



PRELIMINARY



**D/2 DA4 DVI**  
Direct Digital Distribution Amplifier

68-538-01 AX3  
Printed in the USA  
09 01

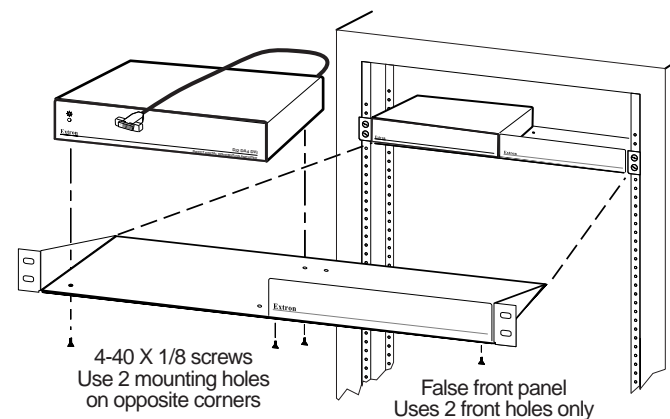
**Installation**

**Description**

The D/2 DA4 DVI Direct Digital Distribution Amplifier (DA) accepts a Digital Visual Interface (DVI) signal or a Digital Flat Panel (DFP) signal (with a DFP-to-DVI adapter) from a computer or other device that outputs digital video. The D/2 DA4 DVI outputs four independently buffered signals. The D/2 DA4 DVI is rack mountable and has an internal switching power supply.

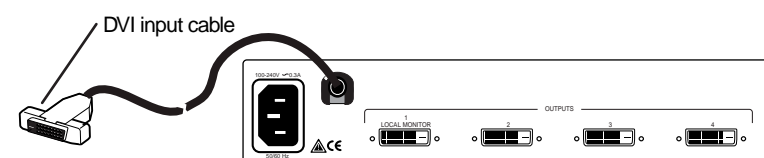
**Installation**

1. Power off the computer and its local monitor.
2. For optional rack mounting, mount the D/2 DA4 DVI on the left or right side of a 19" 1U Universal Rack Shelf (Extron part #60-190-01) (figure 1).

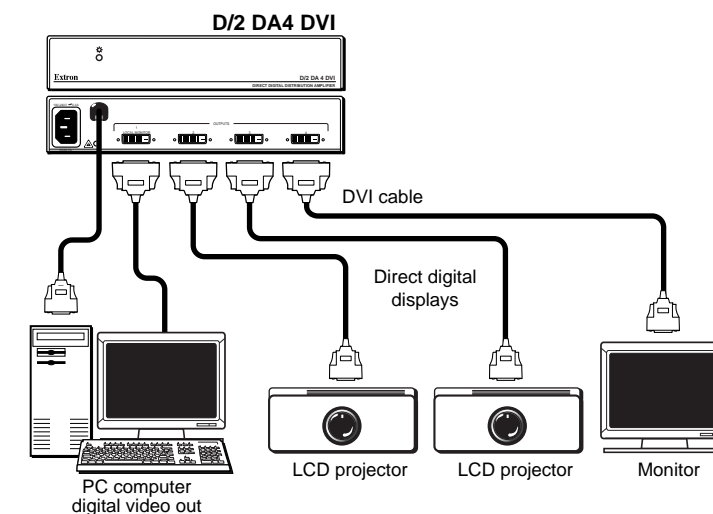


**Figure 1 — Rack mounting the D/2 DA4**

- a. If feet were previously installed on the bottom of the case, remove them.
  - b. Mount the D/2 DA4 DVI on the rack shelf, using two 4-40 x 1/8 screws in opposite (diagonal) corners to secure the case to the shelf.
3. Connect the D/2 DA4 DVI input cable (figure 2) to the DVI video output port of the computer (figure 3).



**Figure 2 — D/2 DA4 rear panel**



**Figure 3 — D/2 DA4 DVI typical application**

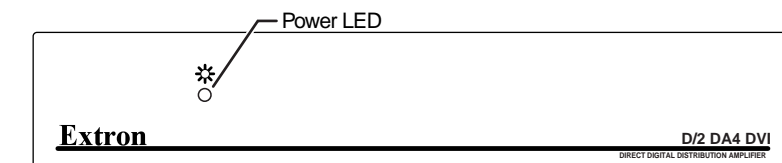
4. Connect the computer monitor to the Local Monitor output of the D/2 DA4 DVI.

**NOTE** The maximum permissible length of the DVI input and output cables is 16.4 feet (5 meters). Ensure that the cables do not exceed the maximum permissible length, otherwise images may be distorted or missing. Extron does not guarantee signal integrity beyond 16.4 feet.

5. Connect desired DVI-compatible LCD panels, monitors, or projectors to the other output(s).
6. Connect power to the D/2 DA4 DVI.
7. Power on the local monitor and other connected display device(s).
8. Power on the computer

**Indicators**

**Power LED** — Located on the front panel (figure 4), this lights to indicate that the D/2 DA4 DVI is receiving power.



**Figure 4 — D/2 DA4 DVI front panel**

## Operation

### Operation

After the D/2 DA4 DVI and its connected devices are powered up, the system is fully operational. If any problems are encountered, verify that the cables are routed and connected properly, and that all display devices have identical resolutions and refresh rates.

**NOTE** The direct digital video output is tailored for a specific monitor resolution and refresh rate. Ensure that all display devices have identical resolutions and refresh rates, otherwise images may be distorted or missing.

**NOTE** Ensure that the computer and primary monitor are connected to the D/2 DA4 DVI, and the D/2 DA4 DVI and monitor have power applied, before applying power to the computer. If the other devices are not turned on before the computer is, the image will not appear.

### DFP Connector Pin Assignments

Figure 5 and the table below define the pin assignments for the DVI protocol.

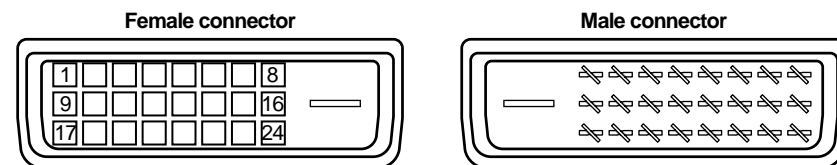


Figure 5 — DVI connectors

Pin	Signal	Pin	Signal	Pin	Signal
1	TMDS Data 2-	9	TMDS Data 1-	17	TMDS Data 0-
2	TMDS Data 2+	10	TMDS Data 1+	18	TMDS Data 0+
3	TMDS Data 2/4 Shield	11	TMDS Data 1/3 Shield	19	TMDS Data 0/5 Shield
4	TMDS Data 4-	12	TMDS Data 3-	20	TMDS Data 5-
5	TMDS Data 4+	13	TMDS Data 3+	21	TMDS Data 5+
6	DDC Clock	14	+5 V Power	22	TMDS Clock Shield
7	DDC Data	15	Ground (+5 V)	23	TMDS Clock+
8	No Connection	16	Hot Plug Detect	24	TMDS Clock-

## Troubleshooting

DVI/DFP signals run at a very high frequency and are especially susceptible to bad video connections, too many adapters, or too long cables. To avoid the loss of an image or image jitter, follow these guidelines:

- Do not exceed 16.4 feet (5 meters) on the output of the DA.
- Use only cable designed for DVI signals.
- Limit or avoid the use of adapters.
- Use only approved DVI/DFP connectors.

### Specifications

#### Video

Bit rate ..... 1.6 gigabits/second/color  
Pixel data bit depth ..... 24 bits

#### Video input

Number/signal type ..... 1 single link DVI-D  
Connectors ..... 1 attached cable with DVI-D male connector  
Horizontal frequency ..... 15 kHz to 135 kHz  
Vertical frequency ..... 30 Hz to 170 Hz  
Maximum resolutions ..... 1280 x 1024 @ 85 Hz, 1600 x 1200 @ 60 Hz  
Minimum input voltage ..... 0.15V p-p

#### Video signal characteristics

Rise/fall time ..... 220 pS nominal, maximum 350 pS

#### Video output

Number/signal type ..... 4 single link DVI-D  
Connectors ..... 4 DVI-D female  
Maximum output cable length .. 16.4 feet (5 meters)  
Minimum output voltage ..... 0.6V p-p

#### General

Power ..... 100VAC to 240VAC, 50/60 Hz, 13 watts, internal, auto-switchable;  
Temperature/humidity ..... Storage -40° to +158°F (-40° to +70°C) / 10% to 90%, non-condensing  
Operating +32° to +122°F (0° to +50°C) / 10% to 90%, non-condensing  
Rack mount ..... Yes, with optional rack shelf, part #60-190-01  
Enclosure type ..... Metal

## Specifications

Enclosure dimensions ..... 1.75" H x 8.7" W x 9.5" D  
4.5 cm H x 22.2 cm W x 24.1 cm D  
(depth excludes connectors)  
Shipping weight ..... 6 lbs (2.7 kg)  
Vibration ..... ISTA/NSTA 1A in carton (International Safe Transit Association)  
Approvals ..... UL, CUL, CE, FCC Class A  
MTBF ..... 30,000 hours  
Warranty ..... 2 years parts and labor

**NOTE** Specifications are subject to change without notice.

### Optional Adapters

- 26-497-01 DVI (male), DFP (female)
- 26-498-01 DVI (female), DFP (male)

## FCC Class A Notice

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Note: This unit was tested with shielded cables on the peripheral devices. Shielded cables must be used with the unit to ensure compliance.



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