2022

CTI 2500 Series® System Product Guide

Introducing our all-new Janus family of PACs: feature-rich, with IEC61131-compliant programming, yet backwards compatible

2500-C400
"Original" CPU

CTI Janus PACs look from the past to the future to ensure seamless control for life

2500P-J750
"Janus" CPU

Control Technology, Inc.

ROCK SOLID PERFORMANCE. TIMELESS COMPATIBILITY.

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CTI Replacement Model Numbers For Siemens® Products

Siemens® Model #	CTI Replacement Model #	Siemens® Model #	CTI Replacement Model #
505-CP2572	2572-B	505-4716	2596/2597
505-2555	2555-A	505-4732	2597
505-2556	2556-A	505-4808	2598/2598-8/2599
505-2557	2557-A	505-4816	2598/2599
505-2571	2573-MOD	505-4832	2599
505-2580	2580	505-4908	2534
505-2590-A	2590-A	505-4916-A	2532
505-4008-A	2588-8 / 2589-B	505-4932-A	2531
505-4016-A	2589-B	505-6108-A/B	2558
505-4032-A	2589-B	505-6208-A/B	2562
505-4208-A	2588-8 / 2589-B	505-6504	2500P-R4
505-4216-A	2589-B	505-6508	2500P-R8
505-4232-A	2589-B	505-6516	2500P-R16
505-4308	2588-8 / 2589-B	505-6511	2500-R11-A
505-4316, 4316-A	2589-B	505-6660	2512/2512A/2515A
505-4332	2589-B	505-6660-A[1]	2512/2512A/2515A
505-4408-A	2588-8 / 2589-B	505-6660-B[1]	2512/2512A/2515A
505-4416-A	2589-B	505-6663	2513
505-4432-A	2589-B	505-6663-A	2513-A
505-4508	2596/2596-8/2597	505-6851-A/B	2500-RIO-A/B
505-4516	2596/2597	505-6870	2500-RBC
505-4532	2597	505-7002	2502
505-4608	2598/2598-8/2599	505-7003	N/A
505-4616	2598/2599	505-7012	2501
505-4632	2599	505-7016	2501
505-4708	2596, 2596-8, 2597	505-7028, 7028-A	2559-TC

CTI Replacement Model Numbers For Siemens® Products

Siemens® Model #	CTI Replacement Model #	Siemens® Model #	CTI Replacement Model #
505-7038	2559-RTD		
545-1101[2]	2500-C200		
545-1102	2500-C200		
545-1103[3]	2500-C100		
545-1104	2500-C200		
545-1105[3]	2500-C100		
545-1106	2500-C200		
555-1101	2500-C300		
555-1102	2500-C400		
555-1103	2500-C300		
555-1104	2500-C400		
555-1105	2500-C300		
555-1106	2500-C400		

NOTES

[1] if 505-6660-A/B is used in redundant mode, CTI 2512-A or 2515-A must be used for replacement

[2] if memory extension card is used with 545-1101, then 2500-C300 must be used for replacement

[3] if a Profibus-DP annex card is installed, 2500-C200 must be used for replacement

CTI Replacement Model Numbers For Siemens® Products

Siemens® Model #	CTI Replacement Model #
500-5001	2588-8, 2589-B
500-5002	2588-8, 2589-B
500-5005	2588-8, 2589-B
500-5006	2588-8, 2589-B
500-5007	2585
500-5008	2588-8, 2589-B
500-5009	2558, 2550-A
500-5010	2598-8, 2599
500-5011	2598-8, 2599
500-5012	2598-8, 2599
500-5013	2596-8, 2597
500-5016	2562, 2560-A
500-5018	2585
500-5019	2595
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500-5031	2597
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500-5037A	2558, 2550-A
500-5047A	2562, 2560-A
500-5048	2581
500-5049	2591-A
500-5051	2559-TC
500-5052	2557-A
500-5055	2589-B
500-5056	2599
500-5061	2534, 2530
500-5062	2534, 2530
500-5187	2589-B
500-5192	2589-B
500-5194	2585

We offer very similar fully compatible solutions for Series 500 CPU's like 520, 525, 530, 535, 560, 575. If you need replacements for these products, please refer to our Replacement Guide at http://www.controltechnology.com or contact us.

2500 Series® Classic

2500P-J750 Janus PAC w/ 3MB Project Memory and New IEC 61131 Standards-Based Programming Package

Our new family of Janus PACs will bring completely new capabilities to the CTI 2500 Series® System. Designed to work seamlessly with existing Siemens/TI 505® and CTI 2500 Series® Systems as well as to look to the future with state-of-the-art programming, protocols and capabilities, including direct access to the Industrial Internet of Things (IIoT) using MQTT, these PACs are fast, agile and optimized for quick, easy and cost-effective communications. Our new Janus PAC includes integrated drivers to a wide variety of protocols, allowing communications with best-in-class I/O, drives, and HMI/SCADA no matter the manufacturer. It also utilizes CTI's budget– and user-friendly new Janus Workbench Software programming package that includes all IEC programming languages. This family includes fully featured Compact versions (p. 46) and will include both lower-end and high-end Classic-sized modules in the future.

Features:

- Programming is done using Janus Workbench Software (currently used for programming 2500P-ACP1 and 2500-JACP) which allows use of SFC, FBD, LD, ST, & IL in programs
- Up to 10x execution speed compared to current 2500 Series® CPUs
- 3MB Project Memory and 15MB Data Storage
- Built-in Remote I/O and Profibus interfaces with support for all existing 2500 Series® discrete/analog modules
- External SD card for user backup and file transfer while in RUN mode
- Four Ethernet ports with internal switch that supports simultaneous connection to four different Ethernet networks.
- Embedded HMI function to easily create and view graphics screens directly from the PAC for local operator interface
- Extensive built-in communications capabilities:
  - — Optimized peer-to-peer communications with all CTI CPUs and IEC-based products
  - — CAMP server for HMI/SCADA access
  - — CAMP client for communicating with 2572/2572-x products and Cxxx processors
  - — Open Modbus client and server
  - — EtherNet/IP Scanner/Adapter/Tag Client/Server
  - — MQTT client for direct access to the IIoT
  - — OPC-UA server
  - — Profinet controller and device (available soon)

2500-C100 CPU with 128K User Memory

The 2500-C100 CPU provides discrete, analog, loop, advanced mathematical and high-speed sequential control capability for your CTI 2500 Series® or Simatic® 505® control system.

Features:

- Replaces Siemens® 545-1103, 1105 (NOTE: If Profibus Annex card is used, 2500-C200 must be used for replacement.)
- 128K user memory
- 1024 digital / 1024 analog I/O
- 16 loops / 32 alarms
- Built-in Ethernet for HMI and programming
- Built-in USB for programming
- Built-in SD flash card slot for firmware upgrade

2500-C200 CPU with 256K User Memory

The 2500-C200 CPU provides discrete, analog, loop, advanced mathematical, and high-speed sequential control capability for your CTI 2500 Series® or Simatic® 505® control system.

Features:

- Replaces Siemens® 545-1101, 1102, 1104, 1106. (NOTE: If memory expansion card is used with 545-1101, then 2500-C300 must be used for replacement.)
- 256K user memory
- 2048 digital / 1024 analog I/O
- 64 loops / 128 alarms
- Built-in Ethernet for HMI and programming
- Built-in USB for programming
- Profibus-DP master and RS485 Remote I/O ports
- Built-in SD flash card slot for firmware upgrade

2500-C300 CPU with 512K User Memory

The 2500-C300 CPU provides discrete, analog, loop, advanced mathematical, and high-speed sequential control capability for your CTI 2500 Series® or Simatic® 505® control system.

Features:

- Replaces Siemens® 555-1101, 1103, 1105
- 512K user memory
- 8192 digital / 8192 analog I/O
- 512 loops / 512 alarms
- Built-in Ethernet for HMI and programming
- Built-in USB for programming
- Profibus-DP master and RS485 Remote I/O ports
- Built-in SD flash card slot for firmware upgrade

2500-C400 CPU with 3072K User Memory

The 2500-C400 CPU provides discrete, analog, loop, advanced mathematical, and high-speed sequential control capability for your CTI 2500 Series® or Simatic® 505® control system.

Features:

- Replaces Siemens® 555-1102, 1104, 1106
- 3072K user memory
- 8192 digital / 8192 analog I/O
- 512 loops / 512 alarms
- Built-in Ethernet for HMI and programming
- Built-in USB for programming
- Profibus-DP master and RS485 Remote I/O ports
- Built-in SD flash card slot for firmware upgrade

2500-40F 40-Position Standard Screw-Terminal Connector

The 2500-40F is a 40-position standard screw-terminal connector for terminating field I/O wiring at the 2500 Series® Programmable controller.

NOTE: Connectors are not included with CTI 2500 Series® I/O modules and must be ordered separately as needed.

Features:

- Replaces Siemens® 2587705-8011
- Front access to screws and wires
- 14-22 AWG
- 15A, 300V rating

2500P-ACP1 Application Coprocessor

A member of our Janus Family, the 2500P-ACP1 Application Coprocessor module provides a high performance platform for computing or communications applications which need additional power beyond the main CPU. Up to 4 modules can be connected to one processor. Applications on the 2500P-ACP1 are programmed using CTI Janus Workbench Software (2500P-WB-USB). IMPORTANT NOTE: Because 2500P-ACP1 employs an advanced dynamic cache communications engine, a CTI 2500 Series® processor is recommended for operation.

Features:

- Programs using open-standards IEC-61131 languages
- Exchanges data between RLL program on host PLC and IEC-61131 program
- Supports Modbus server & client (serial and ethernet)
- Supports EtherNet/IP Adapter/Scanner/Tag Client
- Supports MQTT Client
- Network Data Exchange with other CTI processors
- Optimized for high-speed communications with 2500P Series® CPUs
- Ability to log data in real time to on-board SD card

2500P-ECC1 Ethernet Communications Coprocessor

The 2500P-ECC1 Ethernet Communications Coprocessor module provides a high performance multi-protocol networking solution for CTI 2500 Series® processors. Up to 4 modules can be connected to one processor.

IMPORTANT NOTE: Because 2500P-ECC1 employs an advanced dynamic cache communications engine, it requires a CTI 2500 Series® processor for operation.

Features:

- Extremely high performance when attaching multiple HMI clients to CTI processors
- CAMP server & client
- Open Modbus server & client
- Network Data Exchange with other CTI processors
- Optimized for high-speed communications with 2500P Series® CPUs

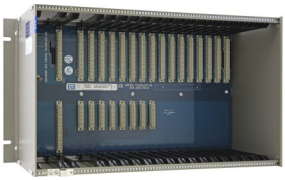
Photo Coming Soon

2500P-JACP Application Coprocessor

The 2500P-JACP Application Coprocessor module is the next-generation of the 2500P-ACP1. The newest member of our Janus Family, the 2500-JACP improves upon the 2500-ACP1 with additional project and data memory, CTI block transfer capability, OPC-UA, EtherNet I/P Tag Server, and CAMP Server. IMPORTANT NOTE: Because 2500P-ACP1 employs an advanced dynamic cache communications engine, a CTI 2500 Series® processor is recommended for operation.

Features:

- Programs using Janus Workbench Software
- Exchanges data between RLL program on host PLC and JSoft IEC-61131 program
- Supports Modbus server & client (serial and ethernet)
- Supports EtherNet/IP Adapter/Scanner/Tag Client and Tag Server
- Supports OPC-UA Server
- Supports MQTT
- Supports CAMP Server and Client
- Network Data Exchange with other CTI processors
- Optimized for high-speed communications with 2500P Series® CPUs



2500P-R4 / -R8 / -R16, 2500-R11-A I/O Bases

I/O bases provide four, eight or sixteen slots for industrial I/O for your CTI 2500 Series® or Simatic® 505® system. The bases provide space for a power supply and Processor or Remote Base Controller (RBC), and slots for up to 16 I/O modules. R11– bases allow for two power supplies and two RBCs in a redundant configuration.

Features:

- 2500P-R4 replaces Siemens® 505-6504
- 2500P-R8 replaces Siemens® 505-6508
- 2500-R11-A replaces Siemens® 505-6511
- 2500P-R16 replaces Siemens® 505-6516

2500-RBC Profibus Remote Base Controller

The 2500-RBC Profibus Remote Base Controller (RBC) allows a CTI 2500 Series® or Simatic® 505® I/O base to function as a slave node on a PROFIBUS-DP I/O channel.

Features:

- Replaces Siemens® 505-6870; compatible with Siemens® S5 and S7, as well as Siemens® 505 masters
- Can be used in all currently available CTI and Siemens® 4, 8, and 16 slot bases
- Supports communication speeds from 9.6 Kbaud (maximum cable distance per segment: 1200 m) up to 12 Mbaud (maximum cable distance per segment: 100m)

2500-RFC CPU to RF Modem Cable

The 2500-RFC is a specially constructed cable used to connect the Simatic® 505-6860 RS-485/RF I/O Channel Converter to CTI 2500 Series® Processors. The cable uses special shielding and terminations to provide the best possible communications performance with RF networks.

Features:

- Short 16” length to attach to adjacent RF converter
- Shielded cable for maximum noise immunity
- RS485 terminations on both ends for maximum communications performance

2500-RIO-B RS485 Remote Base Controller

The 2500-RIO-B RS485 Remote Base Controller allows control of a remotely-located CTI 2500 Series® or Simatic® 505® I/O base over a twisted-pair RS485 cable up to 1000m from the CPU.

Features:

- Replaces Siemens® 505-6851-A and 505-6851-B with no rewiring
- Can be used in all currently available CTI and Siemens® 4, 8, 11 and 16-slot bases
- Up to 15 remote bases can be attached to a CPU
- Maximum cable distance between CPU and remote base is 1000m

2500-SSB Single Slot Blank Front Panel

The 2500-SSB is used to cover unused slots in the I/O base, keep out debris, and maintain proper airflow.

2500-TAP RS485 Network Tap

The 2500-TAP Remote I/O Network Tap is specially designed for attaching trunkline and dropline sections to create 2500 Series® remote I/O networks. These taps use an impedance-controlled design for highest noise immunity and include built-in termination resistance which can be easily switched in- or out- of the circuit using a toggle switch. They also include an electrical noise bleed path to chassis ground which can improve the noise immunity of your network.

Features:

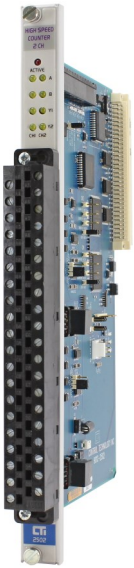
- Dust and water resistant installation
- Impedance controlled design
- Built-in terminating resistance
- Electrical noise bleed system for improved noise immunity

2501 8in/4out Analog Module

The 2501 module provides eight channels of analog input and four channels of analog output in a compact, single-wide module to fit in the CTI 2500 Series® or Simatic® 505® I/O base.

Features:

- Replaces Siemens® 505-7012 and 505-7016 with no rewiring
- Fast 6mSec update time for all channels
- Selectable input/output or input-only operating modes
- Bipolar or unipolar inputs per channel
- Inputs: 1500V channel-to-backplane isolation
- Outputs:
  - 1500V channel-to-channel isolation
  - Voltage and current outputs available simultaneously
  - Bipolar or unipolar outputs per channel



2502 High Speed Counter Module

The 2502 is a high-speed counter module designed to count incoming pulses from external sensors and provide process control outputs based on count status.

Features:

- Replaces Siemens® 505-7002 with no rewiring
- Two independent high-speed counter channels
  - pulse counter mode
  - 1X, 2X, 4X quadrature counter modes
  - 10 KHz count rate with minimum pulse width of 25us
  - two count inputs
  - reset input, inhibit input
  - two outputs
  - LED indicators

2505 Vibration Sensor Interface Module

The 2505 Vibration Sensor Interface Module provides four vibration inputs to the CTI 2500 Series® or Simatic® 505® I/O base. The module is configurable to interface to accelerometers, velocity probes, or proximity probes plus a tachometer input. The module calculates the RMS value of the overall vibration on each channel and passes this value to the controller via the I/O backplane.

Features:

- Four channels to interface to any vibration sensor plus a tach input
- Buffered BNC outputs for external analysis equipment
- Overall RMS and true peak vibration levels computed with high speed ADC
- Alert and Danger alarm levels with program-specified setpoints, time delays, and Trip Multipliers

2512 75-Watt AC/DC Power Supply

The 2512 120/240VAC/VDC Power Supply is designed for CTI 2500 Series® or Simatic® 505® Programmable Controllers. It provides up to 75 watts of power for use by the CPU and I/O modules. The 2512 also provides power using 125VDC from battery backup systems like those found in utility applications.

Features:

- Replaces Siemens® 505-6660, 505-6660-A, and 505-6660-B (if 505-6660-A/B is in redundancy mode, 2512-A must be used)
- 90-240VAC, 47-63Hz single phase, or 125VDC input power
- Up to 75 watts @ +5VDC to CPU and I/O modules
- 125 VDC input power for utility applications

2512-A 75-Watt AC Power Supply with Redundancy Support

The 2512-A 120/240VAC Power Supplies are designed for CTI 2500 Series® or Simatic® 505® Programmable Controllers. They provide up to 75 watts of power for use by the CPU and I/O modules.

Features:

- Replaces Siemens® 505-6660, 505-6660-A, and 505-6660-B
- Works in all CTI 2500 Series® or Simatic® 505® base formats
- 90-240VAC, 47-63 Hz single phase input power
- Up to 75 watts @ +5VDC to CPU and I/O modules
- 2512-A provides power redundancy when used in a dual configuration with 2500-R11-A

2513-A 24VDC Power Supply with Redundancy Support

The 2513-A is a 24VDC Power Supply designed for CTI 2500 Series® or Simatic® 505® Programmable Controllers. The triple-wide module provides up to 75 watts at +5VDC for use by the CPU and I/O modules. Provides backplane power redundancy when operated in a dual configuration in a 2500-R11-A base.

Features:

- Replaces Siemens® 505-6663-A
- Works in all CTI 2500 Series® or Simatic® 505® base formats
- 20-30VDC input power
- Up to 75 watts @ +5VDC to CPU and I/O modules

2515-A 100-Watt Power Supply with Redundancy Support

The 2515-A is a 120 VAC AC power supply for CTI 2500 Series® or Simatic® 505® Programmable Controllers. The 2515-A provides up to 100 watts of power for use by the CPU and I/O modules.

Features:

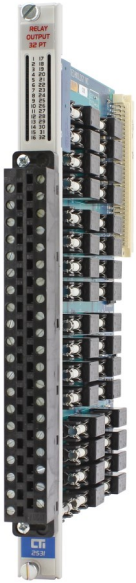
- Replaces Siemens® 505-6660, 505-6660-A, and 505-6660-B
- Works in all CTI 2500 Series® or Simatic® 505® base formats
- 90-240 VAC, 47-63 Hz single phase or 125VDC input power
- 100 Watts @ +5 VDC to CPU and I/O modules
- 2515-A provides power redundancy when used in a dual configuration with 2500-R11-A

2530 8-Point Form-C Relay Output Module

The 2530 module provides eight isolated Form-C relay outputs for the CTI 2500 Series® or Simatic® 505® I/O base. The 2530 is designed for high-current applications such as switching motor starters. It is also designed for 125 VDC (nominal) low-level current applications and is especially suited for applications in power utility substations.

Features:

- 8 Form-C relay outputs
- 1500V channel-to-backplane isolation
- 4.0 Amps per output
- Individually fused outputs

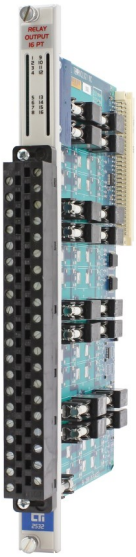


2531 32-Point Form-A Relay Output Module

The 2531 module provides 32 Form-A relay outputs for the CTI 2500 Series® or Simatic® 505® I/O base. The module uses relay output circuits to switch on or off external devices such as pilot lamps, motor starters, or solenoids. The 2531 is designed to switch externally supplied 15 to 240 VAC and 15 to 30 VDC.

Features:

- Replaces Siemens® 505-4932-A with no rewiring
- 32 Form-A relay outputs
- Isolated 1500V group-to-group
- Isolated 1500V channel-backplane
- Isolation in groups of 8
- Individually fused outputs
- 4.0 Amps per output



2532 16-Point Form-A Relay Output Module

The 2532 module provides 16 Form-A relay outputs isolated in groups of four for the CTI 2500 Series® or Simatic® 505® I/O base. The module uses relay output circuits to switch on or off external devices such as pilot lamps, motor starters, or solenoids. The 2532 is designed to switch externally supplied 15 to 240 VAC and 15 to 30 VDC.

Features:

- Replaces Siemens® 505-4916-A with no rewiring
- 16 Form-A relay outputs
- Isolated 1500V group-to-group
- Isolated 1500V channel-backplane
- Individually fused outputs
- 4.0 Amps per output

2534 8-Point Form C Relay Output Module

The 2534 module provides 8 isolated Form C relay outputs for the CTI 2500 Series® or Simatic® 505® I/O base. The 2534 is designed for high-current applications such as switching motor starters. It is also designed for 125 VDC (nominal) low-level current applications and is especially suited for applications in power utility substations.

Features:

- Replaces Siemens® 505-4908 with no rewiring
- 8 Form C relay outputs
- Isolated 1500V channel-to-backplane
- Wide 15-240 VAC, 15-150 VDC output range
- Individually fused outputs
- 4.0 Amps per output

2541 Redundant Processor Manager Module

The 2541 Redundant Processor Manager (RPM) provides an automatic backup solution for CTI 2500 Series® or Simatic® 505® Programmable Controllers. If the active PLC fails, the RPM will automatically switch the remote I/O to the standby PLC. Transfer to the standby processor is bumpless. All remote I/O updates are mirrored to the stand-by PLC. In addition, up to 4096 words of user-defined critical data can be transferred from the active PLC to the standby PLC every scan. Other non-critical data can be transferred over several scans. The RPM can also switch up to two serially attached operator interface devices.

Features:

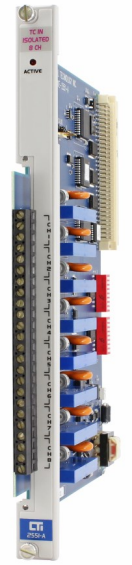
- Automatically transfers control to standby PLC upon loss of I/O scan or "heartbeat" pulse from the active PLC
- Switches both remote I/O and serially attached operator interface devices
- Enables PLC logic to monitor status and contol switchover
- Allows optional manual switchover capability

2550-A 8-Channel Isolated Analog Input Module

The 2550-A is a high-speed 8-channel isolated analog input module compatible with the CTI 2500 Series® or Simatic® 505® I/O base. The 2550-A translates analog input signals into an equivalent digital word.

Features:

- Fast 4 mSec update time for all 8 channels
- External isolators not required
- 1500V channel-to-channel isolation
- 1500V channel-to-backplane isolation
- No external power supply required for module
- No external current resistor required
- On-board calculations for 4-20 mA offset inputs

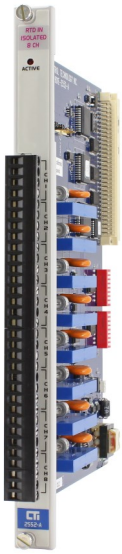


2551-A 8-Channel Isolated Thermocouple Input Module

The 2551-A is a high-speed 8-channel isolated thermo-couple input module compatible with the CTI 2500 Series® or Simatic® 505® I/O base. The 2551-A translates thermocouple input signals into scaled temperature values and millivolt input signals into equivalent digital words.

Features:

- Fast 2 mSec update time per channel
- Each input configurable for Type J, Type K, or millivolts
- 1500V channel-to-channel isolation
- 1500V channel-to-backplane isolation
- Digital filtering circuit for increased noise immunity

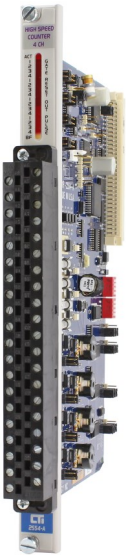


2552-A 8-Channel Isolated RTD Input Module

The 2552-A is a high-speed 8-channel isolated RTD input module compatible with the CTI 2500 Series® or Simatic® 505® I/O base. The 2552-A translates RTD input signals into scaled temperature values and millivolt input signals into equivalent digital words.

Features:

- Fast 2 mSec update time per channel
- Supports 100W platinum and 120W nickel RTDs
- 1500V channel-to-channel isolation
- 1500V channel-to-backplane isolation
- User selectable digital filtering

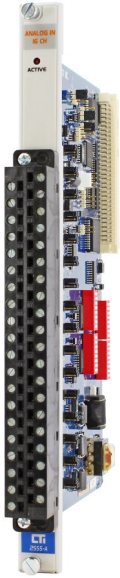


2554-A 4-Channel Isolated High-Speed Counter Module

The 2554-A is an isolated 4-channel high-speed counter input module. Each channel can operate in one of three selectable modes: frequency, period, or general counter. In addition, two channels may be configured together for quadrature mode operation.

Features:

- Single-wide 4-channel high-speed counter
- Operates in frequency, period, or counter mode
- External gate and reset inputs on each channel
- External 1.5A sourcing output per channel
- Auto-reset option for rapid or random asynchronous events

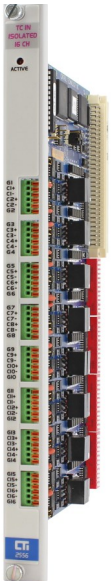


2555-A 16-Channel Analog Input Module

The 2555-A is a high-speed 16-channel differential analog input module compatible with the CTI 2500 Series® or Simatic® 505® I/O base. The 2555-A translates analog input signals into an equivalent digital word.

Features:

- Replaces Siemens® 505-2555
- Fast 6 mSec update time per channel
- No external power supply required for module
- 1500V channel-to-backplane isolation
- 140Vrms channel-to-channel isolation
- Accepts voltage or current input signals

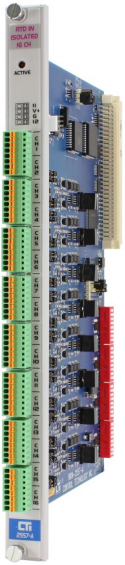


2556-A 16-Channel Isolated Thermocouple Input Module

The 2556-A is a high-speed 16-channel isolated thermocouple input module compatible with the CTI 2500 Series® or Simatic® 505® I/O base. The 2556-A translates millivolt-level signals from the thermocouple element into a scaled temperature value. Multiple thermocouple types are supported as well as millivolt inputs.

Features:

- Replaces Siemens® 505-2556
- 16 bit ADC for each channel
- Supports J, K, R, S, T, E, and L thermocouples and millivolt inputs
- Advanced preprocessing with on-board scaling, alarm detection, filtering and averaging
- Fast 20 mSec update time, open thermocouple detection
- Uses 2559-FPC removable wiring connector



2557-A 16-Channel RTD Input Module

The 2557-A is a high-speed 16-channel isolated RTD input module compatible with the CTI 2500 Series® or Simatic® 505® I/O base. The 2557-A translates millivolt-level signals from the RTD element into a scaled temperature value.

Features:

- Replaces Siemens® 505-2557
- 16 bit ADC for each channel
- Supports 10W Cu, 100W Pt, and 120W Ni RTDs and millivolt inputs
- Advanced preprocessing with on-board scaling, alarm detection, filtering and averaging
- Fast 20 mSec update time, open RTD detection and lead resistance compensation
- Support for 2, 3, or 4 wire RTD elements

2558 8-Channel Analog Input Module

The 2558 is an 8-channel analog input module compatible with the CTI 2500 Series® or Simatic® 505® I/O base. The 2558 translates analog input signals into equivalent digital words. It is fully compatible with all versions of the Siemens® 545 and 555 Programmable Controllers.

Features:

- Replaces Siemens® 505-6108-A and 505-6108-B with no rewiring
- 8 analog input channels
- 140Vrms isolation between channels
- 1500V channel-to-backplane isolation
- Supports 16-bit and 13-bit resolution
- Fast 5 mSec update time for all 8 channels
- On-board calculations for 4-20 mA offset inputs

2559-FCAL Precision Calibration Connector

The 2559-FCAL is a precision calibration connector used for calibrating the 2559-RTD.

Features:

- Standard 40 pin connector
- Built-in high precision resistors for accurate calibration

2559-FPC 40-Position Screw-Terminal Connector

The 2559-FPC is a 36-position screw-terminal connector with built-in cold junction compensation for the 2556-A and 2559-TC Thermocouple Input Module.

FPC Features:

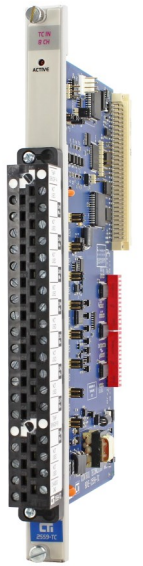
- Front access to screws and wires
- 14-22 AWG
- Built-in cold junction compensation for 2559-TC
- 15A, 300V rating

2559-RTD 8-Channel RTD Input Module

The 2559-RTD is a high-speed 8-channel RTD input module which translates RTD input signals into scaled temperature values in a CTI 2500 Series® or Simatic® 505® I/O base.

Features:

- Replaces Siemens® 505-7038 with no rewiring
- 1500V channel-to-backplane isolation
- Supports 7 RTD probe types in Pt, Cu and Ni.
- Configurable for 8 resistive values for RTD probe types
- Supports 2-, 3-, and 4-wire probes
- Data formats in °F, °C and scaled integer
- Error reporting and digital filtering

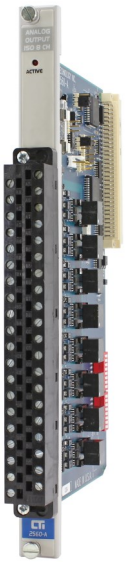


2559-TC 8-Channel Thermocouple Input Module

The 2559-TC is a high-speed, 8-point thermocouple input module which translates millivolt-level signals from the thermocouple element into a scaled temperature value in a CTI 2500 Series® or Simatic® 505® I/O base. Thermocouple types J, K, T, E, R, S, N, and millivolts are supported.

Features:

- Replaces Siemens® 505-7028 (requires special I/O connector)
- 1500V channel-to-backplane isolation
- Fast 9 mSec update time for all channels
- No CJC calibration necessary
- Microprocessor self-diagnostics
- Requires 2559-FPC connector

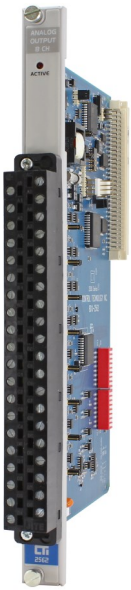


2560-A 8-Channel Isolated Analog Output Module

The 2560-A is a high-speed 8-channel isolated analog output module compatible with the CTI 2500 Series® or Simatic® 505® I/O base. The 2560-A translates a digital word from the controller into equivalent analog outputs.

Features:

- Voltage and current outputs available simultaneously
- Fast 0.25 mSec update time per channel
- 1500V channel-to-channel isolation
- 1500V channel-to-backplane isolation
- Unipolar or bipolar applications supported



2562 8-Channel Analog Output Module

The 2562 is a low-cost, high-speed, 8-channel analog output module compatible with the CTI 2500 Series® or Simatic® 505® I/O base. The 2562 translates digital words from the controller into equivalent analog outputs.

Features:

- Replaces Siemens® 505-6208-A and 505-6208-B with no rewiring
- 8 analog output channels
- 1500V channel-to-backplane isolation
- Fast 4 mSec update time for all channels
- Voltage and current outputs available simultaneously
- Bipolar or unipolar outputs per channel

2572-B Fast Ethernet TCP/IP Adapter

The 2572-B Ethernet TCP/IP Adapter is the next generation Ethernet interface module for CTI 2500 Series® or Simatic® 505® controllers. The 2572-B provides connectivitly to networks using IEEE 802.3, Ethernet II and Transmission Control/Internet Protocol standards, at 10M or 100M speeds.

Features:

- Compatible with Siemens® 505-CP2572 and CTI 2572
- Auto-sensing for 10/100Mbps networks
- TCP/IP support includes UDP and TCP
- Supported protocols include: Camp Client and Server, Modbus TCP Server, Ethernet/IP Server
- Remote programming over Ethernet
- HMI connectivity
- DDE and OPC support available
- DHCP configuration option

2573-MOD Serial Interface Adapter with MODBUS

The 2573-MOD is a microprocessor-based communications adapter for CTI 2500 Series® or Simatic® 505® controllers. The 2573-MOD provides support for communicating with plant-floor devices such as modems, barcode readers, scales, displays, printers, and other controllers.

Features:

- Provides 4 serial ports, each providing RS-422, RS-485, and RS-232 electrical interfaces. All ports operate concurrently and independently.
- Enables the CPU to act as a master or slave for devices which use Modbus RTU pr ASCII protocols
- Task Code Master support allows the local CPU to access memory in other SIMATIC® 505® or 500 series systems.

2577 Profibus DP Slave Adapter

The 2577 provides the ability to read any V, WX, X, and C memory location over Profibus.

Features:

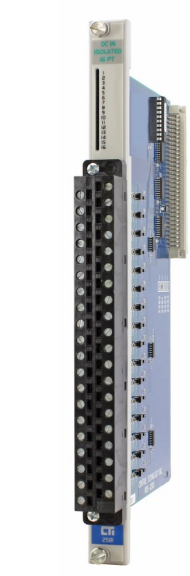
- No changes required to existing program configuration and I/O
- Allows transfer of up to 110 words of data in and 110 words of data out to Profibus Master
- Maintains statistics and diagnostic information for the Profibus network
- Auto-senses Profibus baud rate

2580 16-Point Isolated 95-132 VAC Input Module

The 2580 16-point discrete input module accepts sixteen discrete isolated 95-132 VAC inputs to the CTI 2500 Series® or Simatic® 505® I/O base.

Features:

- Replaces Siemens® 505-2580
- 1500V channel-to-channel isolation
- 1500V channel-to-backplane isolation
- Sourcing and sinking applications
- Indicator LEDs for each channel

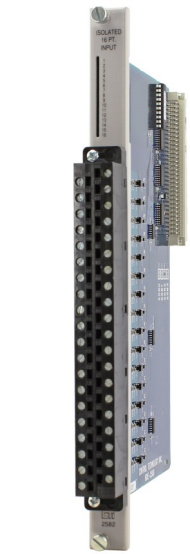


2581 16-Point Isolated 12-56 VDC Input Module

The 2581 16-point discrete input module accepts sixteen discrete isolated 12-56 VDC inputs to the CTI 2500 Series® or Simatic® 505® I/O base.

Features:

- 1500V channel-to-channel isolation
- 1500V channel-to-backplane isolation
- Sourcing and sinking applications
- Indicator LEDs for each channel

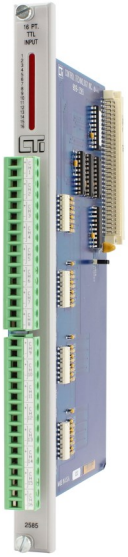


2582 16-Point Isolated 125 VDC Input Module

The 2582 16-point discrete input module accepts sixteen 125 VDC discrete isolated inputs to the CTI 2500 Series® or Simatic® 505® I/O base.

Features:

- 1500V channel-to-channel isolation
- 1500V channel-to-backplane isolation
- Sourcing and sinking applications
- Indicator LEDs for each channel

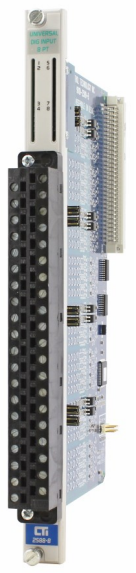


2585 16-Point TTL / Word Input Module

The 2585 16-point TTL input module accepts sixteen TTL inputs to the CTI 2500 Series® or Simatic® 505 I/O base. Note that the 2585 is available by special order only. A minimum quantity purchase is required.

Features:

- Selectable discrete (X) or word (WX) format
- 1500V channel-to-backplane isolation
- Sourcing and sinking applications
- Indicator LEDs for each channel

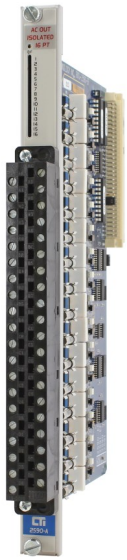


Universal Discrete Input Module
2588-8 8-Point
2589-B 8/16/32-Point

The 2588-8 and 2589-B accept both AC and DC voltage inputs and are compatible with the CTI 2500 Series® or Simatic® 505® I/O base. The 2589-B can be configured to login as 8, 16 or 32-points.

Features:

- 2588-8 replaces Siemens® 505-4008, 4208, 4308, 4408 with no rewiring
- 2589-B replaces Siemens® 505-4008, 4016, 4032, 4116, 4132, 4208, 4216, 4232, 4308, 4316-A, 4332, 4408, 4416 -A, 4432-A with no rewiring
- 11V to 250V AC/DC range (NOTE: 2589-A supports max 16 inputs on 250 VAC, 2589-B supports 32 inputs on 250 VAC)

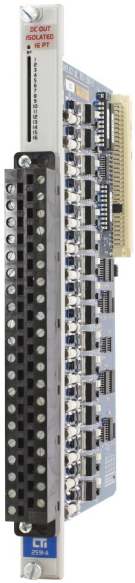


2590-A 16-Point Isolated Discrete 20-132 VAC Output Module

The 2590-A 16-point discrete output module provides sixteen isolated outputs from the CTI 2500 Series® or Simatic® 505® I/O base. The 2590-A is designed to switch externally supplied 20 to 132 VAC.

Features:

- Replaces Siemens® 505-2590-A
- Supports sourcing and sinking applications
- 2.0 Amps per output with no derating
- 1500V channel-to-channel isolation
- 1500V channel-to-backplane isolation
- Outputs individually fused
- Blown fuse indicator
- Blown fuse reporting

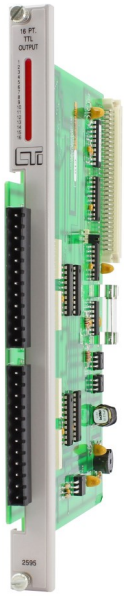


2591-A 16-Point Isolated 11-146 VDC Output Module

The 2591-A 16-point discrete output module provides sixteen isolated outputs from the CTI 2500 Series® or Simatic® 505® I/O base. The 2591-A is designed to switch externally supplied 11 to 146 VDC.

Features:

- Supports sourcing and sinking applications
- 1.5 Amps per output with no derating
- 1500V channel-to-channel isolation
- 1500V channel-to-backplane isolation
- Outputs individually fused
- Blown fuse indicator
- Blown fuse reporting

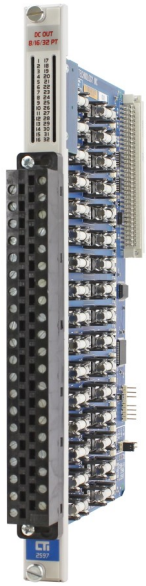


2595 16-Point TTL / Word Output Module

The 2595 16-point TTL output module provides sixteen TTL driven outputs from the CTI 2500 Series® or Simatic® 505® I/O base. Note that the 2595 is available by special order only. A minimum quantity purchase is required.

Features:

- Selectable discrete (Y) or word (WY) format
- Sourcing and sinking applications
- 1500V channel-to-backplane isolation
- Indicator LEDs for each channel



2596-8 8-Point DC Output Module
2596 8/16-Point DC Output Module
2597 8/16/32-Point DC Output Module

These modules provide 8, 16, and 32 11-125 VDC outputs from the CTI 2500 Series® or Simatic® 505® I/O base. The solid-state outputs can be used to switch on or off external devices such as pilot lamps, motor starters, or solenoids.

Features:

- 2596-8 replaces Siemens® 505-4508, 4708
- 2596 replaces Siemens® 505-4508, 4516, 4708, 4716
- 2597 replaces Siemens® 505-4508, 4516, 4532, 4708, 4716, 4732
- Individually fused sourcing outputs
- Wide 11-125 VDC output range
- 2.0 Amps per output

2598-8 8-Point AC Output Module
2598 8/16-Point AC Output Module
2599 8/16/32-Point AC Output Module

These modules provide 8, 16 or 32 11-240 VAC outputs from the CTI 2500 Series® or Simatic® 505® I/O base. The solid-state output circuits can be used to switch on or off external devices such as pilot lamps, motor starters, or solenoids.

Features:

- 2598-8 replaces Siemens® 505-4608, 4808
- 2598 replaces Siemens® 505-4608, 4616,4808, 4816
- 2599 replaces Siemens® 505-4608, 4616, 4632, 4808, 4816, 4832
- Individually fused sourcing outputs
- Wide 11-240 VAC output range
- 2.0 Amps per output

Photo Coming Soon

075-00008 Battery for Cxxx Processor
075-00019 Battery for Jxxx Processor

Replacement batteries for Janus Jxxx Processors and for Cxxx Processors

IMPORTANT NOTE: International aviation laws regulate the transportation of lithium batteries by airplane which impacts our ability to ship spare CPU batteries by aircraft to many countries.

We therefore recommend purchasing spare CPU batteries locally based on the specifications listed in the Installation and Operating Guides for the respective processors:

- Appendix F on p. 107 for the 2500-Cxxx Processors which is available on our website at https://controltechnology.com/Files/Products/2500-Classic/2500-Cxxx/manuals/CTI-2500-IOG-(62-370)
- Appendix D on page 79 for the 2500P-Jxxx Processors available on our website at https://controltechnology.com/Files/Products/2500-Classic/2500-Jxxx/manuals-(restricted)/Janus-Controller-Installation-and-Operation-Guide.

Contact us if you need further assistance.

050-00066 Battery Cap for Cxxx Processors
050-00066-MOD Battery Cap for Jxxx Processors

Battery cap replacement for Cxxx and Jxxx Processor batteries