

OPTO 22 SNAP PAC CONTROLLER COMPARISON CHART

2037-230110

The following table compares SNAP PAC controllers using minimum version 10.0 firmware and 10.0 PAC Project software.

		SNAP PAC Controllers					
		Software	Standalone		Rack-mounted		
		SoftPAC	SNAP-PAC-S1 SNAP-PAC-S1-FM ^o	SNAP-PAC-S2	SNAP-PAC-R1 SNAP-PAC-R1-FM	SNAP-PAC-R1-B	SNAP-PAC-R2 SNAP-PAC-R2-FM ^o
Maximum PAC Control charts running at once (plus default host task)		64	32	32	16	16	16
Communication	Ethernet (UDP/IP, 10/100 Mbps)	●	●	●	●	●	●
	Two independent Ethernet network interfaces	^b	●	●	●	●	●
	Number of RS-485 serial ports	^c	1	4 ^d			
	Number of RS-232 serial ports		2	4 ^d	1	1	1
Protocols	EtherNet/IP™ (Allen-Bradley® RSLogix® systems, others)		●	●	●	●	●
	Modbus®/TCP (slave)		●	●	●	●	●
	OPC driver support	●	●	●	●	●	●
	RESTful API		●	●	●	●	●
	HTTP/HTTPS		●	●	●	●	●
	OptoMMP memory-mapped protocol	● ^e	●	●	●	●	●
	SNMP (network management)		●	●	●	●	●
	FTP server, file system		●	●	●	●	●
	FTP client	●	●	●	●	●	●
	Email (SMTP client with authentication and attachments)	●	●	●	●	●	●
Supports Node-RED via SNAP-PAC nodes and RESTful API			●	●	●	●	●
Direct access to hard drive & network drives (Dropbox®, etc.)		●					
Real-time clock		^b	●	●	●	●	●
Backup battery (recharges when controller has power) ^f			●	●	●	●	●
Physical RAM		^b	32 MB		16 MB		
RAM available for Strategy		64 MB	16 MB		4 MB		
Non-volatile or Battery-backed RAM		8 MB	8 MB		2 MB		
Flash memory		^g	16 MB		8 MB		
Data storage space		^b	~2.5 MB		~2 MB		
Removable data storage (microSD card slot)		^b	32 GB max. ^h		32 GB max. ^h		
32-bit processor		^b	●	●	●	●	●
Floating-point unit (FPU)		^b	●	●	●	●	●
Compatible	SNAP PAC EB	●	●	●	●	●	●
	SNAP PAC SB		●	●			
I/O units ^a	groov EPIC	●	●	●	●	●	●
	groov RIO	●	●	●	●	●	●
Combination controller and I/O processor ^m					●	●	●
Mounts on SNAP PAC I/O mounting rack					●		●
Mounts on SNAP B-series I/O mounting rack		n/a	n/a			●	
Maximum number of modules allowed on largest rack: Any mix of 16 digital, 16 analog, and 8 serial					● ⁿ	● ⁿ	●
Power requirements		^b	8–32 VDC ^l 10 W–11.3 W max		5.0 to 5.2 VDC @ 1.2–1.5 A		

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Operating Temperature in degrees C	b	-20 to 60		-20 to 60		
Storage Temperature in degrees C		-40 to 85		-40 to 85		
Humidity (non-condensing)	b	0–95%		0–95%		

- a For compatibility with legacy Opto 22 hardware, see form 1693, [Legacy and Current SNAP Product Comparison and Compatibility Charts](#).
- b As provided by the Microsoft Windows-based computer SoftPAC runs on.
- c SoftPAC cannot communicate through serial ports on the PC.
- d Serial ports are software configurable for RS-232 or RS-485.
- e SoftPAC includes Status Read, Status Write, and Scratch Pad areas of the memory map.
- f Models manufactured before August 2007 and S1s with serial numbers 625653 and lower have 3-volt CR2032 Lithium battery.
- g Function of Flash memory is implemented via a file; size is limited only by available disk space.
- h Requires firmware 9.4a or higher and loader 6.1a or higher for 32 GB capacity; lower versions limited to 2 GB.
- i Units with serial numbers lower than 500,000 have an 8–24 VDC input voltage rating. *Verify voltage on the unit's faceplate before applying power.*
- m I/O features vary by model. For details, see form 1677, [SNAP PAC Controller and Brain Comparison Chart](#).
- n All SNAP-PAC-R1-Bs, and SNAP-PAC-R1s with serial numbers lower than 600,000 are limited to eight 4-channel digital modules per rack.
- o Obsolete part