

## User's Guide



### *P/2 DA1 USB* VGA Line Driver

# Installation

The Extron P/2 DA1 USB is a one input, one output VGA line driver. It boosts the video signal between a laptop or desktop computer (input device) and a monitor or large screen projector (output device).

## Features

- The P/2 DA1 USB accepts and outputs SVGA, VGA, XGA RGBHV, RGBS, RGsB, and RsGsBs signals.
- The gain/peaking switch increases video signal voltage to compensate for signal degradation caused by long cables.

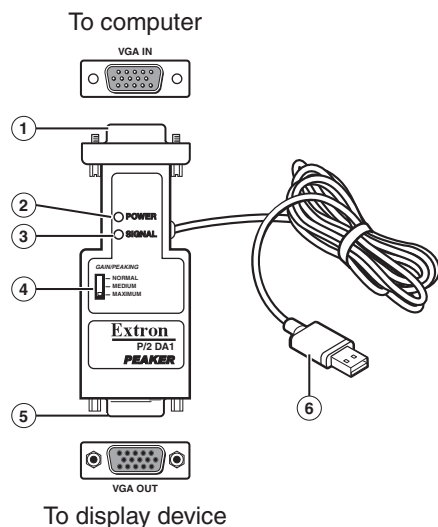
## Installation

To install the P/2 DA1 USB, do the following:

1. Turn off power to the input and output devices, and unplug their power cords.
2. Connect the computer to the 15-pin HD male input connector (see ① in the “Operation” illustration below).
3. Connect the output device to the 15-pin HD female output connector (see ⑤ in the “Operation” illustration below).
4. Plug the P/2 DA1 USB’s power connector into the computer’s USB port.
5. Reattach power cords, and apply power to the input and output devices.

**NOTE** Many laptop computers have an external video port, but they require special commands to output the video to that connector. Also, many laptops’ screens shut off after the port is activated. See the computer’s user’s guide for details, or contact Extron for a list of laptop keyboard commands.

## Operation



- ① **15-pin HD input connector (male)**
- ② **Power LED** — Lights to indicate that the P/2 DA1 USB is on.
- ③ **Signal LED** — Lights to indicate that an input signal is being received.
- ④ **Gain/peaking switch** — Compensates for cable resistance and capacitance.

**Normal** — Output is the same level as input.

**Medium** — 50% of the total gain is applied. Peaking is applied.

**Maximum** — 100% of the total gain is applied. Peaking is applied.

**NOTE** If the signal cable between the P/2 DA1 USB and the output device is shorter than approximately 125 feet, and the gain switch is set to 50% or 100%, the image may be overcompensated. If the edges of the image seem to exceed their boundaries, or if thin lines and sharp edges look thick and fuzzy, try changing the gain/peaking setting.

- ⑤ **15-pin HD output connector (female)**
- ⑥ **USB power connector** — Plug this into a computer’s USB port to provide power to the P/2 DA1 USB.

## Specifications

### Video

Gain .....	0 dB, 0.6 dB, 1.2 dB, selectable: when input is 0.7 Vp-p, output is 0.7 V, 0.75 V, 0.8 Vp-p when switch is at normal, medium, and maximum positions, respectively
Bandwidth .....	300 MHz (-3 dB) <b>Note:</b> ID bits will be passed through.

### Video input

Number/signal type .....	1 VGA-UXGA RGBHV, RGBS, RGsB, RsGsBs
Connectors .....	(1) 15-pin male
Nominal level .....	0.7 Vp-p for RGB
Minimum/maximum levels .....	Analog: 0.3 VDC to 1.5 VDC p-p with no offset at unity gain
Impedance .....	75 ohms
Horizontal frequency .....	15 kHz to 135 kHz
Vertical frequency .....	30 Hz to 170 Hz

### Video output

Number/signal type .....	1 VGA-UXGA RGBHV, RGBS, RGsB, RsGsBs
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Connectors .....	(1) 15-pin HD female
Nominal level .....	0.7 Vp-p for RGB
Minimum/maximum levels .....	Analog: 0.3 VDC to 1.5 VDC p-p with no offset at unity gain
Impedance .....	75 ohms
DC offset .....	±5 mV maximum with input at 0 offset

**NOTE** *Output resolution may vary depending on whether the P/2 DA1 USB is attached to the computer at startup, and on the type of computer you are using.*

**Sync**

Input/output type .....	RGBHV, RGBS, RGsB, RsGsBs
Input level .....	2.0 V to 5.0 Vp-p
Output level .....	TTL: 5 Vp-p
Input impedance .....	510 ohms
Output impedance .....	75 ohms
Max. propagation delay .....	18.8 ns
Max. rise/fall time .....	4 ns
Polarity .....	Positive or negative

**General**

Power .....	USB (5.0 VDC, 0.2 A)
Temperature/humidity .....	Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, noncondensing
Rack mount .....	No
Enclosure type .....	Plastic clamshell
Enclosure dimensions .....	0.6" H x 1.3" W x 3.1" D 1.4 cm H x 3.3 cm W x 7.9 cm D
Product weight .....	0.5 lb (0.3 kg)
Shipping weight .....	1 lb (1 kg)
Vibration .....	ISTA 1A in carton (International Safe Transit Association)
Listings .....	UL, CUL
Compliances .....	CE
MTBF .....	30,000 hours
Warranty .....	3 years parts and labor

**Part Number**

P/2 DA1 USB ..... 60-319-03

**NOTE** *All nominal levels are at ±10%.*

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



**Extron Electronics, USA**  
1230 South Lewis Street  
Anaheim, CA 92805  
USA  
714.491.1500  
Fax 714.491.1517

**Extron Electronics, Europe**  
Beeldschermweg 6C  
3821 AH Amersfoort  
The Netherlands  
+31.33.453.4040  
Fax +31.33.453.4050

**Extron Electronics, Asia**  
135 Joo Seng Road, #04-01  
PM Industrial Building  
Singapore 368363  
+65.6383.4400  
Fax +65.6383.4664

**Extron Electronics, Japan**  
Kyodo Building  
16 Ichibancho  
Chiyoda-ku, Tokyo 102-0082 Japan  
+81.3.3511.7655  
Fax +81.3.3511.7656