



EVERYTHING VIDEO FOR AIRBORNE SURVEILLANCE

## TVD-160 Series High Definition Video Multiplexer (with quad view and signal conversion options)

Tracer Aviation's TVD-160 is a HD-SDI video amplifier designed for use in aircraft. The unit offers multiple outputs with no time delay or lag and is suited to live video applications such as airborne surveillance.

The TVD-160 is available as a simple amplifier or can be ordered with a quad screen generator and/or a video signal conversion function.

The unit multiplexes and routes up to sixteen (16) HD-SDI video inputs to sixteen (16) HD-SDI non-blocking outputs. Any input may be routed to one or up to all sixteen (16) of the outputs simultaneously with no lag or appreciable delay.

Typically the unit is used to multiply outputs from an on-board camera system to multiple sources such as video displays, video recorders and microwave/datalinks. In complex aircraft the unit can be daisy-chained with other units to provide a very comprehensive solution to video routing.

The unit can be operated stand alone as a fixed output distribution amplifier or it may be connected to a Tracer Aviation system data bus carrying proprietary control data from Tracer Aviation mission displays and video recorders. The unit retains previously set input to output routing connections when the power is removed.

In addition to the multiplexing function, the unit can be supplied with a quad image generator and a video conversion unit.

### Quad image generator function:

Any four (4) of the inputs may be routed to an internal quad image generator that can show four inputs combined as four individual quadrant images to a single output. The output of the quad is routed back into the switching matrix where it can then be fed to any of the outputs for onward distribution as a quad image

### Video conversion function:

An internal signal converter is linked to the matrix to allow for a very flexible method of converting, amplifying and routing various analogue signals.

One of these inputs may be converted into a number and variety of analogue outputs (see table on page 3).

### PRODUCT FEATURES

- 16 HD-SDI video inputs
- 16 HD-SDI video outputs
- Simple configuration & setup
- Fully flexible solution allows for numerous video configurations
- Generate a quad screen image from four separate inputs
- Output quad screen on single channel
- Daisy chain TVD-160 units in complex aircraft configurations
- Convert video input signals
- No delay or lag
- Designed for live video applications
- Rugged construction
- Aircraft power supply
- Can be used as a stand alone unit with user configured routing
- Can be controlled from any Tracer Aviation mission display (if required)

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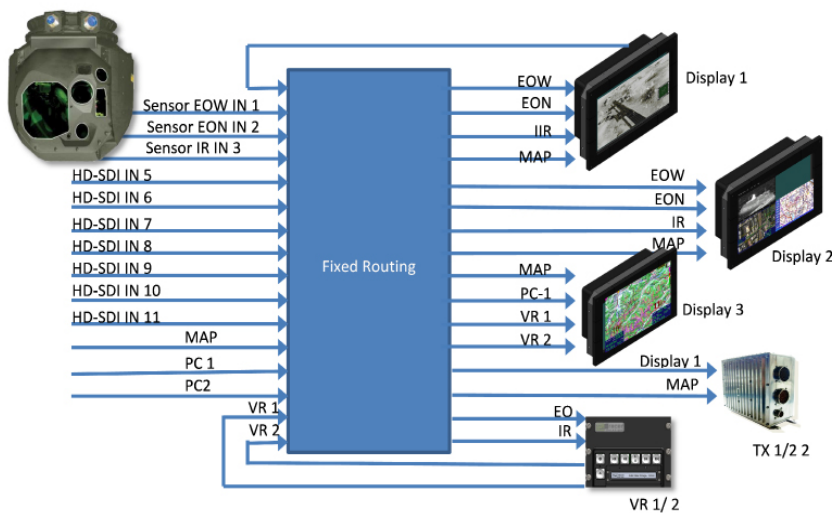
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TVD-160 SERIES MULTIPLEXER (CONTINUED)

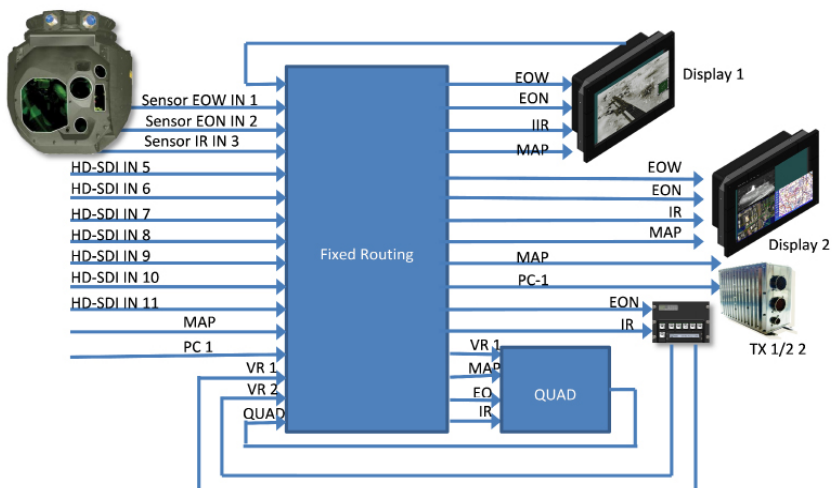
Construction

Designed for aircraft use, the rugged construction is from solid and folded certified aerospace structural aluminium to AS9100 Rev C standards. Internal circuit boards are conformally coated. The unit is lip sealed and drip proof. The finish of all external surfaces is sealed against the effects of contaminants such as oils and hydraulic fluids. In the event of a crash the unit is designed to contain all loose objects within the enclosure.

Typical installation TVD-160-01 (standard unit)



Typical installation TVD-160-02 (QUAD generator version)



TRACER AVIATION PRODUCTS

HD widescreen mission displays

- 7" (180mm)
- 10.6" (270mm)
- 15.6" (395mm)
- 17.3" (440mm)
- 21.5" (540mm)

HD airborne video recorders

- Single channel video recorder
- Multi-channel video recorder
- Data recorders
- Combined HD/SD recorders
- RGB/VGA recorders
- Metadata record & stream function

HD video distribution systems

- Single input to multiple outputs
- Complex routing and switching solutions
- QUAD screen generator
- Video signal conversion unit

Integrated mission solutions

- Moving map touch screen integration
- Augmented reality integration
- Full control of video recorders
- Microwave datalink control interface
- Mission computer control

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TVD-160 SERIES MULTIPLEXER (CONTINUED)

Video signal conversion. Output options:		
HD-SDI		
DVI		
Graphics output	Graphics Red	
	Graphics Green	
	Graphics Blue	
	H Sync	
	V Sync	
HD Analogue	Pr/Pb	
	Pb/Pr	
	Y	
SC Composite	CVBS	
SD Y/C	Y CVBS	
	Y CVBS Auto	
SD RGB	SD Red	
	SD Green	Sync on Green
	SD Blue	

Size, weight, power requirements	
Size	500mm x 50mm x 45/100mm
Weight	1.7kg (depending on options)
Power consumption	Typical 1.5Amps @ 28V DC

Ordering information				
Model	Switch matrix inputs HD-SDI	Switch matrix outputs HD-SDI	Quad option	Converter option
TVD-160-01	16	16	no	no
TVD-160-02	14	12	yes	no
TVD-160-03	14	12	no	yes
TVD-160-04	14	10	yes	yes

Please refer to the TSD for full technical information & dimensions..

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