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 Siemens® /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

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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°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

26/27-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

2500 Series® Process Control System Product Bulletin
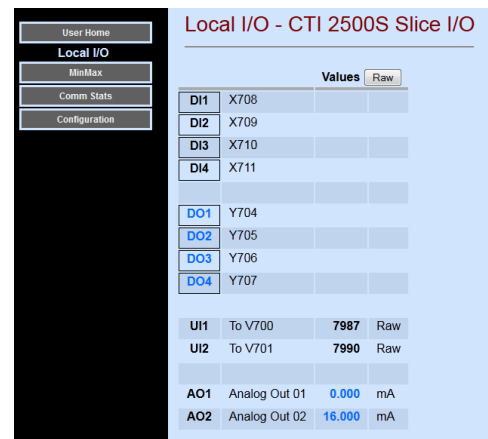
Ordering information

Slice I/O with Ethernet

2500S-23-1050	Slice I/O, Ethernet, 4DI / 4DO / 2UAI / 2AO
2500S-26-1050	Slice I/O, Ethernet, 8DIO / 2UAI
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-26-1550	Slice I/O, Ethernet, RS232/485, 8DIO / 2UAI
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-26-1750	Slice I/O, Ethernet, RS232/485, 900MHz, 8DIO / 2UAI
2500S-27-1750	Slice I/O, Ethernet, RS232/485, 900MHz, 2DIO / 4UAI / 2AI

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