		Serial Varients					Ethernet Varients		TCP/IP Varients				Communication Model			
	Protocol Family	**Protocol Name**	**Phy/Mac Layer**	**Physical Connector**	**# of Devices**	**Data Rate**	**Protocol Name**	**EtherType**	**Protocol Name**	**TCP Port**	**UDP Port**	**Encryption**	**Uni-directional**	**Request / Response**	**Pubilish / Subscribe**	**Notes, tools, etc...**
Fieldbus and Fieldbus Management (Purdue Levels 0-1)	Modbus	**(see Regional SCADA section)**														
	HART (Highway Addressable Remote Transducer)	**HART**			64	1.2 - 9.6 Kps			**HART-IP**	5094	5094	X				https://en.wikipedia.org/wiki/Highway_Addressable_Remote_Transducer_Protocol
		Wireless HART	802.15.4		100+											
	Foundation Fieldbus	**FF H1**	IEC 1158-2 ISA-S50.02		2 - 32	31.25 kbit/s	**FF HSE**		**FF HSE**	1089-1091	1089-1091			X	X	https://en.wikipedia.org/wiki/Foundation_Fieldbus https://en.wikipedia.org/wiki/Foundation_Fieldbus_H1
		FF H2				1.0 Mbit/s 2.5 Mbit/s										
	CIP (Common Industrial Protocol)	**DeviceNET (IEC 62026-3)**	CAN (ISO 11898)		64	125 kbit/s 250 kbit/s 500 kbit/s			**EtherNet/IP**	44818	2222, 44818	TLS or DTLS		X		https://en.wikipedia.org/wiki/DeviceNet https://www.odva.org/wp-content/uploads/2020/05/PUB00026R4-Tech-Adv-Series-DeviceNet.pdf https://www.odva.org/wp-content/uploads/2020/05/PUB00138R6-Tech-Series-EtherNetIP.pdf
		ControlNET	RG-6 Coaxial Cable		99	5 Mbit/s										https://en.wikipedia.org/wiki/ControlNet https://www.odva.org/wp-content/uploads/2020/05/PUB00200R1-Tech-Series-ControlNet.pdf
		CompoNET	TIA-485		384	93.75 kbps - 4 Mbps										https://www.odva.org/wp-content/uploads/2020/05/PUB00161R1-Tech-Series-CompoNet.pdf
	PROFINET	**PROFIBUS DP**			247	9.6-12 Mbit/s	**PROFINET RT**	0x8892	**PROFINET**	34962 - 34964	34962 - 34964					https://en.wikipedia.org/wiki/Profibus https://en.wikipedia.org/wiki/PROFINET
		PROFIBUS PA	IEC 61158-2		32	31.25 kbit/s	**PROFINET IRT**									
	FL-net								**FL-net**	55004	55000 - 55003					https://www.jema-net.or.jp/English/businessfields/standarization/opcn/standard/data/JEM_1479e(20120927).pdf https://www.fortiguard.com/appcontrol/47396
	P-NET (Process NETwork)	**P-NET**	TIA-485		32 - 125	76.8 kbit/s								X		https://www.proces-data.com/the-p-net-fieldbus
	FIP (Factory Instrumentation Protocol)	**WorldFIP**			255	31.25kbit/s 1Mbit/s 2.5Mbit/s										https://en.wikipedia.org/wiki/Factory_Instrumentation_Protocol
	INTERBUS	**INTERBUS**														https://en.wikipedia.org/wiki/INTERBUS
	CC-Link	**Link**	TIA-485		64	10 Mbit/s	**Control**							X		https://en.wikipedia.org/wiki/CC-Link_Industrial_Networks
		LT					**Field**									
		Saftey	TIA-485			10 Mbit/s	**Saftey**									
	Yokogawa Vnet	**Vnet**							**Vnet/IP**	??	5313					https://web-material3.yokogawa.com/rd-tr-r00039-005.pdf https://www.fortiguard.com/appcontrol/49697
	Toshiba TCnet						**TCnet RTE**	0x888B	**TCnet**							https://www.manualslib.com/products/Toshiba-Tc-Net-100-10475338.html https://www.felser.ch/papers/FE-TR-0507.pdf
	EtherCAT						**EtherCAT**	0x88A4	**EtherCAT UDP**	X	34980					https://en.wikipedia.org/wiki/EtherCAT
	Ethernet Powerlink						**Ethernet Powerlink**	0x88AB								https://en.wikipedia.org/wiki/Ethernet_Powerlink
	EPA (Ethernet for Plant Automation)						**EPA**	0x88BC	**EPA**							Developed by China https://core.ac.uk/download/pdf/82172941.pdf https://www.felser.ch/papers/FE-TR-0507.pdf
	Sercos (SErial Real-time Communication System)	**Sercos I**				2 Mbit/s 4 Mbit/s	**Sercos III**	0x88CD								https://en.wikipedia.org/wiki/SERCOS_interface https://en.wikipedia.org/wiki/SERCOS_III https://www.sercos.org/technology/sercos-i-and-ii/communication-method-synchronization-and-protocol-structure/
		Sercos II				2 Mbit/s 4 Mbit/s 8 Mbit/s 16 Mbit/s								X		
	Yaskawa MECHATROLINK	**MECHATROLINK-II**					**MECHATROLINK-III**									https://en.wikipedia.org/wiki/MECHATROLINK https://www.mechatrolink.org/en/mechatrolink/spec.html
	CAN (Controller Area Network)	**CANopen**	CAN (ISO 11898)			10 kbit/s - 1 Mbit/s			**DoIP**	13400	13400			X	X	https://en.wikipedia.org/wiki/CANopen https://www.can-cia.org/can-knowledge/canopen/canopen-lower-layers/ https://cdn.intrepidcs.net/support/VehicleSpy/spyDoIP.htm https://assets.vector.com/cms/content/know-how/_application-notes/AN-IND-1-026_DoIP_in_CANoe.pdf
		ARINC 825/826	CAN (ISO 11898)													Aviation equipment https://www.kvaser.com/arinc
		ODB-I		varies												Automotive diagnostics https://en.wikipedia.org/wiki/On-board_diagnostics https://en.wikipedia.org/wiki/CAN_FD
		ODB-II (EODB, GMLAN)	CAN CANFD	SAE J1962 16-pin (2x8)												
		SAE J1939	CAN (ISO 11898)			250 kbit/s 500 kbit/s										https://en.wikipedia.org/wiki/SAE_J1939 https://www.kvaser.com/about-can/higher-layer-protocols/j1939-introduction
		SAE J2284	CAN			125 kbit/s 250 kbit/s 500 kbit/s										https://www.sae.org/standards/content/j2284/3_201611
Site SCADA (Purdue Levels 2-3)	OPC								**OPC DA**	DCOM						
									OPC UA Binary	4840		TLS				
									OPC UA XML	80, 443		TLS				
	Building Automation (Some might be proprietary and need to be moved to the other tab)								**BACnet/IP**		47808					
									LonTalk		1628, 1629					
									Fox (Tridium/Niagara)	1911						
									KNXnet/IP	3671	3671					
Regional SCADA (Purdue Levels 2-3)	Modbus	**Modbus RTU**	RS-232 TIA-485		247	9.6 Kbs - 12 Mbs			**Modbus TCP**	502	X	X	X	Y	X	
		Modbus ASCII							**Modbus TLS**	802	X	TLS				
	DNP	**DNP3**	RS-232 TIA-485		65519				**DNP3 over TCP/IP**	20000	20000	TLS	X	Y	Y	Water Industry Telemetry Standards (WITS) was created for water sector, based on DNP3, and has wider usage in EU than DNP3
		WITS							**WITS over TCP/IP**							
	DLMS/COSEM (IEC 62056)								**DLMS/COSEM**	4059	4059					DLMS (Device Language Message Specification) COSEM (Companion Specification for Energy Metering)
	IEC 60870	**IEC 101**							**IEC 104**	2404	2404	TLS	X	Y	Y	http://www.iana.org/assignments/service-names-port-numbers/service-names-port-numbers.xhtml?search=RoCE
									ICCP/TASE2	102						
	IEEE C37.118								**IEEE C37.118**	4712	4713					
	IEC 61850						**GOOSE**	0x88B8	**MMS**	102		TLS	X	Y	Y	Goose (Generic Object Oriented Substation Events) GSSE (Generic Substation State Events) SV (Sampled Value Transmission)
							GSSE	0x88B9								
							SV	0x88BA								
	Time Syncronization	**IRIG-A**				1000 bps	**PTP**	0x88F7	**NTP**	X	123		IRIG A & B	NTP & PTP	X	https://www.itsamerica.com/assets/publications/TN-102_IRIG-B.pdf https://en.wikipedia.org/wiki/Precision_Time_Protocol https://en.wikipedia.org/wiki/Network_Time_Protocol
		IRIG-B				100 bps			**PTP over UDP**	X	319, 320					

		Serial Variants					Ethernet Variants		TCP/IP Variants				Communication Model			
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Vendor	Protocol Name (if any)	Notes
Siemens	S7Comm	