Synapse

U4U100

1080p to 4K (3840x2160) Ultra HD 4 wire up converter
A Synapse® product

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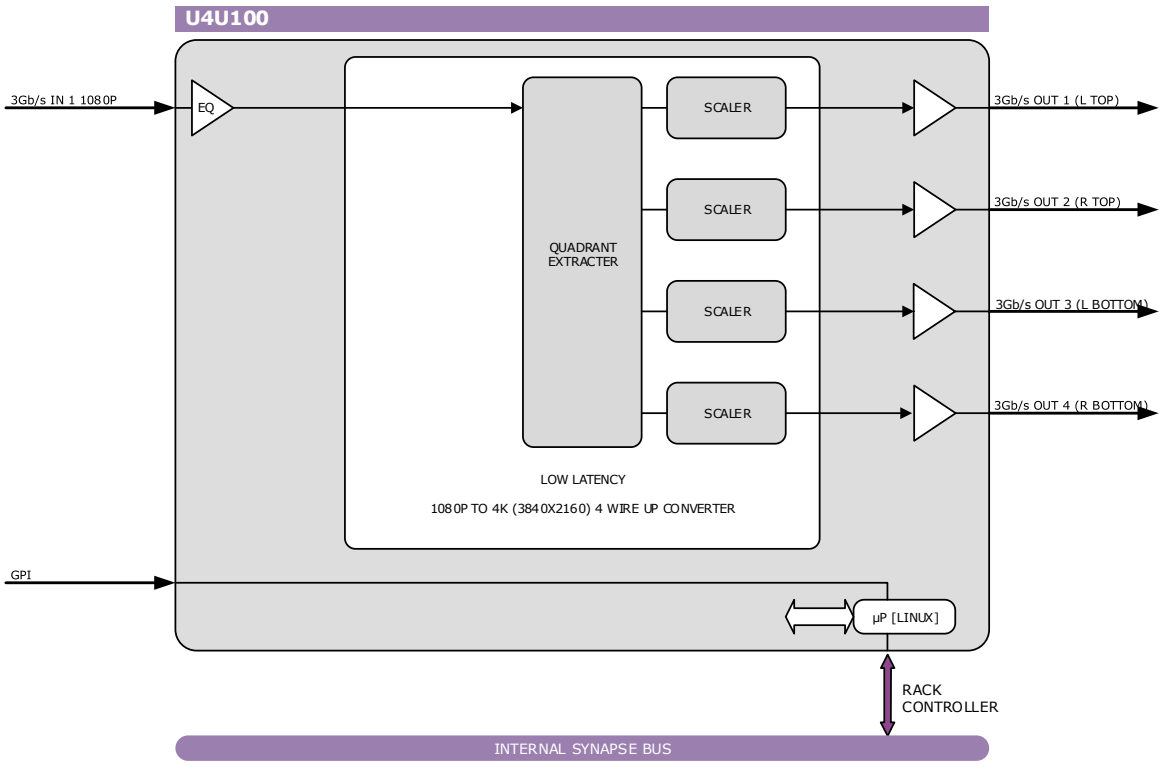
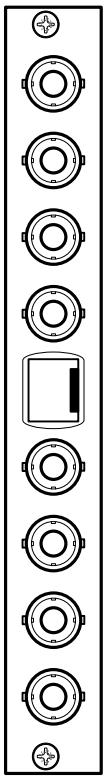
Block schematic & I/O panel



BPH17



3Gb/s INPUT 1	
3Gb/s PROCESSED OUT 1 (LEFT TOP)	
3Gb/s PROCESSED OUT 2 (RIGHT TOP)	
GPI	
3Gb/s PROCESSED OUT (LEFT BOTTOM)	
3Gb/s PROCESSED OUT (RIGHT BOTTOM)	

Features

The U4U100 is a 1080p to 4k (4 wire) up-converter.
The low latency unit extracts four quadrants out of a 1080p (1920x1080) and scales each individual part into to 4 full 1920x1080 pictures

- One 1080p 50 or 59.94 input (level B compliant)
- 4 outputs
- Low Latency (1 1080p Frame 20ms @ 50Hz, 16.7ms @ 59.94 Hz)
- 4K 4 wire (3840 x 2160)
- Compatible with the following formats (auto selecting)
  - 1080p/59.94
  - 1080p/50
- Transparent for 16 channels of embedded audio
- The BPH17 can optionally be fitted with up to two fiber I/O modules (inputs or outputs)
- Full control and status monitoring through the front panel of the SFR04/SFR08/SFR18 frame and the Ethernet port (ACP)

Applications

- Up conversion for 4K production sets

Ordering information

Module:

- **U4U100-I/O:** 4k (4 wire) Up converter

Standard I/O:

- **BPH17-PANEL:** I/O-panel for U4X100

Specifications

Serial Video Input

Standard	3Gb/s SDI:SMPTE424/5 (Level B)
Number of Inputs	1
Connector	BNC
Equalization	Typical maximum equalized length of Belden 1694A cable: 90m at 2.97Gb/s, 120m at 1.485Gb/s,
Return Loss	> 15dB up to 1.5GHz

Serial Video Output

Number of Outputs	4
Connector	BNC
Signal Level	800mV nominal
DC Offset	0V ±0.5V
Rise/Fall Time	135ps nominal
Overshoot	< 10% of amplitude
Return Loss	> 15dB up to 1.5GHz (typ.) > 10dB up to 3GHz (typ.)
Wideband Jitter	< 0.2UI

Miscellaneous

Weight	Approx. 450g
Operating Temperature	0 °C to +40 °C
Dimensions	137 x 296 x 20 mm (HxWxD)

Electrical

Voltage	+24V to +30V
Power	<15 Watts