

OPTO 22 SNAP PAC CONTROLLER COMPARISON CHART

2037-170518

The following table compares SNAP PAC controllers using minimum version 9.5 firmware and 9.5 PAC Project software.

		SNAP PAC Controllers											
		Software	Standalone					Rack-mounted					
		SoftPAC	SNAP-PAC-S1	SNAP-PAC-S1-FM	SNAP-PAC-S2	SNAP-PAC-S1-W	SNAP-PAC-S2-W	SNAP-PAC-R1	SNAP-PAC-R1-FM	SNAP-PAC-R1-B	SNAP-PAC-R2	SNAP-PAC-R2-FM	SNAP-PAC-R1-W
Maximum PAC Control charts running at once (plus host task)		64	32	32	32	32	16	16	16	16	16	16	16
Communication	Ethernet (UDP/IP, 10/100 Mbps)	●	●	●	●	●	●	●	●	●	●	●	●
	Two independent Ethernet network interfaces	b	●	●	●	●	●	●	●	●	●	●	●
	Wireless LAN (802.11a, b, or g): WPA2-AES, WPA-TKIP, WEP	b			●	●						●	●
	Number of RS-485 serial ports	c	1	4 ^d	1	4 ^d							
	Number of RS-232 serial ports		2	4 ^d	2	4 ^d	1	1	1	1	1	1	1
Protocols	EtherNet/IP™ (Allen-Bradley® RSLogix® systems and 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)	●	●	●	●	●	●	●	●	●	●	●	●	
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		128 MB		16 MB			32 MB				
RAM available for Strategy	64 MB	16 MB		64 MB		4 MB			10 MB				
Non-volatile or Battery-backed RAM	8 MB	8 MB		8 MB		2 MB			2 MB				
Flash memory	g	16 MB		16 MB		8 MB			8 MB				
Data storage space	b	~2.5 MB		~2.5 MB		~2 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 brains ^a	SNAP PAC EB brains	●	●	●	●	●	●	●	●	●	●	●	
	SNAP PAC SB brains		●	●	●	●							
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 ⁱ 10 W–11.3 W max ^k					5.0 to 5.2 VDC @ 1.2–1.5 A ^k						

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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.*
- k Higher requirement applies to -W models.
- 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.