

SNAP Ethernet Brains and On-the-Rack Controllers Comparison Chart



The following table compares Ethernet-based SNAP I/O brains and on-the-rack controllers. Shaded products are recommended for new development.

FEATURE		SNAP PAC R-series		SNAP Simple I/O	SNAP Ethernet I/O		SNAP Ultimate I/O		
		SNAP-PAC-R1	SNAP-PAC-R2	SNAP-ENET-S64	SNAP-B3000-ENET	SNAP-ENET-D64	SNAP-UP1-ADS	SNAP-UP1-D64	SNAP-UP1-M64
Digital I/O points	Input latching	●	●	●	●	●	●	●	●
	On/off status	●	●	●	●	●	●	●	●
	Watchdog timer	●	●	●	●	●	●	●	●
	High-speed counters (20 kHz) ²	●			●		●		
	Quadrature counters	●			●		●		
	On-pulse and off-pulse measurement ^{1,2}	●			●		●		
	TPO (time-proportional output) ^{1,2}	●			●		●		
	Pulse generation (N pulses, continuous square wave, on-pulse, and off-pulse) ^{1,2}	●			●		●		
Analog I/O points	Thermocouple linearization (32-bit floating point for linearized values)	●	●	●	●		●		●
	Minimum/maximum values	●	●	●	●		●		●
	Offset and gain	●	●	●	●		●		●
	Scaling	●	●	●	●		●		●
	Time-proportional output	●	●	●	●		●		●
	Output clamping	●	●	●	●		●		●
	Filter weight	●	●	●	●		●		●
	Watchdog timer	●	●	●	●		●		●
Ramping ¹	●	●		●		●		●	
High-density digital modules (inputs and outputs)		●	●	●	●		●		●
Serial communication modules		●	●	●	●		●		●
Serial events		●	●		●		●		●
PID logic on the brain		32 PIDs	32 PIDs		16 PIDs		32 PIDs		32 PIDs
Digital events		●	●		●	●	●	●	●
Alarm events		●	●		●		●		●
Timers		●	●		●	●	●	●	●
Event messages		●	●		●	●	●	●	●
UDP Streaming		●	●	●	●	●	●	●	●
Email (SMTP client)		●	●		●	●	●	●	●

FEATURE	SNAP PAC R-series		SNAP Simple I/O	SNAP Ethernet I/O		SNAP Ultimate I/O		
	SNAP-PAC-R1	SNAP-PAC-R2	SNAP-ENET-S64	SNAP-B3000-ENET	SNAP-ENET-D64	SNAP-UP1-ADS	SNAP-UP1-D64	SNAP-UP1-M64
OPC driver	●	●	●	●	●	●	●	●
Data logging in the brain	●	●		●		●		●
Security (IP filtering, port access)	●	●	●	●	●	●	●	●
Realtime clock (RTC)	●	●				●	●	●
I/O point data mirroring	●	●		●		●		●
Memory map copying	●	●		●		●		●
Scratch Pad area—bits only				●	●			
Scratch Pad area—bits, floats, integers, strings	●	●				●	●	●
SNMP (network management of I/O & variables)	●	●		●	●	●	●	●
PPP (dial-up and radio modems)	●	●		●	●	●	●	●
FTP server and client	●	●				●	●	●
Modbus [®] /TCP	●	●	●	●	●	●	●	●
OptoMMP memory-mapped protocol	●	●	●	●	●	●	●	●
Ethernet network	●	●	●	●	●	●	●	●
Serial (RS-232)	●	●				●	●	●
Runs ioControl strategies	●	●				●	●	●
ioControl compatibility (using SNAP PAC or SNAP-LCE controller or SNAP Ultimate I/O)	●	●	●	●	●	●	●	●
OptoControl compatibility (using Opto 22 controller with Ethernet card. Not recommended for new development.)			●	●	●			
Mounting rack	SNAP-M racks	SNAP-M racks	SNAP-M racks	SNAP-B racks	SNAP-D64RS	SNAP-B racks	SNAP-D64RS	SNAP-M racks
Number of modules per mounting rack	4, 8, 12, or 16	4, 8, 12, or 16	4, 8, 12, or 16	4, 8, 12, or 16	16	4, 8, 12, or 16	16	4, 8, 12, or 16
Module types and maximum numbers allowed per I/O unit (with largest rack)	8 digital ² 16 analog 8 serial 16 HDD ³	16 digital ² 16 analog 8 serial 16 HDD ³	16 digital ² 16 analog 8 serial 16 HDD ³	8 digital ² 16 analog 8 serial 16 HDD ³	16 digital ²	8 digital ² 16 analog 8 serial 16 HDD ³	16 digital ²	16 digital ² 16 analog 8 serial 16 HDD ³

1 Available when used with ioControl Professional and a SNAP PAC controller

2 Standard digital modules

3 High-density digital modules