**Pathfinder**

**PFD 4x4 / 4x2**

*Matrix Switchers*

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**INTRODUCTION**

The PathFinder Matrix Switcher family is a ground-up development aimed at bringing new capabilities and a new level of performance to matrix switching. These smaller 4X4 and 4X2 matrix units are ideal for applications requiring limited source to display routing / switching and have many of the same features as our larger units.

At the heart of the PathFinder is a design that delivers high bandwidth and flat frequency response to insure that the original image is switched and distributed without being altered. Proper signal reproduction is much more than bandwidth. Frequency response plays a vital role in the clarity and accuracy of an image. These units feature greater than 400 MHz (typical) of bandwidth to -3dB. Better, from 0 to 250 MHz the signal is +/-0.5 dB making them the flattest matrix switchers on the market.

The stereo audio option provides balanced and unbalanced stereo audio switching with independent input trim control and output volume level control. Audio can be configured for “follow” or “breakaway” mode to allow separate video and audio source routing.

The Pathfinders can be easily controlled via front panel buttons or RS-232 input from a control system or PC. The command set is an easy to follow, easy to implement ASCII command set that gives control systems complete access to all functions. The units have an RS-232 input and output port to allow daisy chaining of additional serial controlled devices.

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**KEY FEATURES**

- Very high bandwidth
- Easy front panel or RS-232 control
- Integral rack ears
- Audio follow or breakaway
- Audio input trims
- Audio output volume control
- Sized to fit smaller installations
- Vertical interval switching
- Simple full function front panel controls

**APPLICATIONS**

- Boardrooms
- Schools
- House of Worship
- Rental and Staging
- Convention Centers
- Security and Surveillance
- Monitoring Centers
- Courtrooms

We call these units “the kids” because they are the smallest of the FSR Pathfinder Matrix switcher family. Check out our full line of matrix switchers up to 32X32.

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**ORDERING INFORMATION**

<table>
<thead>
<tr>
<th>PathFinder 4X2 / 4x4 Computer and Stereo Audio Matrix Switchers</th>
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<th>Part #</th>
<th>Description</th>
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<td>16796</td>
<td>PFD-4x2-PC</td>
<td>4x2 Computer Video Matrix Switcher</td>
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<td></td>
<td>16797</td>
<td>PFD-4x2-PCA</td>
<td>4x2 Computer Video and Stereo Audio Matrix Switcher</td>
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<td>16798</td>
<td>PFD-4x4-PC</td>
<td>4x4 Computer Video Matrix Switcher</td>
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<td></td>
<td>16799</td>
<td>PFD-4x4-PCA</td>
<td>4x4 Computer Video and Stereo Audio Matrix Switcher</td>
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## TECHNICAL SPECIFICATIONS

### VIDEO INPUT
- **Input Impedance**: 75 ohms for R, G, and B inputs (pins 1, 2, and 3)
- **Nominal level**: 0.7V p-p
- **Maximum level**: 3V p-p with 0V offset
- **Input return loss**: -48dB @ 5 MHz, -44dB @ 10 MHz

### VIDEO OUTPUT
- **Output Impedance**: 75 ohms for R, G, and B outputs (pins 1, 2, and 3)
- **Minimum bandwidth**: -3dB @ 375 MHz 0.7V p-p
- **Typical Bandwidth**: -3dB @ 410 MHz -.7V p-p
- **Flatness**: +/-0.5dB 0-250 MHz
- **Output Offset Voltage**: +/-10 mV max (with input floating)
- **Gain**: Unity into 75 ohm load
- **Adjacent Channel crosstalk**: -62dB @ 10 MHz, -47dB @ 100 MHz
- **Output return loss**: -48dB @ 5 MHZ, -42dB @ 10 MHz

### SYNC IN
- **Frequency range**: 0-200 MHz
- **Input Impedance**: 576 ohms for H and V inputs (pins 13 and 14)
- **Polarity**: positive or negative
- **Minimum level**: 2.2 Volts
- **Maximum level**: 6 Volts

### SYNC OUT
- **Delay**: 18 nS max
- **Rise/Fall time**: 2nS max
- **Output Impedance**: 75 ohms for H and V outputs (pins 13 and 14)
- **Polarity**: Same as input (noninverting)
- **Level**: 4.5V min into Hi-Z, 2.2V min into 75 ohms

*NOTE: RGB switching is performed during vertical blanking interval of the old source for the cleanest possible switch*

### AUDIO INPUT
- **(PCA Models)**
  - **Input trim range**: +15 to -5dB in 1 dB steps
  - **Max Input level**: +7dBm

### AUDIO OUTPUT
- **(PCA Models)**
  - **Gain**: 6dB
  - **Output level control range**: +5 to -45dB in 1 dB steps plus mute
  - **Mute Attenuation**: >95dB @ 2 kHz
  - **Max output level**: +12dBm into 600 ohm balanced load
  - **Adjacent Channel Crosstalk**: < -90dB @ 2 kHz
  - **Stereo separation**: > 90dB @ 2 kHz
  - **THD + Noise**: < 0.1% @ 1 kHz
  - **Frequency Response**: +/-0.25dB 20 Hz-20 kHz -3dB @ 160 kHz typical

### INPUT POWER
- **100-240 VAC  50/60 Hz  25VA**

### TYPICAL APPLICATION

- **CONTROL SYSTEM**
- **PC**
- **STEREO SOUND SYSTEM**
- **OTHER/ADDITIONAL SERIAL DEVICES**
- **PC**
- **MONITOR**
- **PROJECTOR**

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Specifications are subject to change without notice.