2500 Series® Slice
Ethernet Remote I/O System

Powerful & Cost-Effective Ethernet I/O

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. It offers modularity down to a few I/O points without the need for an I/O base and RBC.

For a variety of applications, the CTI 2500 Series® Slice PAC System offers:

- **Connection to CTI and legacy Siemens®/TI CPUs over Ethernet**

- **Several models with differing I/O capabilities 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**

OVERVIEW

The 2500 Series® Slice I/O System is designed for use in a broad range of applications. It is compatible with the 2500 Series® Programmable Automation Control System and offers users the ability to place I/O points in multiple remote locations without the need for I/O bases and RBCs. Instead, the I/O base and the RBC are built into the "block" or Slice I/O unit.

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.

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

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 thermocouple
10Ω, 100Ω, $1K\Omega$ 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: externally 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

ROCK SOLID PERFORMANCE. TIMELESS COMPATIBILITY.

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, RS232/485, 4DI / 4DO / 2UAI / 2AO

2500S-26-1550   Slice I/O, RS232/485, 8DIO / 2UAI

2500S-27-1550   Slice I/O, RS232/485, 2DIO / 4UAI / 2AI

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

2500S-23-1250   Slice I/O, 900MHzh, 4DI / 4DO / 2UAI / 2AO

2500S-26-1250   Slice I/O, 900MHz, 8DIO / 2UAI

2500S-27-1250   Slice I/O, 900MHz, 2DIO / 4UAI / 2AI

ROCK SOLID PERFORMANCE. TIMELESS COMPATIBILITY.

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SIMPLY SEAMLESS™

The CTI 2500 Series® Automation System

The 2500 Series® has a proud legacy as one of the world's premier process control platforms and is known for its capability, simplicity and reliability. CTI has modernized this legendary product line with smart enhancements and rich features to create a complete automation solution that helps our customers run their plants as safely, efficiently and seamlessly as possible.

The BLUE Platform

CTI 2500 Series® products are built on the BLUE platform — CTI's seamless systems architecture. Products built on the BLUE platform are engineered with a consistent design philosophy, a common operating system and common communications protocols and interfaces. This approach ensures interoperability between various components of the system as well as between various product generations to deliver seamless operational communications and control and maximum efficiency with minimum process downtime and greatly reduced engineering development time.

Whether you choose Classic, Compact or Slice, the BLUE platform's seamless systems architecture will ensure seamless integration and powerful process control. Please contact us to learn more.

CONTROL TECHNOLOGY, INC.

5734 Middlebrook Pike
Knoxville, TN 37921 USA
+1.865.584.0440
www.controltechnology.com
sales@controltechnology.com