

P3-EX Expansion Module

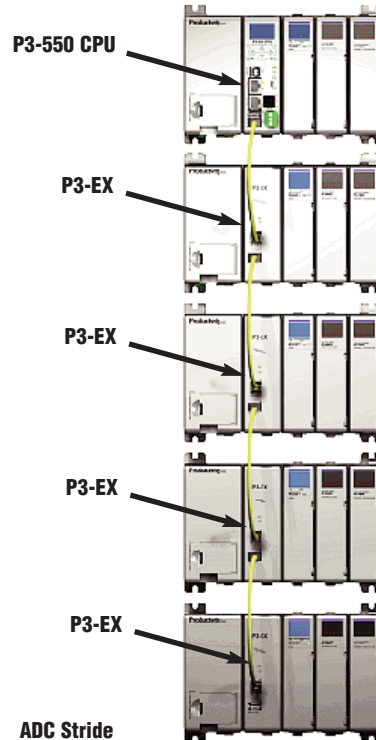
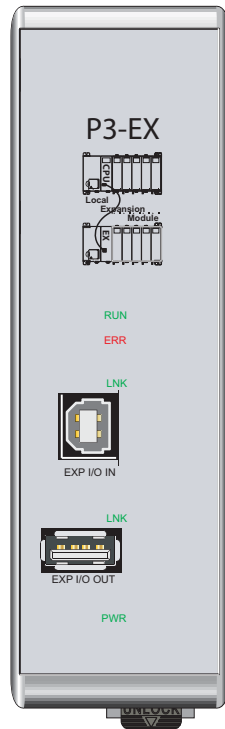
P3-EX



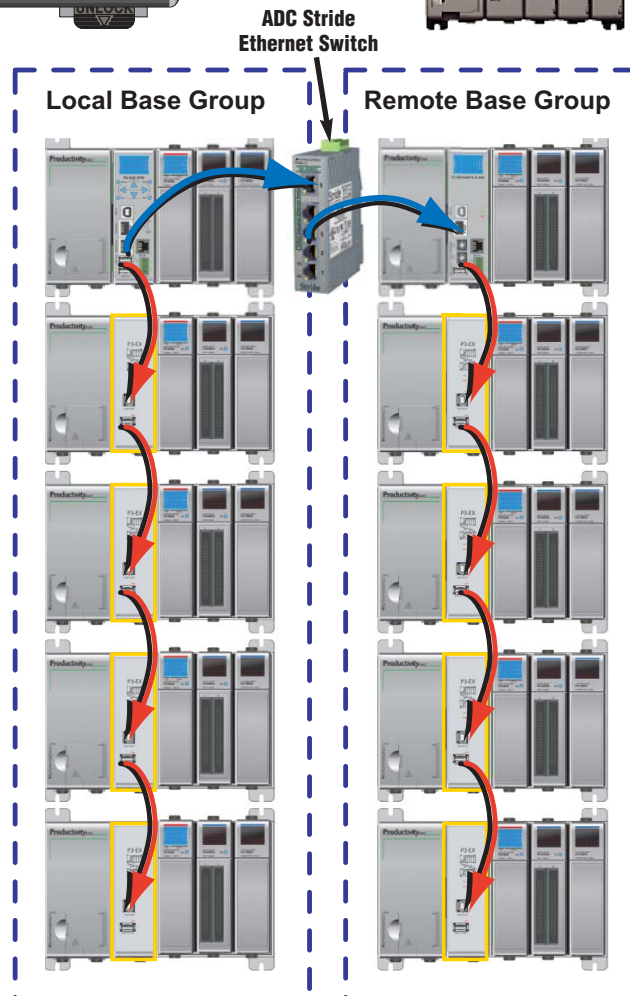
The P3-EX high-performance expansion module provides local I/O expansion to a CPU or Remote I/O. Includes 6-foot USB expansion cable.



A 6-foot USB cable is included with the P3-EX module (Replacement cable: part number P3-EX-CBL6).



The system can have up to 132 expansion bases by adding four expansion bases at the CPU base and four expansion bases per Remote I/O Slave (up to 32 slaves). Each expansion base uses the P3-EX expansion module for USB-based I/O bus connectivity.

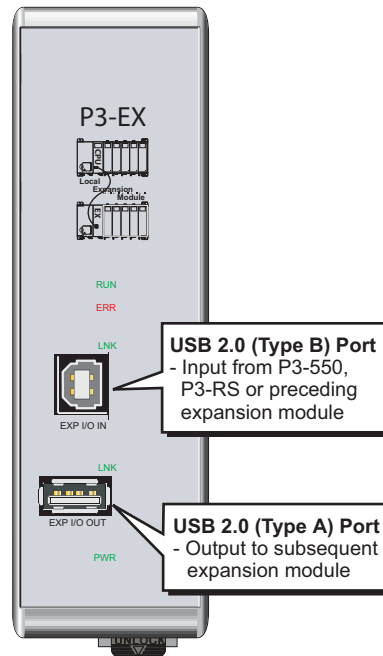


P3-EX Expansion Module

Module Specifications	
Mounting Location	Controller slot of expansion base
Expansion Connectors	1 USB 2.0 Type A, 1 USB 2.0 Type B
Maximum Number of Expansion Modules per CPU or Remote Slave	4
Maximum Distance Between Modules	15 feet
Status Indicators	PWR - Green LED is illuminated when power is on. RUN - Green LED is illuminated when not in reset. Reset occurs during power-up, a watchdog timeout, or if an expansion cable is disconnected. ERR - Red LED is illuminated when a USB fault is detected. LNK - Green LED is illuminated when a USB link is established.
I/O Capabilities	
Max. Number of I/O per CPU System	116,160 (CPU Base with 4 Expansion Bases plus 32 Remote Bases with 4 Expansion Bases per Remote, with 11 64-point I/O modules per base)
Max. Number of Expansion I/O Bases	132 (4 per CPU, 4 per Remote Base)
Module Setup	Automatic hardware verification
Expansion I/O Addressing	Automatic via Tag Names
Standard USB Cables	6 foot: P3-EX-CBL6 (USB Type A to USB Type B)

General Specifications	
Operating Temperature	0° to 60°C (32° to 140°F)
Storage Temperature	-20° to 70°C (-4° to 158°F)
Humidity	5 to 95% (non-condensing)
Environmental Air	No corrosive gases permitted
Vibration	MIL STD 810C 514.2
Shock	MIL STD 810C 516.2
Heat Dissipation	1W
Enclosure Type	Open Equipment
Agency Approvals	UL508 file E157382, Canada & USA UL1604 file E200031, Canada & USA CE (EN61131-2*) This equipment is suitable for use in Class 1, Division 2, Groups A, B, C and D or non-hazardous locations only.
Module Location	Controller slot in a local expansion base in a Productivity3000 System
EU Directive	See the "EU Directive" topic in the Productivity3000 Help File. Information can also be obtained at: www.productivitypac.com
Weight	194g (6.24 oz)

*Meets EMC and Safety requirements. See the Declaration of Conformity for details.



WARNING: Explosion hazard – Substitution of components may impair suitability for Class I, Division 2.

IMPORTANT!



Hot-Swapping Information

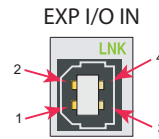
Note: This device cannot be Hot Swapped.

Expansion Module Status Indicators	
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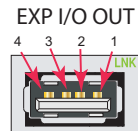
P3-EX Expansion Module

Port Specifications

Exp I/O Port Specifications		
Port Name	EXP I/O IN	EXP I/O OUT
Description	Proprietary USB 2.0 Slave input for connection with a CPU, Remote Slave, or preceding P3-EX expansion base. The P3-EX Expansion Module includes the 6 foot USB cable P3-EX-CBL6.	Proprietary USB 2.0 Master output for connection with the next P3-EX expansion base. Includes built-in surge protection.
Transfer Rate	480 Mbps	
Port Status LED	Green LED is illuminated when LINK is established to connected device	
Cables	USB Type A to USB Type B: 6 ft. cable part no. P3-EX-CBL6	



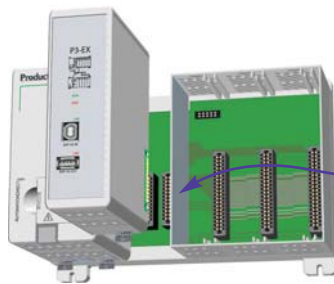
Mating face of USB type B female



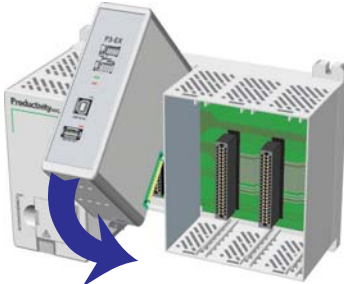
Mating face of USB type A female

Pin #	Signal
1	Reset
2	- Data
3	+ Data
4	GND

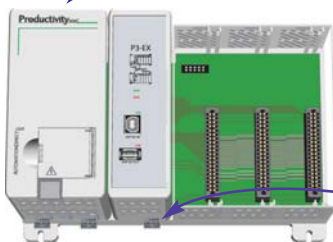
Installation Procedure



Step One:
Locate the two sockets next to the Power Supply.



Step Two
Insert P3-EX at a 45° angle into the notch located at the top of the base and rotate down until seated.



Step Three
Snap retaining tab into the locked position.

WARNING: Explosion hazard – Do not connect or disconnect connectors or operate switches while circuit is live unless the area is known to be non-hazardous. Do not hot swap.