

Software

PAC Project Basic	SNAP PAC System software suite: PAC Control Basic, PAC Display Basic, PAC Manager
PAC Project Professional	SNAP PAC System software suite: PAC Control Pro, PAC Display Pro, PAC Manager, OptoOPCServer, OptoDataLink
PAC Control Professional	Control strategy development software
PAC Display Professional	Operator interface (HMI) development software
OptoOPCServer	OPC 2.0 communication software
OptoDataLink	Database connectivity software
PAC Manager	Controller and brain configuration software

SNAP PAC Controllers

SNAP-PAC-S1**	Programmable automation controller (PAC) for Ethernet networks; standalone
SNAP-PAC-S1-W	Wired+Wireless PAC for Ethernet networks; standalone
SNAP-PAC-S2	Programmable automation controller with four serial ports; standalone
SNAP-PAC-S2-W	Wired+Wireless PAC with four serial ports; standalone
SNAP-PAC-R1**	Programmable automation controller, on the rack, with high-speed digital
SNAP-PAC-R1-B*	Programmable automation controller for B-series rack, with high-speed digital
SNAP-PAC-R1-W	Wired+Wireless PAC, on the rack, with high-speed digital
SNAP-PAC-R2**	Programmable automation controller, on the rack, no high-speed digital
SNAP-PAC-R2-W	Wired+Wireless PAC, on the rack, no high-speed digital
SNAP-PAC-ROK	SNAP PAC Redundancy Option Kit
SOFTPAC	Software-based programmable automation controller

SNAP PAC Brains

SNAP-PAC-EB1**	Analog/digital/serial Ethernet brain, with high-speed digital
SNAP-PAC-EB1-W	Wired+Wireless analog/digital/serial Ethernet brain, high-speed digital
SNAP-PAC-EB2**	Analog/simple digital/serial Ethernet brain, no high-speed digital
SNAP-PAC-EB2-W	Wired+Wireless analog/simple digital/serial Ethernet brain, no high-speed digital
SNAP-PAC-SB1	Analog/digital/serial brain for serial networks, with high-speed digital
SNAP-PAC-SB2	Analog/simple digital/serial brain for serial networks, no high-speed digital

SNAP PAC Racks

SNAP-PAC-RCK4**	4-module analog/digital/serial mounting rack
SNAP-PAC-RCK8**	8-module analog/digital/serial mounting rack
SNAP-PAC-RCK12**	12-module analog/digital/serial mounting rack
SNAP-PAC-RCK16**	16-module analog/digital/serial mounting rack

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SNAP Analog Input Modules

SNAP-AIARMS*	2-channel analog current input, 0–10 amp RMS AC/DC
SNAP-AIARMS-i**	2-channel isolated analog current input, 0–10 amp RMS AC/DC
SNAP-AICTD*	2-channel analog temperature input, ICTD
SNAP-AICTD-4*	4-channel analog temperature input, ICTD
SNAP-AICTD-8	8-channel analog temperature input, ICTD
SNAP-AILC	Load cell input, 10 VDC excitation, 2 or 3 mV/V input sensitivity
SNAP-AILC-2	Load cell input, 10 VDC excitation, 3 or 4 mV/V input sensitivity
SNAP-AIMA*	2-channel analog current input, –20 mA to +20 mA
SNAP-AIMA-i*	2-channel isolated analog current input, –20 mA to +20 mA
SNAP-AIMA-4*	4-channel analog current input, –20 mA to +20 mA
SNAP-AIMA-8	8-channel analog current input, –20 mA to +20 mA
SNAP-AIMA-32**	32-channel analog current input, –20 mA to +20 mA
SNAP-AIMA-iSRC**	2-channel isolated analog current input, –20 mA to +20 mA, with loop sourcing
SNAP-AIMA2-i	2-channel isolated analog current input, –1.0 mA to +1.0 mA
SNAP-AIMA-iH	2-channel isolated analog current input, HART communication, 4–20 mA
SNAP-AIMV-4*	4-channel analog current input, –150 mV to +150 mV or –75 mV to +75 mV
SNAP-AIMV2-4*	4-channel analog current input, –50 mV to +50 mV or –25 mV to +25 mV
SNAP-AIR40K-4*	4-channel analog thermistor input, 0–40,000 Ohm
SNAP-AIR400K-8	8-channel analog resistor/thermistor input, 400,000 Ohms
SNAP-AIRATE*	2-channel analog rate input, 0–25,000 Hz
SNAP-AIRATE-HFI	2-channel analog rate input, 2 Hz to 500 kHz
SNAP-AIRTD*	2-channel analog RTD input, 100 Ohm platinum
SNAP-AIRTD-1K	2-channel analog RTD input, 1000 Ohm platinum
SNAP-AIRTD-10	2-channel analog RTD input, 10 Ohm copper
SNAP-AIRTD-8U	8-channel multifunction RTD/resistance input
SNAP-AITM*	2-channel analog input, type E, J, or K thermocouple or +/-150 mV or +/-75 mV
SNAP-AITM-i*	2-channel isolated input, type E, J, or K thermocouple or +/-150 mV or +/-75 mV
SNAP-AITM-2*	2-channel analog input, type B, C, D, G, N, T, R, or S thermocouple
SNAP-AITM-8**	8-channel input, type B, C, E, G, J, K, N, R, S, or T thermocouple or +/-75 mV, +/-50 mV, or +/-25 mV
SNAP-AITM2-i*	2-channel isolated input, type B, C, D, G, N, T, R, or S thermocouple or +/-50 mV or +/-25 mV
SNAP-AITM-4i	4-channel isolated input, type B, C, E, G, J, K, N, R, S, or T thermocouple or +/-150 mV, +/-75 mV, +/-50 mV, or +/-25 mV
SNAP-AIV*	2-channel analog voltage input, –10 VDC to +10 VDC
SNAP-AIV-i*	2-channel isolated analog voltage input, –10 VDC to +10 VDC
SNAP-AIV2-i	2-channel isolated analog voltage input, –100 VDC to +100 VDC
SNAP-AIV-4*	4-channel analog voltage input, –10 VDC to +10 VDC
SNAP-AIV-8	8-channel analog voltage input, –10 VDC to +10 VDC
SNAP-AIV-32**	32-channel analog voltage input, –10 VDC to +10 VDC
SNAP-AIV-72	Single-channel, dual range analog voltage input
SNAP-AIVRMS*	2-channel analog voltage input, 0–250 V RMS AC/DC
SNAP-AIVRMS-i**	2-channel isolated analog voltage input, 0–250 V RMS AC/DC
SNAP-pH/ORP	2-channel isolated high-impedance analog input, –1.0 VDC to +1.0 VDC and –0.5 VDC to +0.5 VDC
SNAP-AIPM	Single-phase power monitoring, 0–250 V RMS and 0–10 amp RMS inputs
SNAP-AIPM-3	Three-phase power monitoring, 0–250 V RMS and 0–10 amp RMS inputs
SNAP-AIPM-3V	Three-phase power monitoring, 0–250 V RMS and 0–333 mV CT inputs

SNAP Analog Output Modules

SNAP-AOA-23*	2-channel analog current loop output, 4–20 mA
SNAP-AOA-23-iSRC**	2-channel isolated analog current loop output, 4–20 mA, with loop sourcing
SNAP-AOA-23-iH	2-channel isolated analog current output, HART communication, 4–20 mA
SNAP-AOA-28*	2-channel analog current loop output, 0–20 mA
SNAP-AOV-25*	2-channel analog voltage output, 0 to +10 VDC
SNAP-AOV-27*	2-channel analog voltage output, –10 to +10 VDC
SNAP-AOD-29*	2-channel analog time-proportional digital output, 5–60 VDC
SNAP-AOD-29-HFI	2-channel analog time-proportional digital output, 2.5 to 24 VDC, 0–100 kHz
SNAP-AOVA-8	8-channel analog multifunction output, voltage or current

SNAP 4-Channel Digital Input Modules

All 4-channel digital input modules are channel-to-channel isolated.

SNAP-IAC5**	4-channel digital input, 90–140 VAC/VDC, 5 VDC logic
SNAP-IAC5MA	4-channel digital input, 90–140 VAC/VDC, manual/auto switches
SNAP-IAC5A**	4-channel digital input, 180–280 VAC/VDC, 5 VDC logic
SNAP-IDC5**	4-channel digital input, 10–32 VAC/VDC, 5 VDC logic
SNAP-IDC5MA	4-channel digital input, 10–32 VAC/VDC, manual/auto switches
SNAP-IDC5D**	4-channel digital input, 2.5–28 VDC, 5 VDC logic
SNAP-IDC5-FAST*	4-channel digital input, 2.5–16 VDC, 5 VDC logic, high-speed
SNAP-IDC5-FAST-A	4-channel digital input, 18–32 VDC, 5 VDC logic, high-speed
SNAP-IDC5G	4-channel digital input, 35–75 VAC/VDC, 5 VDC logic
SNAP-IDC5-HT	4-channel digital input, 15–32 VDC, leakage-tolerant
SNAP-IDC5-SW*	4-channel digital input, self-powering, normally open
SNAP-IDC5-SW-NC	4-channel digital input, self-powering, normally closed
SNAP-IDC5Q*	2-axis quadrature position input, 4–24 VDC

SNAP High-Density Digital Modules

SNAP-IAC-16	16-channel isolated 90–140 VAC/VDC input
SNAP-IAC-A-16	16-channel isolated 180–280 VAC/VDC input
SNAP-IAC-K-16	16-channel isolated 70–130 VAC/VDC input
SNAP-IDC-16	16-channel isolated 10–32 VDC/VAC input
SNAP-IDC-HT-16	16-channel isolated 15–28 VDC/VAC input, leakage-tolerant
SNAP-IDC-32**	32-channel, 10–32 VDC input
SNAP-IDC-32N	32-channel, -10 to -32 VDC input, with positive common connections
SNAP-IDC-32D	32-channel, 2.5–12 VDC input
SNAP-IDC-32DN	32-channel, -2.5 to -12 VDC input, with positive common connections
SNAP-ODC-32-SRC**	32-channel, 5–60 VDC output, load sourcing
SNAP-ODC-32-SNK**	32-channel, 5–60 VDC output, load sinking

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SNAP Digital Output Modules

SNAP-OAC5**	4-channel digital output, 12–250 VAC, 5 VDC logic
SNAP-OAC5-i**	4-channel isolated digital output, 12–250 VAC, 5 VDC logic
SNAP-OAC5MA	4-channel isolated digital output, 12–250 VAC, manual/auto switches
SNAP-ODC5SRC**	4-channel digital output, 5–60 VDC, 5 VDC logic source
SNAP-ODC5SNK**	4-channel digital output, 5–60 VDC, 5 VDC logic sink
SNAP-ODC5ASNK	4-channel digital output, 5–200 VDC, 5 VDC logic sink
SNAP-ODC5R**	4-channel isolated dry contact output, 0–100 VDC or 0–130 VAC, normally open
SNAP-ODC5R5**	4-channel isolated dry contact output, 0–100 VDC or 0–130 VAC, normally closed
SNAP-ODC5-i**	4-channel isolated digital output, 5–60 VDC, 5 VDC logic
SNAP-ODC5MA	4-channel isolated digital output, 5–60 VDC, manual/auto switches
SNAP-ODC5A-i**	4-channel isolated digital output, 5–200 VDC, 5 VDC logic
SNAP-OMR6T-C	4-channel isolated mechanical relay output, 250 VAC or 30 VDC, 6 A, form C, with integrated transient suppression
SNAP-OMR6-C	4-channel isolated mechanical relay output, 250 VAC or 30 VDC, 6 A, form C

SNAP Serial Modules

SNAP-SCM-232*	2-channel RS-232 serial communication
SNAP-SCM-485-422	2-channel RS-485/422 serial communication
SNAP-SCM-CAN2B	Controller Area Network (CAN) communication module
SNAP-SCM-MCH16	SNAP motion control host communication module
SNAP-SCM-PROFI	Profibus® serial interface
SNAP-SCM-SSI	2-channel SNAP SSI (Serial Synchronous Interface) module
SNAP-SCM-ST2	2-channel pulse and direction signals communication module
SNAP-SCM-W2	2-channel Wiegand® serial interface

SNAP Power Supplies

SNAP-PSS*	5 VDC @ 4 amp, 120 VAC input
SNAP-PSS-24DC*	5 VDC @ 4 amp, 24 VDC input
SNAP-PSSU	5 VDC @ 5 amp, 100–250 VAC input
SNAP-PS24*	24 VDC @ 0.75 amp, 120 VAC input
SNAP-PS24U	24 VDC @ 1.25 amp, 100–250 VAC input

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More about Opto 22

PRODUCTS

Opto 22 develops and manufactures reliable, easy-to-use, open standards-based hardware and software products. Industrial automation, process control, building automation, industrial refrigeration, remote monitoring, data acquisition, and industrial internet of things (IIoT) applications worldwide all rely on Opto 22.

groov EPIC® System

Opto 22's *groov Edge Programmable Industrial Controller (EPIC)* system gives you an industrially hardened system with guaranteed-for-life I/O, a flexible Linux®-based processor with gateway functions, and software for your automation and IIoT applications.

groov EPIC I/O

groov I/O connects locally to sensors and equipment with up to 24 channels on each I/O module. Modules have a spring-clamp terminal strip, integrated wireway, swing-away cover, and LEDs indicating module health and discrete channel status.

groov I/O is hot swappable, UL Hazardous Locations approved, and ATEX compliant.

groov EPIC Processor

The heart of the system is the *groov EPIC* processor. It handles a wide range of digital, analog, and serial functions for data collection, remote monitoring, process control, and discrete and hybrid manufacturing.

In addition, the EPIC provides secure data communications among physical assets, control systems, software applications, and online services, both on premises and in the cloud.

Configuring and troubleshooting I/O and networking is easier with the EPIC's integrated high-resolution color touchscreen. Authorized users can manage the system locally on the touchscreen or on a monitor connected via the HDMI or USB ports.

groov EPIC Software

Software included in the *groov EPIC* processor:

- PAC Control engine to run PAC Control and PAC Display
- CODESYS Runtime engine to run IEC61131-3 compliant programs built with CODESYS Development System
- Optional access to the Linux operating system through a secure shell (SSH) to download and run custom applications
- *groovView* for building your own device-independent HMI, viewable on the touchscreen, PCs, and mobile devices
- Node-RED for creating simple logic flows from pre-built nodes
- Ignition Edge® from Inductive Automation®, with OPC-UA drivers to Allen-Bradley®, Siemens®, and other control systems, and MQTT communications with Sparkplug for efficient IIoT data transfer

groov RIO

groov RIO revolutionizes remote I/O by offering a single, compact, PoE-powered industrial package with web-based configuration, commissioning, and flow logic software built in, plus support for multiple OT and IT protocols.

Standing alone, it meets the needs of small, variable I/O count applications, especially those that require data logging or data communications, commonly found in IIoT applications.

groov RIO can also be used with a Modbus/TCP master or as remote I/O for a *groov EPIC* system.

Older products

From solid state relays (our first products) to world-famous G4 and SNAP I/O, to SNAP PAC controllers, older Opto 22 products are still supported and still

doing the job at thousands of installations worldwide. You can count on us to give you the reliability and service you expect, now and in the future.

QUALITY

Founded in 1974, Opto 22 has established a worldwide reputation for high-quality products. All are made in the U.S.A. at our manufacturing facility in Temecula, California.

Because we test each product twice before it leaves our factory rather than testing a sample of each batch, we can afford to guarantee most solid-state relays and optically isolated I/O modules for life.

FREE PRODUCT SUPPORT

Opto 22's California-based Product Support Group offers free, comprehensive technical support for Opto 22 products from engineers with decades of training and experience. Support is available in English and Spanish by phone or email, Monday–Friday, 7 a.m. to 5 p.m. PST.

Support is always available on our website, including [free online training](#) at OptoU, [how-to videos](#), [user's guides](#), the [Opto 22 KnowledgeBase](#), [troubleshooting tips](#), and [OptoForums](#). In addition, instructor-led, hands-on [Premium Factory Training](#) is available at our Temecula, California headquarters, and you can [register online](#).

PURCHASING OPTO 22 PRODUCTS

Opto 22 products are sold directly and through a worldwide network of distributors, partners, and system integrators. For more information, contact Opto 22 headquarters at **800-321-6786** (toll-free in the U.S. and Canada) or **+1-951-695-3000**, or visit our website at www.opto22.com.



OPTO 22 • www.opto22.com
43044 Business Park Dr. Temecula, CA 92590-3614

SALES • sales@opto22.com
800-321-6786 • 1-951-695-3000

SUPPORT • support@opto22.com
800-835-6786 • 1-951-695-3080

