2500S SLICE I/O Ethernet I/O Modules





Description

The 2500S family of Slice I/O modules expands the capability of 2500 Series[®] Systems to include small drops of I/O connected over Ethernet.

Slice I/O modules communicate to 2500 Series[®] Processors using CAMP protocol and read/write directly to the PLC memory or I/O image table. This allows transparent integration into the 2500 Series[®] system without the requirement for any complicated configuration step. Ethernet connection to the CPU can be accomplished using the on-board port on 2500-Cxxx Processors, using a 2572 / 2572-A Ethernet module, or using the 2500P-ECC1 Ethernet Communications Coprocessor. Note that when using 2572 or 2572-A modules, Slice I/O can be connected even to legacy Siemens[®] and Texas Instruments PLCs.

Several models of Slice I/O are available with different mixes of I/O and with additional communications options including RS232/485 and 900MHz radio. Slice I/O modules feature Universal Analog Inputs which allow connection of 0-5V, 0-20mA, thermocouple, and RTD sensors.

All Slice I/O modules can also be configured to communicate over Ethernet using Modbus-TCP.

Features

- Connects to CTI and legacy ${\rm Siemens}^{\scriptstyle \otimes}$ /TI CPUs over Ethernet
- Several models with differing I/O capabilities allow you to customize the solution to your needs
- Serial RS232/485 and 900MHz radio options for additional communications flexibility (900MHz wireless subject to import limitation, depending on country)
- Extensive intelligent features for processing attached I/O signals:
 - Totalization, filtering, forcing, inversion, runtime, and counting on digital inputs
 - Frequency out (with PWM) and synchronization on digital outputs
 - Filtering, averaging, scaling and totalization on analog inputs
 - Data logging and trending
- All module configuration done using a simple web browser interface
- Wide –40°C to +70°C operating temperature range

Hardware Specifications

Ethernet Ports:

Number of Ports: 1 Connectors: RJ-45 (Auto-MDIX) Speed: 10Mb or 100Mb (auto-negotiated) Duplex: Half or Full (auto-negotiated)

Status LEDs:

Ethernet communications activity I/O channel status

Serial Port: (on some models)

Connector: RJ45 Electrical Interface: RS-232, RS-485 Baud Rates: 1200b -115Kb

I/O Specifications:

Digital Inputs (DI): Input type: low voltage DC or contact closure Input Voltage: 0 to 30 VDC Maximum rate on counting: 10KHz Digital Outputs (DO): Output type: relay contact Output voltage: 0 to 30 VDC, 0-120 VAC Output current: 3A maximum



Control Technology Inc.

5734 Middlebrook Pike, Knoxville, TN 37921-5962 Phone: +1.865.584.0440 Fax: +1.865.584.5720 www.controltechnology.com

Digital Combo (DIO):

Input type: low voltage DC or contact closure Input Voltage: 0—30 VDC Output type: FET output Output voltage: 0 to 30 VDC Output current: 1A maximum Output protection: 1A thermal circuit breaker

Universal Analog Inputs (UAI):

Signal range: 0-20mA, 4-20mA 0-5V, 0-100mV, 0-250mV J,K,T,E,R,S,B,N thermcouple 10Ω, 100Ω, 1KΩ RTD (2-wire and 3-wire) 10K Type II and Type III thermistor Note: 3-wire RTD requires 2 inputs Resolution: 16-bits Accuracy: Voltage: 0.1% of full scale from -40° C to 70° C Current: 0.1% of full scale from -40° C to 70° C RTD: 0.1% of full scale from -40° C to 70° C Thermocouple: 0.1% of full scale $\pm 3^{\circ}$ C from -40° C to 70° C

Analog Inputs (AI):

Signal range: 0-20mA, 4-20mA, 0-5V, 0-100mV, 0-250mV Resolution: 12-bits Accuracy: Voltage: 0.1% of full scale from -40°C to 70°C Current: 0.1% of full scale from -40°C to 70°C

Analog Outputs (AO):

Signal range: 0-20mA, 4-20mA Resolution: 12-bits Accuracy: 0.1% of full scale from -40°C to 70°C

Connector Wire Gauge: 12-22 AWG

Power:

23-xxxx: externally supplied 10-28VDC, 5 watts

27-xxxx ext. supplied 12VDC, 3 watts; (also 24VDC power for charging battery, if used).

Operating Temperature -40 to +70°C (-40°F to +158°F)

Storage Temperature -40 to 85°C (-40 to 185° F)

Relative Humidity 5% to 95% non-condensing

Agency Approvals (pending) UL, UL-C, CE Class 1 Div 2

Shipping Weight 0.5 lb. (225g)

Configuration

All 2500S Slice I/O modules include a web server, allowing parameters for communications, signal ranges, intelligent features, and data logging/trending to be set using a simple web browser interface. The browser interface is used for configuring all module functions, including:

- Ethernet communications parameters
- Intelligent I/O functions
- Alarms
- Trending
- Maintenance
- PLC mapping of I/O information

User Home	Local I/O - CTI 2500S Slice I/O				
Local I/O					
MinMax			Values	Raw	
Comm Stats	DI1	X708			
Configuration	DI2	X709			
	DI3	X710			
	DI4	X711			
	DO1	Y704			
	DO2	Y705			
	DO3	Y706			
	DO4	Y707			
	UI1	To V700	7987	Raw	
	UI2	To V701	7990	Raw	
	A01	Analog Out 01	0.000	mA	
	AO2	Analog Out 02	16.000	mA	
		0			





Ordering information

Slice I/O with Ethernet

2500S-23-1050	Slice I/O, Ethernet, 4DI / 4DO / 2UAI / 2AO
2500S-27-1050	Slice I/O, Ethernet, 2DIO / 4UAI / 2AI

Slice I/O with Ethernet and RS232/485

2500S-23-1550	Slice I/O, Ethernet, RS232/485, 4DI / 4DO / 2UAI / 2AO
2500S-27-1550	Slice I/O, Ethernet, RS232/485, 2DIO / 4UAI / 2AI

Slice I/O with Ethernet, RS232/485, and 900Mhz Radio (subject to import limitation, depending on country)

2500S-23-1750	Slice I/O, Ethernet, RS232/485, 900MHz, 4DI / 4DO / 2UAI / 2AO
2500S-27-1750	Slice I/O, Ethernet, RS232/485, 900MHz, 2DIO / 4UAI / 2AI



ocess Control System

đ

a