

## **PQ3-P Digital Video Multiplexer**



The PQ3-P digital video multiplexer allows several cameras to be viewed on one screen. The standard version can combine up to 4 video inputs, but there are also options to allow up to 16 video inputs to be combined.

Unlike most quads, the PQ3-P is very compact and power efficient measuring just 82 x 60 x 30mm in the cased version, weighing 155g and consuming just 1.7W. For ease of use, the system includes 16 pre-set display modes accessible via an external hex switch, any of which may be reconfigured via the serial port using the optional PC Configuration utility. The system also provides excellent picture quality coupled with a real-time update rate per channel. Custom display modes can also be configured, allowing the user to optimise the PQ3-P output.

The PQ3-P will operate with almost any composite analogue video source, automatically configuring itself for PAL or NTSC operation.

For OEM applications, the system may be supplied as an even smaller unit (PQ3) or PCB, together with full support for interfacing to the product's serial control protocol.

### **Connections**

The PQ3-P uses high quality Hirose connectors for all inputs and outputs. Each camera connector provides power for the camera connected, simplifying cabling and increasing reliability.

### **Layouts**

Drivedata can supply the PQ3-P pre-loaded with 16 standard layouts or with 10 standard layouts and 6 custom layouts optimised for particular applications. Custom display modes can be designed using optional software provided by Drivedata. Once designed they can be assigned to any of the 16 presets.

The design software allows any channel to be sized, positioned, cropped and mirrored as necessary. When new layouts are needed, they can be designed, downloaded to the PQ3-P and they are then stored in the unit and can be selected using the hex switch on the front panel.

The PQ3-P can also be used to switch between un-synced video sources (such as mini cameras without an external sync) without losing sync on the output.

Several PQ3-P units can be connected together if more than 4 sources need to be combined into one screen. Advanced digital signal processing ensures picture quality is always very close to the original source no matter how the layouts are configured.

A typical layout using 4 inputs and mirroring on one input is shown below in a frame grab:



### Specifications

#### **General:**

Operating temperature range	-20 to +65°C.
Mechanical size (housed)	82 x 60 x 30 mm.
Finish	Black Anodised aluminium.
Weight (housed)	155 g.
Operating voltage range	5 to 28 V DC.
Power consumption	< 2 Watts
Current consumption at 12 V	140 mA (approx.).
Standard accessories	Video Output/power input cable.

#### **Video:**

Video standards supported	PAL or NTSC (auto / manual config).
Video Input / output levels	1 Vpp into 75R
Video bandwidth:	4MHz @-1dB, 5.35 MHz @-3dB
Signal to noise ratio:	> 60 dB weighted
Insertion loss:	< ± 3 %
Differential gain:	< ± 3 %
Differential phase:	< ± 3 degrees
Luminance linearity:	< ± 1.4 %
Chrominance linearity:	< ± 1.4 %
Chroma/luminance delay:	< 40 nS
Tilt:	< ± 1 %
AGC pulling range:	> ± 15 %
Digital sampling (PAL)	576 lines by 720 pixels
Lock-in time	<1 second
Input camera gen-lock	Not required
Number of input channels	4 (more possible)
Preset-display modes	16 via external switch + 176 via RS232
Update rate per image	Real-time