

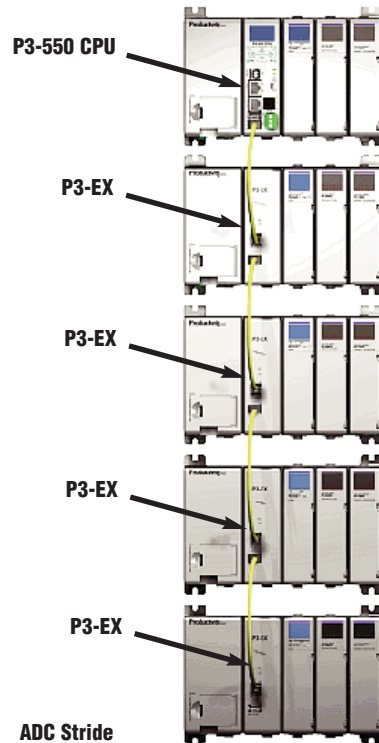
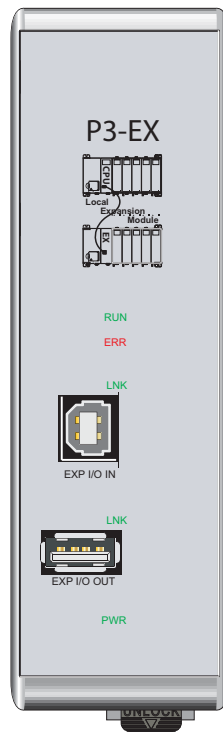
P3-EX Expansion Module

P3-EX <--->

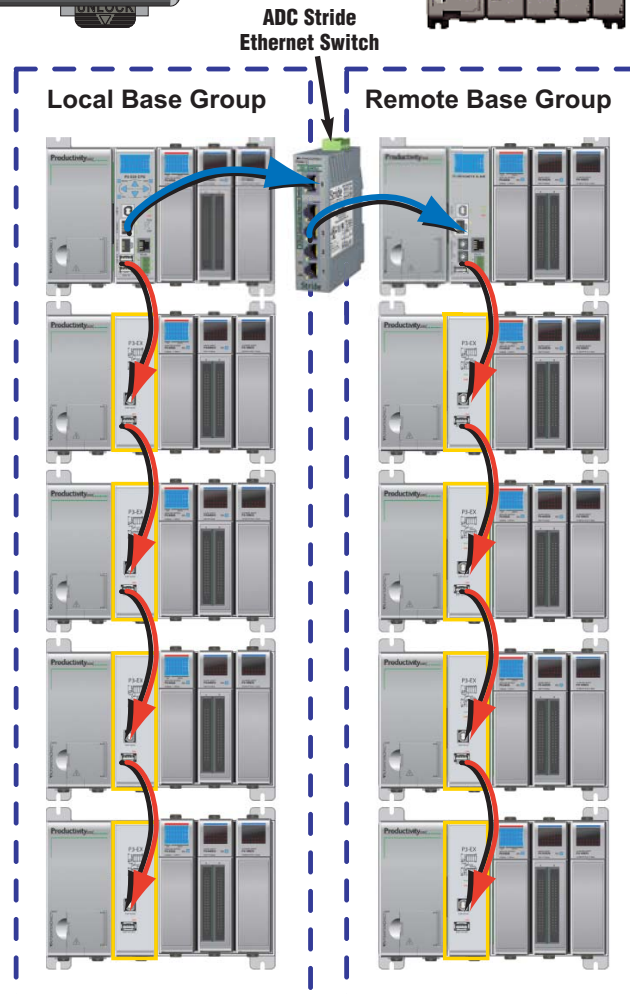
The P3-EX high-performance expansion module provides local I/O expansion to a CPU or Remote I/O. Includes 6-foot USB expansion cable.



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
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	IEC60068-2-6 (Test Fc)
Shock	IEC60068-2-27 (Test Ea)
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.

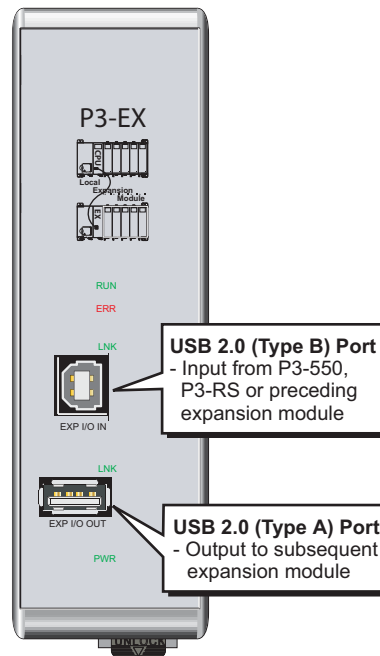
IMPORTANT!



Hot-Swapping Information

Note: This device cannot be Hot Swapped.

Expansion Module Status Indicators	
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 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.



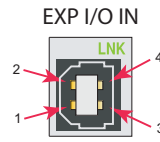
USB 2.0 (Type B) Port
- Input from P3-550, P3-RS or preceding expansion module

USB 2.0 (Type A) Port
- Output to subsequent expansion module

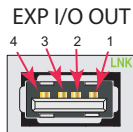
P3-EX Expansion Module

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



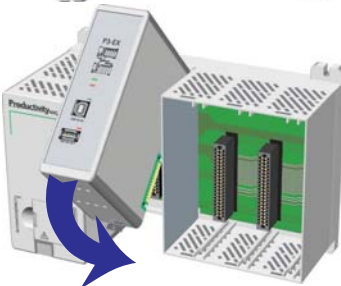
Mating face of USB type A female

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

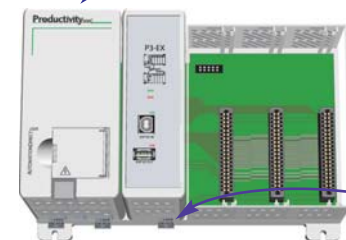
Installation Procedure



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.

Field I/O

Software

C-more & other HMI

Drives

Soft Starters

Motors & Gearbox

Steppers/Servos

Motor Controls

Proximity Sensors

Photo Sensors

Limit Switches

Encoders

Current Sensors

Pressure Sensors

Temperature Sensors

Pushbuttons/Lights

Process

Relays/Timers

Comm.

Terminal Blocks & Wiring

Power

Circuit Protection

Enclosures

Tools

Pneumatics

Appendix

Product Index

Part # Index