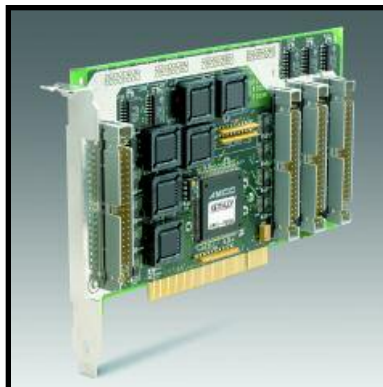


# KPCI-3160 KPCI-PIO96 KPCI-PIO24



- 96 or 24 TTL-level compatible digital I/O lines
- Bi-directional I/O
- High-current driver capability, 15mA (source) and 64mA (sink)
- Compatible with SSIO-24 and PB-24SM accessories
- Compatible with industry standard solid-state relays
- 32-bit DriverLINX<sup>®</sup> drivers plus a suite of bundled software including <sup>™</sup> VisualSCOPE<sup>™</sup>, TestPoint<sup>™</sup>, and LabVIEW<sup>™</sup> drivers

## Ordering Information

### KPCI-3160

96-Channel, PCI-Bus,  
Parallel Digital I/O Board,  
CE Compliant

### KPCI-PIO96

PCI bus 96-bit Parallel  
Digital I/O Board

### KPCI-PIO24

PCI bus 24-bit Parallel  
Digital I/O Board, CE  
Compliant

## 96/24-Line Parallel Digital I/O Boards

### Functional Description

These parallel digital I/O boards offer a wide range of functionality for applications as diverse as digital I/O and process control to prototyping and parallel communications. They provide 96 or 24 TTL-level digital I/O lines that can be used for digital control of processes and monitoring of the status of switches, contacts, or other control points. All digital I/O lines can be accessed simultaneously by the hardware and software. These lines also provide high current driver outputs for sinking (64mA) and sourcing (15mA). This allows them to drive relays directly without any interface circuitry.

The digital I/O lines of the KPCI-3160 and KPCI-PIO96 are divided into four 24-bit groups, each of which is further divided into three separate 8-bit ports (PA, PB, and PC). These ports can be set independently under software control as inputs or outputs. In addition to operating as a standard 8-bit data port, the third port (PC) can be subdivided into two half ports of four bits each. The PA, PB, and PC ports can always be read/write accessed, regardless of their initial configuration, without affecting external signal levels. All ports default as inputs upon initial power-up or reset conditions. The KPCI-3160 has a high output current of 15mA (source) and 64mA (sink), enabling direct control of LEDs, solid-state I/O modules, and relays.

The KPCI-PIO24's 24 digital I/O lines are grouped into three separate 8-bit ports (PA, PB, and PC), which can be set independently under software control as inputs or outputs. In addition to operating as a standard 8-bit data port, the third port (PC) can be subdivided into two half ports of four bits apiece. The PA, PB, and PC ports can always be read/write accessed, regardless of their initial configuration, without affecting external signal levels. All ports default as inputs upon initial power-up or reset conditions.

	KPCI-3160	KPCI-PIO96	KPCI-PIO24
Number of Channels	96	96	24
Sink	64 mA	64 mA	64 mA
Source	-15 mA	-15 mA	-15 mA
Interrupt Capability	Yes, configurable	No	Yes, configurable
Connector Type	100 pin	4 × 50 pin	37 pin D type
CE Compliant	Yes	No	Yes



### APPLICATIONS

- Factory automation
- Monitoring the status of switches, push buttons, limit switches, etc.
- Laboratory automation
- Production test
- Energy management
- Security systems

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# KPCI-3160

# KPCI-PIO96

# KPCI-PIO24

## 96/24-Line Parallel Digital I/O Boards

### Specifications

Symbol	Parameter	Min.	Typ.	Max.	Unit
<b>Logic Inputs and Outputs</b>					
$V_{IH}$	Voltage, input high	2.0	—	—	V
$V_{IL}$	Voltage, input low	—	—	0.8	V
$I_{IH}$	Current, input high, $V_{IN} = 2.7V$	—	—	$\pm 1$	$\mu A$
$I_{IL}$	Current, input low, $V_{IN} = 0.5V$	—	—	$\pm 1$	$\mu A$
$I_{OZH}$	High impedance output current, $V_{OUT}$ high	—	—	$\pm 1$	$\mu A$
$I_{OZL}$	High impedance output current, $V_{OUT}$ low	—	—	$\pm 1$	$\mu A$
$V_{OH}$	Voltage, output high, $I_{OH} = -8mA$	2.4	3.3	—	V
$V_{OL}$	Voltage, output low, $I_{OL} = 64mA$	—	0.3	0.55	V
$I_{OL}$	Current, output low	—	—	64.0	mA
$I_{OH}$	Current, output high	—	—	-15	mA
$I_{OS}$	Short circuit current	-60.0	-120.0	-225.0	mA
$I_{OFF}$	Input/output power off leakage	—	—	$\pm 1$	$\mu A$
<b>Environmental</b>					
	Operating temperature range	0		+50	$^{\circ}C$
	Storage temperature range	-40 <sup>1</sup>		+100 <sup>2</sup>	$^{\circ}C$
	Humidity (non condensing)	0		90	%
<b>Dimension</b>					
	5 × 4.25 × 0.75 (half slot)				inches
	12.7 × 10.8 × 1.9				cm
<b>Weight</b>					
	4.4 (4 for KPCI-PIO24)				oz
	125 (116 for KPCI-PIO24)				grams

<sup>1</sup> -20 for KPCI-PIO24.

<sup>2</sup> +85 for KPCI-PIO96 and KPCI-PIO24.

### ACCESSORIES AVAILABLE (KPCI-3160)

CAB-1800/S	100-conductor shielded cable with a 100-pin D-type connector on each end. 18 in length. Longer and non-shielded cables are also available
CAB-SSR	3 ft ribbon cable with card-edge connector for PB-24 and PB-24SM
CACC-2000	Cable, 24 in, 50 conductor. Interfaces CONN-3160-D1 to STA-50, STP-50, or SSIO-24
CONN-3160-D1	Adapter accessory for the KPCI-3160
PB-24SM	24-channel baseboard for SM Series SSR modules
SSIO-24	24-channel solid-state I/O module board. Requires CACC-2000 cable
STA-50	Universal 50-pin screw terminal board. Requires CACC-2000 cable
STP-50	Screw Terminal panel with 50-pin male header. Requires CACC-2000 cable
STP-100U	100-pin universal screw terminal panel
STP-ENCL	General purpose enclosure for STP-37, STP-37/E, and STP-50
TESTPOINT	TestPoint software package

### ACCESSORIES AVAILABLE (KPCI-PIO96)

C1800	18-inch ribbon cable
CAB-SSR	3 ft ribbon cable with card-edge connector for PB-24 and PB-24SM
CACC-2000	KPCI-PIO96 to STA-50, STP-50, or SSIO-24 cable (24 in)
PB-24SM	24-channel baseboard for SM Series SSR modules
SSIO-24	24-channel solid-state I/O module board
STA-50	Universal 50-pin screw terminal board
STP-50	Screw terminal panel with 50-pin male header
TESTPOINT	TestPoint application software on CD-ROM

### ACCESSORIES AVAILABLE (KPCI-PIO24)

C1800	18-inch ribbon cable
S1800	18-inch shielded ribbon cable
SSIO-24	24-channel solid-state I/O module board
STA-U	Universal screw terminal assembly
STC-37	Direct screw terminal connector
STP-37	Screw terminal panel
TESTPOINT	TestPoint application software on CD-ROM

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