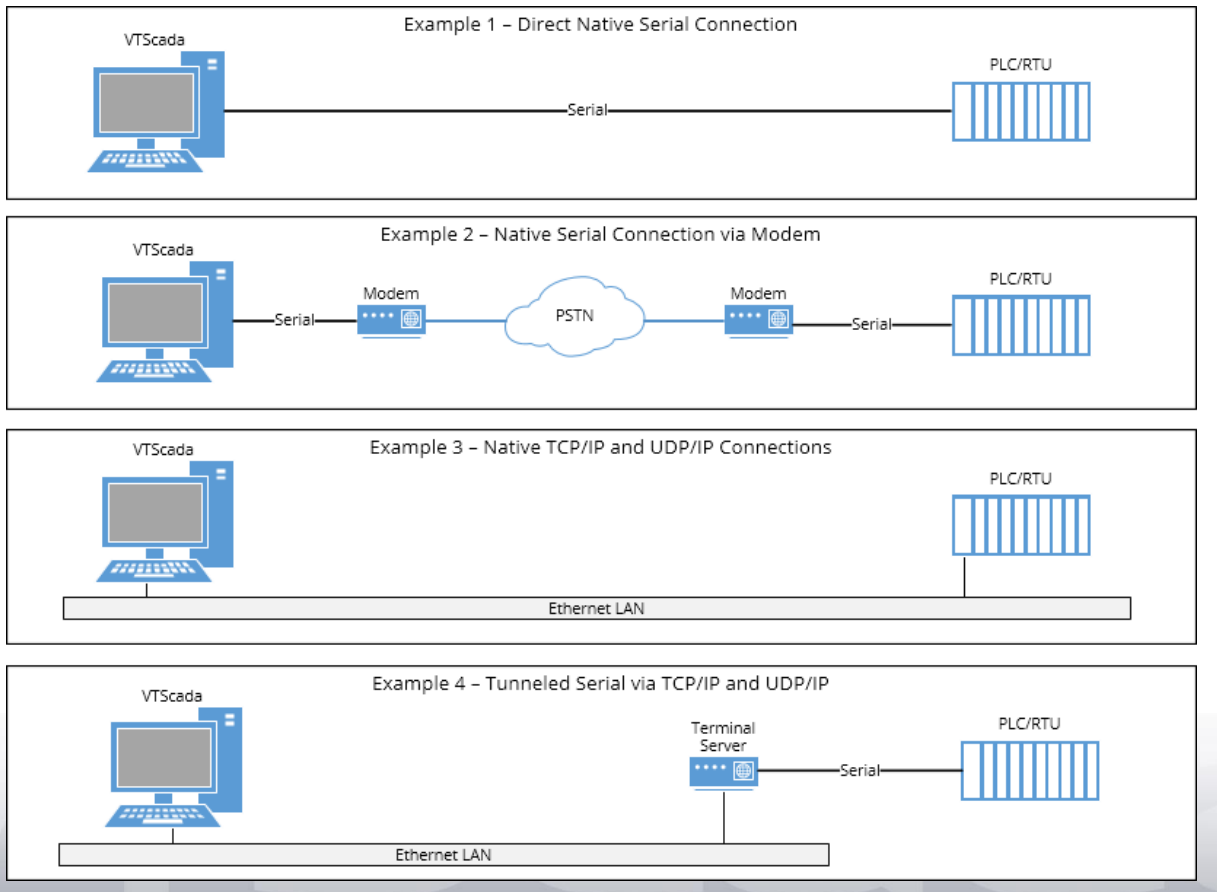
Native VTScada Protocols

Driver Tag Type	Protocol	Example Device	Native Serial	Dial up Modem	Native TCP/IP	TCP/IP Tunnel	Native UDP/IP	UDP/IP Tunneled	Connection	Virtual PLC	More Info
SNMP Managed Device	S+imple Network Management Protocol (SNMP)®	Standardized protocol for thousands of devices						X			
Uses System Settings	SNMP Agent	Allows VTScada to supply data like a network device									
SQL Data Query Driver	SQL Data Query (ODBC)	SQL Databases									

Driver Connection Definitions

Term	Definition	Example
Native Serial	Driver supports native serial communication as defined in protocol standard document(s) on PC serial ports using VTScada "Serial Port" tags.	1
Modem	Driver supports native serial communication as defined in protocol standard document(s) over modems defined in the operating system.	2
Native TCP/IP	Driver supports native TCP/IP communication to devices as defined in the protocol standard document(s).	3
TCP/IP Tunnel	Driver supports tunneling of serial protocol via Ethernet connected TCP/IP to serial converters using VTScada "TCP/IP Port" tags.	4
Native UDP/IP	Driver supports native UDP/IP communication to devices as defined in the protocol standard.	3
UDP/IP Tunneled	Driver supports tunneling of serial protocol via Ethernet connected UCP/IP to serial converters using VTScada "UDP/IP Port" tags.	4
Other Connection	Driver supports device or protocol specific interface or methodology not covered by above definitions (e.g. ODBC).	
Virtual PLC	Driver supports VTScada acting as a memory-mapped PLC or RTU that other devices can read from or write to.	

Driver Connection Examples



New Driver Development

If you don't see the device or protocol you are looking for, Trihedral can create custom drivers to meet your specific needs. Prices for new driver development are determined on a case-by-case basis. Contact Trihedral for details.

- Email info@trihedral.com
- Call 1.800.463.2783
- Visit www.trihedral.com

Native VTScada Polling Driver

Integrated polling eliminates the need for a master PLC device reducing hardware costs, integration time, and points of failure. VTScada simplifies device communications by automatically organizing scheduled polling cycles and communications channels. Reduce the number of required radios by transmitting multiple protocols on a single communications link. The Polling Driver is a standard component of VTScada Runtime and Development Runtime Licenses.

- Configure any number of polling groups.
- Select 'Fast Polling' rate for specific RTUs.
- Poll by external triggers, on schedule, or on command.
- Enable or disable polling in any polling driver.
- Display min, max, and average values.

Enterprise Data Sharing Tools

VTScada also includes integrated tools for sharing application history and services with third-party platforms. These components are standard in VTScada Development Runtime Licenses.

- **OPC SERVER** - Allows OPC-compliant programs (including other VTScada applications with OPC clients) to exchange live data to and from a standard VTScada application.
- **OPC CLIENT** - Allows VTScada applications to exchange live data with an OPC-compliant server (including VTScada applications with configured OPC servers).
- **ODBC SERVER** - Use popular software like XLReporter®, Dream Report®, SAP Crystal Reports®, Microsoft Access®, or Excel® to extract system data from your application. VTScada acts as a database where each logged tag represents a table of timestamps and values that reporting software can query to retrieve logged values. XLReporter® and Dream Report® both feature integrated interfaces to VTScada.
- **VTScada WEB SERVICES** - This SOAP (XML) interface allows business systems to request real-time and historical data from VTScada. Supports time/date ranges, min, max, time of min, time of max, average, total, and SQL that include SELECT commands and WHERE clauses.

Easy to Try

Download the 90-day Trial

www.trihedral.com/trial

Download VTScadaLIGHT™

A free perpetual license for real-world applications with up to 50 I/O. VTScadaLIGHT includes the same communication drivers that are a part of standard VTScada Runtime and Development Runtime licenses.

www.trihedral.com/LIGHT

* Includes devices we have internally tested and those that have been used by one or more customers. Trihedral does not guarantee any of the listed devices.

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