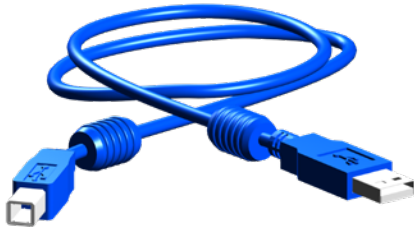# P3-EX Expansion Module

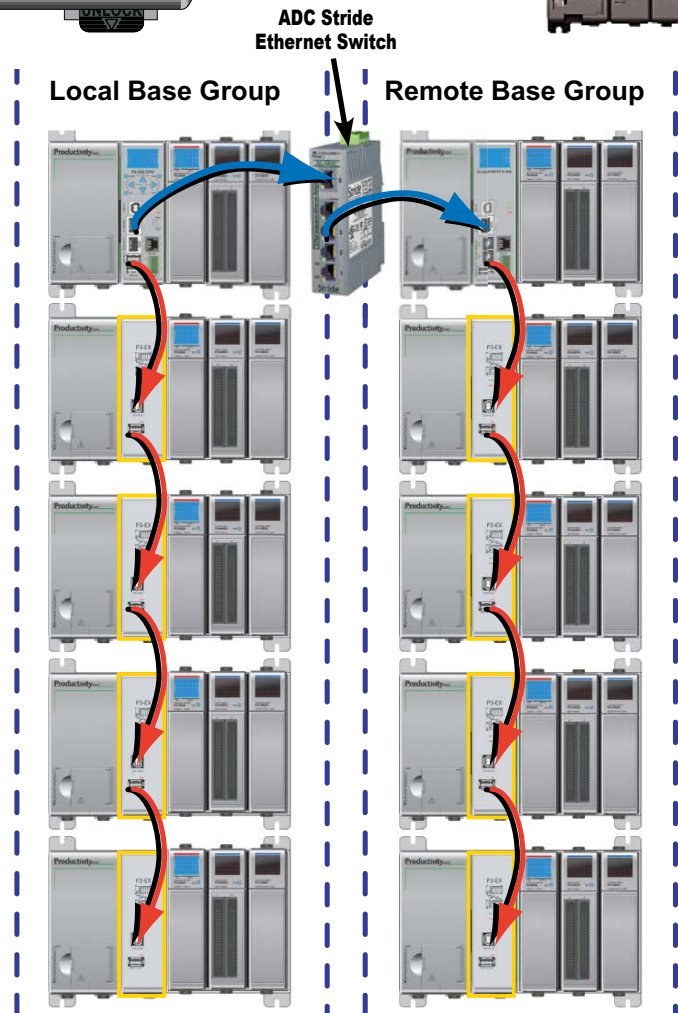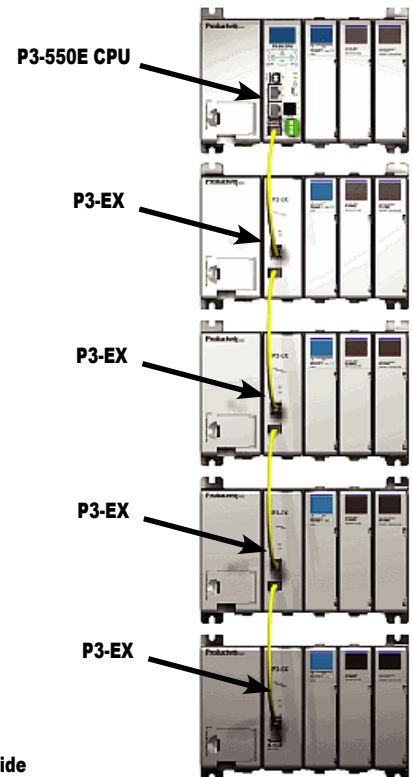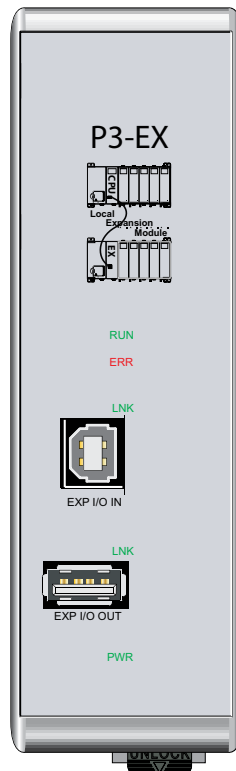## P3-EX $138.00

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 68 expansion bases by adding four expansion bases at the CPU base and four expansion bases per Remote I/O Slave (up to 16 slaves). Each expansion base uses the P3-EX expansion module for USB-based I/O bus connectivity.

P3-550E CPU

P3-EX

P3-EX

P3-EX

P3-EX

ADC Stride Ethernet Switch

Local Base Group   **Remote Base Group**

P3-EX Expansion Module

P3-EX

RUN
ERR
LNK

USB 2.0 (Type B) Port
- Input from P3-530, P3-RS/RX or preceding expansion module

EXP I/O IN

LNK

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

EXP I/O OUT

PWR
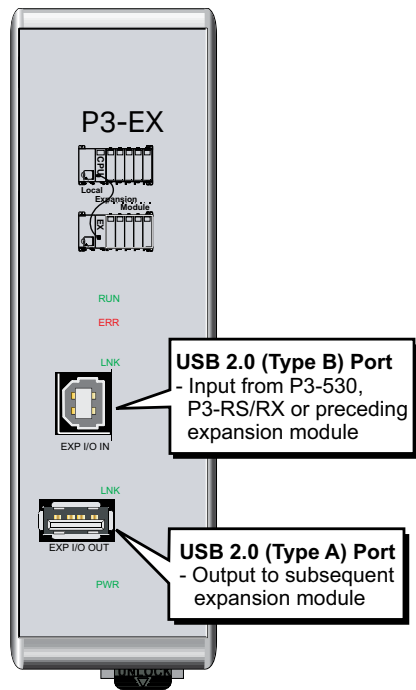
Hot-Swapping Information

Note: This device cannot be Hot Swapped.

IMPORTANT!

⚠️

WARNING!: *EXPLOSION HAZARD – SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2.*

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.

| 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. LINK - Green LED is illuminated when a USB link is established.
I/O Capabilities **Max. Number of I/O per CPU System** **Max. Number of Expansion I/O Bases**	59,840 (CPU Base with 4 Expansion Bases plus 16 Remote Bases with 4 Expansion Bases per Remote, with 11 64-point I/O modules per base) 68 (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°C– 60°C (32°F–140°F)
Storage Temperature	-20ºC–70ºC (-4°F–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
Module Location	Controller slot in a local expansion base in a Productivity3000 system
Weight	194g (6.24 oz)
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.

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

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: 6ft. cable part no. P3-EX-CBL6	

EXP I/O IN
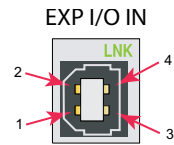
Mating face of USB type B female

EXP I/O OUT
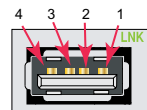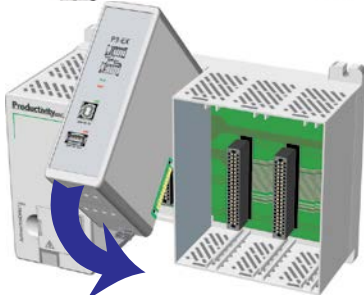
Mating face of USB type A female

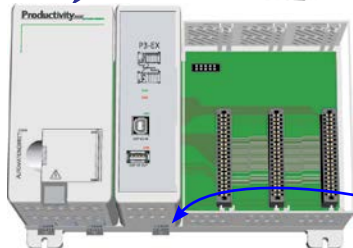| Pin #	Signal
1	Reset
2	– Data
3	+ Data
4	GND

Installation Procedure
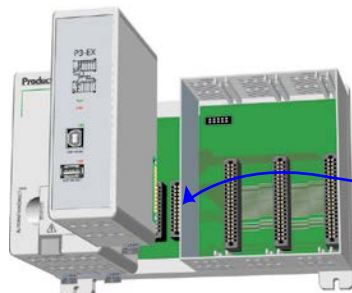
Step One:

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.*