

5000 Series

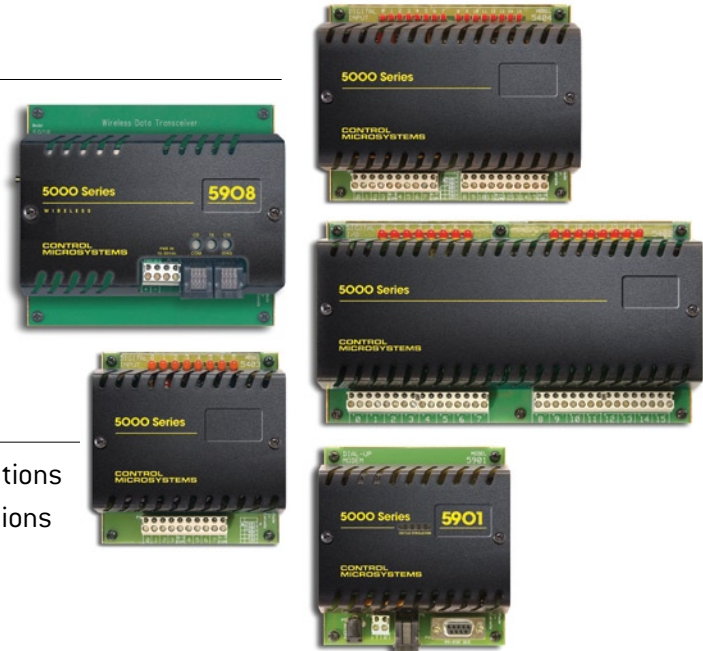
Expansion & Communication Modules

Expansion:

- Analog input module: 4 variations
- Analog output module: 5 variations
- Digital input/output relay module: 2 variations
- Digital input module: 17 variations
- Digital output module: 7 variations
- Combination IO module: 8 variations
- External UPS module

Communication:

- Spread Spectrum radio transceiver module: 2 variations
- Bluetooth local communications interface: 2 variations
- Dial-up modem module
- Bell 202 radio/leased line modem module
- HART protocol interface module
- Ethernet Switch module
- SDI-12 interface module



With the addition of Control Microsystems' 5000 Series I/O Expansion and Communication modules, the series of powerful SCADAPack controllers become even more powerful. Any+ SCADAPack controller is easily expandable from its base I/O configuration to more than 700 process I/O points, and regardless of what communication format is required, there is a communication module to fit the need.

Overview

Flexible I/O – The Control Microsystems 5000 Series I/O Expansion modules are available for a wide range of process I/O requirements, from digital and analog I/O to I/O-simulators and a UPS module. A maximum of twenty I/O modules may be connected for an expansion of up to 512 digital outputs, 512 digital inputs, 128 analog inputs, 64 counters and 64 analog outputs, on some models.

Flexible Communications

Already a SCADAPack strong point, communication flexibility is further increased with a selection of connectivity modules. From the traditional leased line, phone line and radio-transceiver formats to the latest Ethernet, SDI-12 and Bluetooth technologies, Control Microsystems 5000 Series communication modules make data-transfer easy and cost-effective.

Applications and Benefits

Whether being specified for a new SCADAPack installation or incorporated into an existing one, the I/O Expansion and Communication modules are specifically designed for use with SCADAPack controllers, are DIN rail-mountable, and are powered either by the SCADAPack itself or by an external power supply. The 5103 UPS module provides additional power where required.

With a wide selection of I/O expansion modules available, many diverse industries, including water and wastewater, oil and gas, and industrial process control, will benefit from SCADAPack process control and SCADA applications.

A variety of communication modules ensures that SCADAPack controllers can be integrated into existing corporate LANs and WANs, and industrial plant-based networks such as leased-line and RS-485.

3 year warranty on parts and labor for all Expansion and Communication Modules.

+ SCADAPack 100 and SCADAPack ER controllers do not support 5000 Series I/O Expansion modules.

5000 Series

Analog Input Modules

Module 5502 Differential Analog Input Module

Features:

- 8 Differential Isolated Inputs for high versatility
- Integrated transient protection with fusing
- Bipolar 13 bit resolution
- High common mode voltage rejection and tolerance



Model	Part No.	Model
5502	297211	8 channel isolated, differential, bipolar analog input module, +/-10V or +/-20mA

Module 5504 Thermocouple Input Module

Features:

- 8 type J, K, T, E or ± 80 mV inputs
- Optical isolation for high reliability
- Integrated transient protection
- Linearized and cold junction compensated



Model	Part No.	Model
5504	297166	8 channel isolated thermocouple input module, J,K,T,E

Module 5505 RTD Input Module

Features:

- Input values scaled and linearized
- Data returned as 32-bit floating-point number
- Lower power consumption
- Automatic 3-wire RTD compensation
- 5503 emulation mode for Legacy systems
- ATEX II 3G and IECEx: Ex nA IIC T4 per EN 60079-15, protection type n (Zone 2)



Model	Part No.	Model
5505	297318	4 channel 3 or 4 wire RTD input module, 100ohm platinum

Analog Input Modules

Module 5506 Analog Input Module

Features:

- 0 to 20mA / 4 to 20mA inputs
- 0 to 5V / 1 to 5V inputs
- Individual input configuration
- 5501 emulation mode for Legacy systems
- ATEX II 3G and IECEx: Ex nA IIC T4 per EN 60079-15, protection type n (Zone 2)



Model	Part No.	Model
5506	297319	8 channel analog input module, each input individually configured

Analog Output Modules

Module 5302 Analog Output Module

Features:

- 20mA Current
- Low Power
- Class 1, Division 2 for use in hazardous locations



Model	Part No.	Model
5302*	297176	4 channel isolated analog output module, 0-20/4- 20mA (only two channels supported with SmartWIRE)

Module 5304 Analog Output Module

Features:

- 4 isolated analog outputs
- Selectable voltage and current modes
- 5V and 10V selectable voltage modes
- Low Power
- Class 1, Division 2 for use in hazardous locations
- ATEX II 3G and IECEx: Ex nA IIC T4 per EN 60079-15, protection type n (Zone 2)



Model	Part No.	Model
5304-20*	297248	4 channel analog output module, 0-20mA
5304-10*	297252	4 channel analog output module, 0-10volts
5304-5*	297253	4 channel analog output module, 0-5volts
5304-C*	297254	4 channel analog output module, Custom (specify range of each input)

Expansion & Communication Modules

Digital Input Modules

Module 5403 High Level Digital Input Module

Features:

- 8 digital inputs
- Reliable optical isolation
- Isolated in groups of 4 for ease of wiring
- Very low power requirements
- Universal AC or CD



Model	Part No.	Model
5403-240	297106	8 point discrete input module, 240V
5403-120	297107	8 point discrete input module, 120V
5403-48	297108	8 point discrete input module, 48V
5403-24	297109	8 point discrete input module, 24V
5403-12	297110	8 point discrete input module, 12V

Module 5404 High Level Digital Input Module

Features:

- 16 digital inputs
- 16 optically isolated digital inputs
- Isolated in groups of 4 for ease of wiring
- Very low power requirements
- 12 to 240 volts



Model	Part No.	Model
5404-240*	297154	16 point discrete input module, 240V
5404-120*	297155	16 point discrete input module, 120V
5404-48*	297156	16 point discrete input module, 48V
5404-24*	297157	16 point discrete input module, 24V
5404-12*	297158	16 point discrete input module, 12V

Digital Input Modules

Module 5405 Digital Input Module

Features:

- High density, 32 digital inputs
- 12 to 120 volts
- Low Power
- Class 1, Division 2 for use in hazardous locations
- ATEX II 3G and IECEx: Ex nA IIC T4 per EN 60079-15, protection type n (Zone 2)



Model	Part No.	Model
5405-120*	297249	32 point discrete input module, 120V
5405-24*	297247	32 point discrete input module, 12-24V

Module 5410 High Speed Counter/Accumulator

Features:

- 4 counter inputs
- Optically isolated
- 32 bit count range
- Wide input range 3 VDC - 28 VDC
- Guaranteed no missed counts to 10KHz
- Count retained during power outage
- Self clearing or accumulating
- Accepts quadrature phase inputs



Model	Part No.	Model
5410	297149	4 channel, 10KHz counter input module (or 2 phase encoder inputs)

Module 5414 Compact Digital Input Module

Features:

- 16 optically-isolated digital inputs
- 12 to 240 volts
- Universal AC or DC
- Very low power requirements
- Compact module
- 3 year warranty on parts and labor
- ATEX II 3G and IECEx: Ex nA IIC T4 per EN 60079-15, protection type n (Zone 2)



Model	Part No.	Model
5414-24	297378	16 point digital input module (12/24V AC/DC)
5414-48	297379	16 point digital input module (48V AC/DC)
5414-120	297380	16 point digital input module (115/125V AC/DC)
5414-240	297381	16 point digital input module (240V AC/DC)

5000 Series

Digital I/O Modules

Module 5401 Configurable Digital I/O Module

Features:

- MAX. 8 input/output points
- Each point can be input or output
- Most cost-effective for low point counts
- Mix of inputs and outputs supported
- Plug-in relays simplify maintenance
- High current outputs to 3A

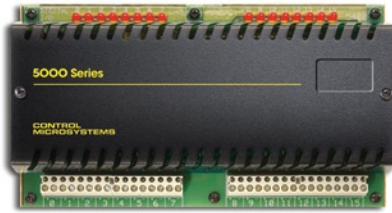


Model	Part No.	Model
5401	297121	8 point input/output module [Relay choices listed on Module 5401 specification sheet]

Module 5402 Configurable Digital Input or Output Module

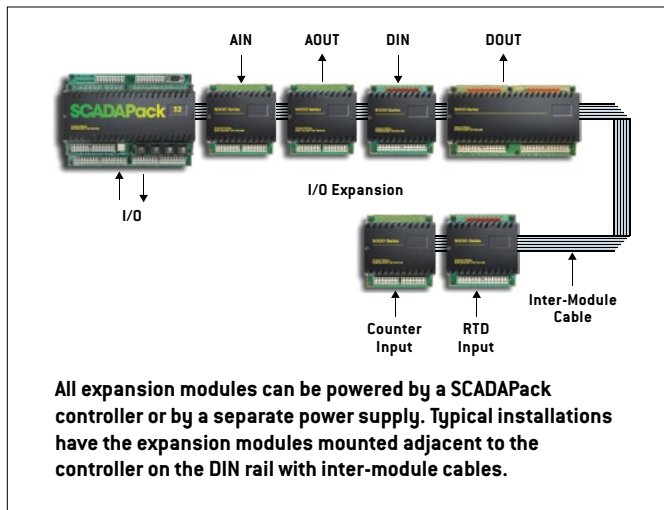
Features:

- 16 configurable digital inputs or outputs
- Each point can be AC or DC
- Plug-in relays simplify maintenance
- High current outputs to 3A



Model	Part No.	Model
5402*	297153	16 point input or output module [Relay choices listed on Module 5402 specification sheet]

Typical Installation

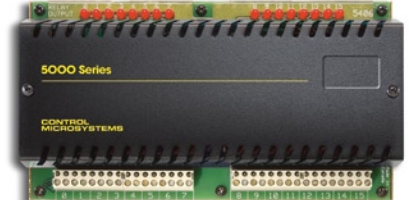


Digital Output Modules

Module 5406A Dry Contact Relay Out Module

Features:

- 16 Form A mechanical relays
- Highest output load current
- Zero leakage current
- Individually isolated
- Modifiable for Form B (NC) operation
- External power input capability



Model	Part No.	Model
5406*	297284	16 point Form A relay output module, 6A contacts

Module 5407 Dry Contact Relay Out Module

Features:

- 8 Form A mechanical relays
- Highest output load current
- Zero leakage current
- Individually isolated
- Modifiable for Form B (NC) operation
- Relays sealed against corrosion



Model	Part No.	Model
5407	297126	8 point Form A relay output module, 6A contacts

Module 5408 Triac Digital Output Module

Features:

- 8 triac digital outputs
- Optical isolation
- Snubbers for inductive loads
- MOV transient suppression
- Zero-crossing turn on/off for low EMF



Model	Part No.	Model
5408	297103	8 point triac output module, 24-240VAC @ 1A

Expansion & Communication Modules

Digital Output Modules

Module 5409 FET Digital Output Module

Features:

- 8 isolated DC outputs
- Optical isolation
- Diode protected for inductive loads
- Power source LED



Model	Part No.	Model
5409	297117	8 point DC output module, 12-24VDC @ 1A

Module 5411 Digital Output Module

Features:

- High density, 32 digital outputs
- Sinking output design
- Low Power
- Class 1, Division 2 for use in hazardous locations
- ATEX II 3G and IECEx: Ex nA IIC T4 per EN 60079-15, protection type n (Zone 2)



Model	Part No.	Model
5411*	297246	32 point, 12-24V digital output module, open-drain type

Module 5415 Compact Relay Digital Output Module

Features:

- 12 digital outputs
- Dry Contact or Solid State Relay variants
- Isolated in 3 groups of 4
- LEDs can be disabled to conserve power
- Very low power requirements
- Compact module
- ATEX II 3G and IECEx: Ex nA IIC T4 per EN 60079-15, protection type n (Zone 2), (5415-A only)
- 3 year warranty on parts and labor



Model	Part No.	Model
5415	297382	12 point compact mechanical relay output module
5415-A	297384	12 point compact solid state relay output module

* I/O modules not fully supported by the non-programmable 5201 and 5202 controller modules.

Combination I/O Modules

Module 5606 Analog/Digital I/O Module

Features:

- High density IO combination board
- 32 DIs
- 16 Relay DOs
- 8 Configurable AIs
- 2 Optional AOs
- ATEX II 3G and IECEx: Ex nA IIC T4 per EN 60079-15, protection type n (Zone 2), (Solid State Relay types only)



Model	Part No.	Model
5606-24	297328	Combination 24V DI, DO and AI module
5606-48	297329	Combination 48V DI, DO and AI module
5606-120	297330	Combination 120V DI, DO and AI module
5606-240	297331	Combination 240V DI, DO and AI module
5606-24-AO	297334	Combination 24V DI, DO, AI and AO module
5606-48-AO	297335	Combination 48V DI, DO, AI and AO module
5606-120-AO	297336	Combination 120V DI, DO, AI and AO module
5606-240-AO	297337	Combination 240V DI, DO, AI and AO module

I/O Simulator Modules

Module 5421 Toggle Switch Digital Input Module

Features:

- 8 toggle switch digital inputs
- Reliable, sealed toggle switches
- Ideal for simulation, testing
- Status LEDs show switch position



Model	Part No.	Model
5421	297104	8 point, toggle switch DI module for simulation/testing

Module 5521 Potentiometer Input Module

Features:

- 8 potentiometer inputs
- Multi-turn pots aid adjustment
- 12 bit resolution
- Does not require 24V power



Model	Part No.	Model
5521	297119	8 channel potentiometer analog input module for simulation/testing

5000 Series

Modems

Module 5901 Dial-Up Modem

Features: †

- Heavy duty lightning suppression prevents damage
- Automatic recovery from failure-to-answer
- Power-down mode conserves power when battery-operated
- -40°C/F to 70°C/158°F operating temperature range
- v.32bis, 300 - 14,400 baud



Model	Part No.	Model
5901	297198	Auto dial/auto answer modem module, 56K baud V.32 bis, with built-in transient protection
5901SA	297199	Same as 5901 with a 115VAC AC adapter for connection to PCs or other RS-232 devices

Module 5902 Bell 202 Radio or Leased Line Modem

Features: †

- Universal radio or telephone interface
- Soft carrier turnoff for rapid turn-around
- Excellent performance on poor lines
- Optional stand-alone versions for PCs



Model	Part No.	Model
5902	297120	Bell 202 modem module, 1200 baud, FSK, 2/4 wire, with radio PTT key control and RF carrier detect
5902SA	297194	Same as 5902 with a 115VAC AC adapter for connection to PCs or other RS-232 devices
5902SAF	297195	Same as 5902SA with a full duplex to half duplex converter - for devices without RTS/CTS support

Interface Modules & Gateways

Module 5904 HART Interface Module

Features:

- Compliant with HART physical layers specifications
- Configurable as primary or secondary master
- Unloads HART protocol details from application software
- Enables up to 4 HART ports per CPU without using CPU serial ports



Model	Part No.	Model
5904	297205	HART interface module

Interface Modules & Gateways

Module 5908/5908-WO2 Wireless Data Transceiver

Features (5908) †

- Incorporates Freewave Radio Technology
- Available in 900 MHz and 2.4~GHz versions
- High Speed (115.2 kbps true data throughput)



Features (5908-WO2) †

- Incorporates MDS TransNET Radio Technology
- Available in 900 MHz
- High Speed (115.2 kbps true data throughput)



~ Not applicable in all areas - consult Control Microsystems for availability

Model	Part No.	Model
5908	297270	Radio Transceiver, Freewave 900MHz Spread Spectrum Radio, 6-30VDC
5908-2.4G	297283	Radio Transceiver, Freewave 2.4GHz Spread Spectrum Radio, 6-30VDC
5908-WO2	297310	Radio Transceiver, MDS 900 Spread Spectrum Radio, 9-30VDC

Module 5910 Ethernet Switch

Features:

- 5-port, 10/100BaseT Ethernet switch
- Auto MDI/MDI-X crossover operation
- Powered by SCADAPack 5V source.
- Class 1, Division 2, Hazardous Area Rating



Model	Part No.	Model
5910	297288	Ethernet Switch, 5 port (unmanaged), 10/100Mb autodetect, 12-24 Vdc powered
5910SA	297289	Same as 5910 with a 115VAC AC adapter for connection to PCs or other RS-232 devices

† Note: Serial communication cable sold separately

Expansion & Communication Modules

Interface Modules & Gateways

Module 5913 Serial to *Bluetooth*[®] Adapter

Features:

- Acts as *Bluetooth* slave
- Connects to SCADAPack RJ-45 serial port connector, (cable included)
- Wireless communications module certified to *Bluetooth* version 2.0
- *Bluetooth* Class 1: +100 meter (330 feet) distance when communicating with another Class 1 device
- Encryption and 16-character alphanumeric Personal Identification Number (PIN) and error correction schemes for guaranteed packet delivery
- Class I, Division 2 Groups A, B, C and D Hazardous Locations

Model	Part No.	Model
5913	297373	Serial to <i>Bluetooth</i> Adapter w/ 24" RJ45-to-RJ45 cable

Module 5914 USB to *Bluetooth*[®] Adapter

Features:

- Acts as *Bluetooth* master
- Connects to USB port on desktop or laptop computer
- Wireless communications module certified to *Bluetooth* version 2.0
- *Bluetooth* Class 1: +100 meter (330 feet) distance when communicating with another Class 1 device
- Encryption and 16-character alphanumeric Personal Identification Number (PIN) and error correction schemes for guaranteed packet delivery

Model	Part No.	Model
5914	297374	USB to <i>Bluetooth</i> Transceiver

Module 5915 SDI-12 Interface Module

Features:

- RS232-to-SDI-12 hardware interface
- Supported by SCADAPack 32 & 300 Series controllers
- C++ application provides SDI-12 protocol functionality #
- Companion TelePACE or ISaGRAF application generates protocol messages #
- External (RJ45) RS232 connection to SCADAPack com port
- Powered by external 12V source
- ATEX II 3G and IECEx: Ex nA IIC T4 per EN 60079-15, protection type n (Zone 2)

Available free of charge from the Control Microsystems Configuration Software CD and the corporate website.



Model	Part No.	Model
5915	297475	SDI-12 Interface Module

UPS Power Supply

Module 5103 Uninterruptible Power Supply

Features:

- Transformer isolated
- Built-in battery charger for UPS
- Isolated 24 volt analog loop output
- Dual, wide range AC/DC inputs
- Cool running switch-mode design



Model	Part No.	Model
5103	297102	External UPS with 5V@2A, 24V@0.5A isolated outputs, 16-24VAC or 12-40 VDC

Non-Programmable Controller Modules

Module 5201 RS-485 Communication Controller

Features:

- Simple configuration – no programming
- Powerful industry-standard protocol
- Support 64 AI, 64 DI, 64 DO, 32 AO
- Watchdog timer
- Power saving LED control



Model	Part No.	Model
5201	297101	CPU, 1 RS-485 port, 2/4 wire, supports up to to 64 D/I, 64 D/O, 64 A/I and 32 A/O, non-programmable

Module 5202 RS-232 Communication Controller

Features:

- Simple configuration – no programming
- Powerful industry-standard protocol
- Support 64 AI, 64 DI, 64 DO, 32 AO
- Watchdog timer
- Power saving LED control



Model	Part No.	Model
5902	297111	CPU, 1 RS-232 port, DB9P, supports up to to 64 D/I, 64 D/O, 64 A/I and 32 A/O, non-programmable

Sample installation of Communications & I/O Modules

