

# Multi-Channel Signal Conversion With Dual-link Scaling

*Hydra*<sup>™</sup> multi-channel scalers offer users a new level of functionality that includes DVI dual-link to single-link scaling and format conversion of signals up to 3840x2160/30. The compact systems consist of up to eight independent scaler/converter channels housed in a 2RU chassis, a space saving design with a single power connection.

Available functions include format conversion from analog or 3G/HD-SDI to DVI/HDMI and scaling with pan and zoom. Internal switching allows any input to be routed to multiple outputs, each with unique scaling, format and signal parameters.

## Models

*Hydra* scalers are available in three basic configurations that can be customized depending on the requirements of the system:

100 Series models offer up to four channels of DVI dual-link to single-link conversion. HDCP support allows processing of content-protected HDMI signals. The system supports input resolutions of up to 3840x2400/30 and scales to single link resolutions up to 2048x1152. 4K computer inputs can be accommodated with low cost display port to DVI dual-link adapters.

200 Series models support up to 8 channels of DVI/HDMI and/or analog RGB signals with resolutions of up to 1920x1200 and 2048x1152.

300 Series models feature input cards that accept 3G/HD-SDI video from cameras and other devices up to 1080p. They convert signals to DVI, allowing them to be displayed via cost-effective DVI/HDMI monitors. Color space conversion and upsampling from 4:2:2 to 4:4:4 are supported.

## Additional Features

*Hydra* scalers offer a host of additional features that simplify installation and operation:

- Create, store and recall custom timings for inputs and outputs
- Pan and zoom on signals up to 1920x1200; full frame dual-link to single-link scaling
- Store presets in memory and export for backup

The new units replace the popular *Quadra* scaler, with double the processing capacity and many additional features. Ideal for simulators, visualization rooms, and other venues requiring high resolution signal conversion. *Hydra* scalers offer unmatched quality and versatility.

## Hydra

Scalers/Converters

Dual-link to single-link  
DVI scaling

Eight independent channels  
in a compact 2RU chassis

Format conversion from  
analog or 3G/HD-SDI to DVI

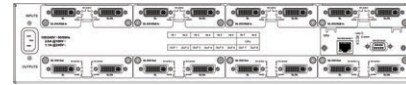
4:2:2 to 4:4:4 upsampling





## Models

Model Number	Description
HY 104	2 DVI dual-link inputs; 2 DVI outputs
HY 106	3 DVI dual-link inputs; 3 DVI outputs
HY 108	4 DVI dual-link inputs; 4 DVI outputs
HY 204	4 DVI, RGB, or YUV inputs, 4 DVI outputs
HY 206	6 DVI, RGB, or YUV inputs, 6 DVI outputs
HY 208	8 DVI, RGB, or YUV inputs, 8 DVI outputs
HY 304	4 3G/HD-SDI inputs, 4 DVI outputs
HY 306	6 3G/HD-SDI inputs, 6 DVI outputs
HY 308	8 3G/HD-SDI inputs, 8 DVI outputs



Inputs	100 Series	200 Series	300 Series
Module Format	1-channel	2-channel	2-channel
Signal Type	Dual-link DVI	Single-link DVI, HDMI RGBHV, YPbPr	SMPTE 292M and 424M
Pixel Clock Rate	165 to 330 MHz	25 to 165 MHz	25 to 165 MHz
HDCP-compliant	Display dependent	Yes	No
Resolution	Up to 2560x1600p/60 3840x2160/30	Up to 1920x1200p/60, 2048x1152p/60 and 1080p	3G: 1080p/60 HD: 1080p/30; 1080i/30, 29, 25 720p/60, 59, 50
Connectors	DVI-I x 2	DVI-I x 2	BNC x 2
Cable Equalization	Manual/Auto to 164 ft. (50m)	Manual/Auto to 164 ft. (50m)	HD: Auto 656 ft. (200 m) 3G: Auto 393 ft. (120 m)
Max. Cable Length	164 ft. (50 m)	164 ft. (50 m)	HD: 656 ft. (200 m) 3G: 393 ft. (120 m)

Outputs	DVI with Scaler
Module Format	2-channel; 1-channel in dual-link to single-link conversion mode
Signal type	DVI single-link / HDMI
Pixel Clock Rate	25 to 165 MHz
Resolutions	640x480p/60 to 2048x1152p/60 and 1080p
Connectors	DVI-I
Pin Power	500 mA @ 5VDC

Control	
Serial	RS-232 9600 - 115,200 baud
Network	Ethernet TCP/IP 10/100/1000Base-T Command line and graphical user interface

Audio	
Digital Audio	Embedded HDMI audio pass through: stereo, 5.1, 7.1

Physical	
Size (H x W x D)	3.5 x 19 x 16 inches ( 8.9 x 48.3 x 40.7 mm)
Weight	20 lbs/9.1 kg

Environmental	
Power	100-240 VAC; 50/60 Hz, 170 W max
Operating Temp.	+32 to +122 °F (0 to +50 °C)
Storage Temp.	-40 to +158 °F (-40 to +70 °C)
Humidity	10% to 90%, non-condensing
Safety	UL, CE
EMI/EMC CE,	FCC Class A
MTBF	30,000 hours (Calculated)