

OPTO 22 PAC Project Basic & Professional Comparison Chart

1681-250910

The following table compares the features in version R10.6 of PAC Project Basic™ and PAC Project Professional™.

Feature		Basic	Pro
Included software	PAC Control™ Basic	●	●
	PAC Control Professional		●
	PAC Display™ Basic	●	●
	PAC Display Professional		●
	PAC Manager™	●	●
	OptoOPCServer™		●
	OptoDataLink™		●
	SoftPAC™		●
Control software: PAC Control			
Compatible controllers	groov EPIC processor	●	●
	SNAP PAC controllers (S-series and R-series)	●	●
	SoftPAC software-based controller	●	●
Compatible I/O	Built-in I/O unit (in groov EPIC processors and SNAP PAC R-series controllers)	●	●
	groov RIO modules (with groov EPIC and SNAP PAC controllers) ¹	●	●
	SNAP PAC brains (obsolete)	●	●
	G4EB2 brains (with groov EPIC and SNAP PAC controllers)	●	●
	Ethernet I/O units—E1, E2, EIO, UIO (with groov EPIC and SNAP PAC controllers)	●	●
	Serial <i>mistic</i> ™ brains/bricks: B3000-B, B3000, SNAP-BRS, B100, B200, G4D16R, G4D32RS, G4A8R (with SNAP PAC S-series controllers) ²		●
Network	Controller to PC: groov EPIC and SNAP PAC—Ethernet	●	●
	Controller to I/O:		
	• groov EPIC—Ethernet only	●	●
	• SNAP PAC S-series:	●	●
	– Ethernet to R-series controllers and obsolete EB brains	●	●
	– Serial to obsolete SB brains	●	●
	– Serial to obsolete <i>mistic</i> brains		●
	• SNAP PAC R-series—Ethernet only	●	●
	Controller to third-party devices: Ethernet or serial ³	●	●
Main features	Support for Ethernet link redundancy or segmented control network		●
	Support for controller redundancy [not for new projects] (Limited to SNAP PAC S-series controllers running firmware versions 9.0a to 10.4e) ⁴		●
	Flowchart programming	●	●
	OptoScript programming	●	●
	Subroutines (debuggable)	●	●
	Graphical debugger	●	●
	Conversion utility for OptoControl 4.1 strategies		●
	Support for serial <i>mistic</i> I/O units ²		●
	Ethernet link redundancy (with S-series controllers and R-series I/O units)		●

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Feature		Basic	Pro
Maximum charts running at once	On <i>groov</i> EPIC (plus host task)	64	64
	On SoftPAC (plus host task)	64	64
	On SNAP PAC S-series (plus host task)	32	32
	On SNAP PAC R-series (plus host task)	16	16
Proportional-integral-derivative (PID) loops	PID algorithms for Ethernet I/O units	4	4
	PID algorithm for <i>mistic</i> serial units ²	–	1
	Loops per SNAP PAC rack-mounted controller or brain	96	96
	Loops per <i>groov</i> RIO module	4	4
	Loops per <i>mistic</i> brain/brick ²	–	8
	Graphical tuner for Ethernet PID loops	●	●
	Graphical tuner for <i>mistic</i> ² PID loops		●
Ethernet link redundancy	Primary and secondary IP addresses on <i>groov</i> EPIC processors and SNAP PAC controllers		●
	PAC Control commands can be used to control redundancy algorithm		●
Controller redundancy ⁴ [Required hardware is obsolete. Newer firmware and software no longer support this feature.]	PAC Redundancy Manager utility (support changed in R10.6)		
	Checkpoint blocks		●
Additional toolkits ⁵	Modbus Integration Kit (serial and TCP)	●	●
	Controller Area Network (CAN) Integration Kit ⁶	●	●
	Other Integration Kits (BACnet, TL1, DNP3, IEC60870-5, Allen-Bradley DF1) ⁶	●	●
HMI software: PAC Display			
Main features	Alarming	●	●
	Trending	●	●
	Logging	●	●
	Operator authentication and login	●	●
	3000-graphic library	●	●
	Additional graphics tools for PID and embedding web pages		●
	Data logging to MySQL, Microsoft® SQL Server, and other ODBC databases		●
	Conversion utility for OptoDisplay projects		●
	Primary and secondary IP addresses for control engine		●
	Primary and secondary scanner		●
Controllers supported	<i>groov</i> EPIC processors ⁷	●	●
	SNAP PAC controllers	●	●
	ioControl controllers	●	●
	OptoControl controllers with Ethernet interface		●
OPC server: OptoOPCServer ⁸			
OPC version	OPC DA 2.0-compliant ⁸		●
Database connectivity: OptoDataLink ⁹			
Databases supported	Microsoft SQL Server, Microsoft Access, MySQL, and ODBC-compatible databases		●

Feature		Basic	Pro
PC-based control: SoftPAC			
Compatible I/O	<i>groov</i> RIO modules	●	●
	<i>groov</i> I/O (EPIC processor)	●	●
	SNAP PAC (R-series and EB-series)	●	●
	Ethernet I/O units (E1, E2, UIO, EIO)	●	●
	G4EB2 brains	●	●

- Requires SNAP PAC controller firmware 10.3a or higher or *groov* EPIC firmware 2.0.0 or higher.
- Requires SNAP PAC S-series controller(s).
- On a *groov* EPIC, serial connections from the processor require a USB-to-serial adapter.
- Controller redundancy is no longer supported for new projects:
 - The required hardware [SNAP-PAC-ROK](#) Redundancy Option Kit is obsolete as of 2022.
 - SNAP PAC S-series controllers running firmware higher than R10.4e do not support controller redundancy.
 - PAC Control version R10.6 or higher does not support the creation of new strategies with controller redundancy; it does support maintenance of existing strategies.
- For more information, see the [Communication Tools & Protocols for Opto 22 Products Technical Note](#) (form 1820).
- Not recommended for use with *groov* EPIC processors running PAC Control.
- PAC Display projects can include *groov* EPIC systems and *groov* RIO modules. PAC Display cannot run on an EPIC processor; it runs on a Microsoft Windows PC.
- For an OPC UA-compliant server, use a *groov* EPIC processor.
- Do not use OptoDataLink with a *groov* EPIC processor; use its included data communication options instead.