Modicon Premium automation platform

Ethernet CPUs and modules

Transparent Ready

Applications **Network type**		Processors with built-in TCP/IP Ethernet port (heterogeneous industrial local area network)			
					
Type of network		**Ethernet TCP/IP**			
Structure	Physical interface	10BASE-T/100BASE-TX (RJ45)			
	Method of access	CSMA-CD			
	Data rate	10/100 Mbit/s			
Medium		Double twisted pair Fiber optic, via Ethernet ConneXium wiring system			
Configuration	Maximal number of devices	Maximum of 64 stations per network			
	Maximum length	100 m max. between hub and terminal device			
	Number of networks/station	0 *(1)*		2 *(1)*	3 *(1)*
	Other built-in port	–	Fipio bus manager function	–	Fipio bus manager function
Basic services	Services TCP/IP	Uni-TE/Modbus message handling			
	Services X-Way	Inter-network X-Way routing, X-Way/Uni-Telway routing, module diagnostics			
	Ethway	–			
Embedded Web serverservices	Basic services	"Rack Viewer" PLC diagnostics "Data Editor" access to PLC variables and data			
	FactoryCast services	–			
	Factory Cast HMI services	–			
Transparent Ready communication services		I/O Scanning (64 stations)			
		Global Data			
		Network management (SNMP)			
		FDR server for automatic reconfiguration (BOOTP/DHCP protocols)			
		–			
Type of processor		–			
Module format		Double format processor			
Type of module		**TSX P57 1634M** **TSX P57 2623M**	**TSX P57 2823M**	**TSX P57 3623M** **TSX P57 3634M**	**TSX P57 4823M** **TSX P57 4634M** **TSX P57 5634M**
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(1) Excluding embedded Ethernet port.

Ethernet TCP/IP modules (heterogeneous industrial local area network)

10BASE5 (AUI), 10BASE-T (RJ45)		10BASE-T, 100BASE-TX (RJ45)		
CSMA-CD				
10 Mbit/s		10/100 Mbit/s		
Triaxial cable or double twisted pair Fiber optic, via Ethernet ConneXium wiring system		Double twisted pair Fiber optic, via Ethernet ConneXium wiring system		
1 to 4 depending on processor or coprocessor used				
–				
Uni-TE message handling, common words, application to application		–		
–	“Rack Viewer” PLC diagnostics “Data Editor” access to PLC variables and data			
	“Alarms viewer” “Graphic Data Editor” Display of user Web pages (1.4 Mb available)	–	“Alarms viewer” alarm display “Graphic Data Editor” graphic object editor Display of user Web pages (8 Mb available)	
				FactoryCast HMI services *(2)*
–		I/O Scanning (64 stations)		–
–		Global Data		–
–		FDR server for automatic reconfiguration (BOOTP/DHCP)		–
	TCP Open	–	TCP Open	–
All types of Premium processors TSX P57 1●/57 2●/57 3●/57 4● and Atrium coprocessor T PCX 57 20/57 35				
Standard format module				
TSX ETY 110	**TSX ETY 110 WS**	**TSX ETY 4103**	**TSX ETY 5103**	**TSX WMY 100**
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(2) FactoryCast HMI services : HMI database, E.mail with automatic sending on events, interpreted math and logic functions, connection to relational databases and simulator tool.

Modicon Premium automation platform
Network and bus modules

Applications		Local area network conforming to Modbus Plus standard	Local area network conforming to Fip
			
Type of network or bus		**Modbus Plus**	**Fipway**
Structure	Physical interface	Modbus Plus standard	Fip standard
	Method of access	Rotating token	Bus managed by bus arbitrator
	Data rate	1 Mbit/s	1 Mbit/s
Medium		Twisted pair	Twisted shielded pair Fibre optic via transceivers or repeaters
Configuration	Maximal number of devices	32 per segment 64 on all segments	32 per segment 128 on all segments
	Maximal length	450 m per segment 1800 m with 3 repeaters	1000 m per segment 5000 m maxi with 3 repeaters
	Number of links/station	1 max.	1 to 4 depending on the model of processeur
Services	Message handling	- Write/read varaibles - Global database - Peer Cop service	- Uni-TE - COM/shared table - Application-to-application - Telegram
Type of processor		All type of Premium processor and Atrium coprocessor	
Nature of module		PCMCIA type III card on processor/coprocessor	PCMCIA type III card on processor/coprocessor and on TSX SCY 21601 module
Type of module		**TSX MBP 100**	**TSX FPP 20**
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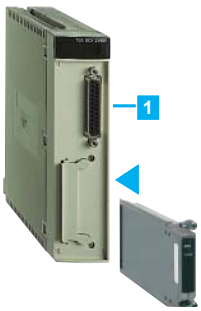
CAN fieldbus	Open industrial sensor/actuator bus conforming to AS-i standard		Modbus open industrial bus	
				
Bus CANopen V4.02	**AS-Interface**		**Modbus**	
ISO 11898	V1 AS-Interface standard	V2 AS-Interface standard	RS 232D RS 485 isolated 20 mA CL	RS 485 isolated
CSMA/CA, multi-master	Master/slave		Master/slave	
20 Kbit/s...1 Mbit/s according to distance	167 Kbit/s		19.2 Kbit/s max.	
Twisted shielded pair	2-wire AS-Interface cable		Twisted shielded pair	
127 slaves	31 discrete devices	31 + 31 discrete, analog or security devices	32 devices max. 48 slave addresses max.	32 devices max. 247 slave addresses max.
From 20 m (1 Mbit/s)…2500 m (20 Kbit/s)	100 m 200 m with repeaters		15 m in RS 232D 1000 m in RS 485 1300 m in 20 mA CL or intégrated link	1300 m
1 max.	2 to 8 depending on the model of processor		According to power consumption (see page 43900/2)	
- Implicit PDO exchange - Explicit SDO exchange or CAN function block - Explicit PDU CAN exchange	Transparency of exchanges with sensor/actuator devices		Modbus master/slace RTU or ASCII 13 Modbus functions (read/write bits and words, diagnostic…)	
All type of Premium processor (except TSX P57 153) and Atrium coprocessor	All type of Premium processor and Atrium coprocessor			
PCMCIA type III card on processor/coprocessor	Standard format module		PCMCIA type III card inserted on *(1)*	Standard format module
TSX CPP 110	**TSX SAY 100**	**TSX SAY 1000**	**TSX SCP 11● *(2)*** **1 built-in link TSX SCY 21601**	**TSX SCY 11601**
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(1) Premium processor/Atrium coprocessor and **TSX SCY 21601** *communication module.*
(2) At the end of reference, replace ● by **1***: RS 232D, by* **2***: 20 mA CL or by* **4***: isolated RS 485.*

Modicon Premium automation platform
Network, bus and serial link modules

Applications		Local area network conforming to Fip		Uni-Telway multicomponent industrial bus	
					
Type of network or bus		**Fipio** (Agent)	**Fipio** (gestionnaire de bus)	**Bus Uni-Telway**	
Structure	Physical interface	Fip standard		RS 485 non-isolated	RS 485 isolated
	Method of access	Bus managed by bus arbitrator		Master/slave	
	Data rate	1 Mbit/s		19,2 Kbit/s max. *(1)*	
Medium		Twisted shielded pair Fibre optic via transceivers or repeaters		Twisted shielded pair	
Configuration	Maximal number of devices	32 per segment, 128 on all segments (limited to 64 with TSX P57 153M processor)		5 (excluding programming terminal)	28, (96 slaves addresses max.)
	Maximal length	From 1000 m to 15 000 m (depending on the medium use) with repeaters		10 m	1000 m 15 m in 20 mA CL
	Number of links/station	1 max.		1 max.	According to power
Services	Message handling	- Uni-TE - Periodic data exchange - Application-to-application - Transparent exchange of remote I/O		- Uni-TE Client/Server 240 bytes (128 bytes on - Application-to-application 240 bytes (128 bytes - Transparency of all devices on X-Way architecture	
Type of processors		All type of Premium processor and Atrium coprocessor	TSX P57 •53M TSX P57 •823M T PCX 57 353M	All type of Premium processor and Atrium coprocessor	
Nature of module		PCMCIA type III card on processor or coprocessor	Built-in on the processor or coprocessor	Uni-Telway built-in link	Standard format module
Type of module		**TSX FPP 10**	**2 Built-in link on processor**	**1 AUX terminal port**	**2 TSX SCY 21601**
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	Jnet proprietary industrial local network		InterBus industrial fieldbus	Profibus industrial fieldbus
				
	Jnet		**InterBus**	**Profibus DP**
RS 232 RS 485 isolated 20 mA CL	RS 485 isolated	20 mA CL	RS 485 isolated	RS 485
	Rotating token		Master/slave generation 4	Master
	19,2 Kbit/s		500 Kbit/s	9,6 Kbit/s...12 Mbit/s according to lenght of bus
	Twisted shielded pair		Twisted shielded pair, Fiber optic, infra-red ...	Twisted shielded pair, Fiber optic or infra-red
2 in RS 232D, 28 in RS 485, 16 in 20 mA CL	32 (16 if SMC PLC in the network)		512 slaves max. with 254 bus terminal blocks max.	126 slaves
	1300 m	200 m depending on network topology	400 m max. (inter-station bus)	1200 m (9,6 Kbit/s), 4800 m with 3 repeaters 100 m (12 Mbit/s), 400 m with 3 repeaters
consumption(see page 43900/2)	3 maxi		1 ou 2 depending on the type of Premium processor/Atrium coprocessor	
terminal port) on terminal port) via the master	Shared table pwith a total of 128 words (64 words if SMC PLC in the network)		- Data process implicit exchange - Pre-processing - Logical addressing - Segmentation	- Read/write access for DP slave I/O data - Data transfer for slave diagnostics - Parametering and monitoring requests - Inter-master dialog not supported
			All type of Premium processor(except TSX 57 1●) and Atrium coprocessor	
PCMCIA type III card on processor or coprocessor and on TSX SCY 21601 module	PCMCIA type III card on TSX SCY 21601 module		Standard format module	PC card on ISA bus	Standard format module
TSX SCP 11● *(1)*	**TSX JNP 112**	**TSX JNP 114**	**TSX IBY 100**	**TSX IBX 100**	**TSX PBY 100**
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(1) At the end of reference, replace ● by **1***: RS 232D, by* **2***: 20 mA CL or by* **4***: isolated RS 485.*