

### Overview

The Active VGA Balun II Kit allows VGA or component video to be transmitted via cost-efficient unshielded copper twisted cable in a point-to-point configuration. The product supports remote power pass-thru and is DDC compliant with all “plug-and-play” laptops, PCs and displays. The product supports up to 1920 x 1440 pixels and 1080p resolution and features manual gain adjustment and local monitor output for added versatility. Applications include; Digital signage, residential, boardroom, classroom, medical imaging video systems.



### Key Features

- Up to 600 ft (180m) via Cat5e/6 @ 1920 x 1440
- Up to 600 ft (180m) via Cat5e/6 @ 1080p
- Remote power pass-thru up to 150 ft (46m)
- DDC1/DDC2 (Plug-and-Play) Compliant
- Manual gain compensation
- Local monitor output
- Ground loop isolation

| Specifications   |  |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
|--|--|---------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|---------------------------------|----------------------------------|------------------------------------|-----------|--|-----------|---|
| <b>Environment</b>   | VGA. VESA VP&D 1.0, VIP ver 2.0. DDC1 and DDC1.  |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>Devices</b>   | PCs, laptops, monitors, LCD monitors, plasma screens, DLP projectors.  |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>Transmission</b>  | Transparent to the user.   |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>Bandwidth</b>   | Up to 220 MHz (1920 x 1200 resolution), 1080p  |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>Input Impedance</b>   | HD15; 75 ohms  |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>Output Impedance -</b>  | Cat5: 100 ohms   |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>Connectors – Transmitter</b>  | VGA/Component Input (PC): DB15HD-F<br>VGA/Component Output (Local Monitor): DB15HD-F<br>VGA/Component Output (Cat5E): RJ45 shielded  |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>Connectors – Receiver</b>   | VGA/Component Input (Cat5E): RJ45 shielded<br>VGA/Component Output (Display): DB15HD-M   |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>Maximum Distance – Remote Power</b>   | 150 ft (46m) (Tx Balun unpowered, Rx balun powered)<br>150 ft (46m) (Tx Balun powered, Rx balun unpowered)   |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>Max. Distance for VGA via Cat 5E/6</b><br><i>Up to three (3) transmitters may be cascaded. Loss of 100 ft (30m) for every Tx cascaded @ 1024x768.</i> | <table border="0"> <tr> <td>640 x 480 (VGA): 1000 ft (305m)</td> <td>1600 x 1200 (UXGA):800 ft (245m)</td> </tr> <tr> <td>800 x 600 (SVGA): 1000 ft (305m)</td> <td>1366 x 768 (WXGA):850 ft (260m)*</td> </tr> <tr> <td>1024 x 768 (XGA): 1000 ft (305m)</td> <td>1680x1050 (WSXGA):850 ft (260m)</td> </tr> <tr> <td>1280 x 1024 (SXGA):850 ft (260m)</td> <td>1920 x1200 (WUXGA):600 ft (180m)**</td> </tr> <tr> <td></td> <td>*Cat6:Skew is noticeable at 300' (90m)</td> </tr> <tr> <td></td> <td>**Cat6:Skew is noticeable at 200' (60m)</td> </tr> </table> | 640 x 480 (VGA): 1000 ft (305m) | 1600 x 1200 (UXGA):800 ft (245m) | 800 x 600 (SVGA): 1000 ft (305m) | 1366 x 768 (WXGA):850 ft (260m)* | 1024 x 768 (XGA): 1000 ft (305m) | 1680x1050 (WSXGA):850 ft (260m) | 1280 x 1024 (SXGA):850 ft (260m) | 1920 x1200 (WUXGA):600 ft (180m)** |           | *Cat6:Skew is noticeable at 300' (90m) |           | **Cat6:Skew is noticeable at 200' (60m) |
| 640 x 480 (VGA): 1000 ft (305m)  | 1600 x 1200 (UXGA):800 ft (245m)   |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| 800 x 600 (SVGA): 1000 ft (305m)   | 1366 x 768 (WXGA):850 ft (260m)*   |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| 1024 x 768 (XGA): 1000 ft (305m)   | 1680x1050 (WSXGA):850 ft (260m)  |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| 1280 x 1024 (SXGA):850 ft (260m)   | 1920 x1200 (WUXGA):600 ft (180m)**   |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
|  | *Cat6:Skew is noticeable at 300' (90m)   |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
|  | **Cat6:Skew is noticeable at 200' (60m)  |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>Max Distance for Component Video (YPbPr) via Cat 5E/6</b><br><i>Up to four (4) transmitters may be cascaded</i>                                       | 480i/p: 1,000 ft (305 m)    1080i: 850 ft (260 m)<br>1080p: 600 ft (180 m)<br><br>* VGA-to-component video cables required at both ends (not included)   |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>RJ45 Pin Configuration</b><br><b>Reverse Polarity Sensitive</b><br><b>Use EIA/TIA 568 A or B, straight-through wiring</b>                             | <table border="0"> <tr> <td>Red:</td> <td>Pin 7 (R)</td> <td>Pin 8 (T)</td> </tr> <tr> <td>Green:</td> <td>Pin 3 (R)</td> <td>Pin 6 (T)</td> </tr> <tr> <td>Blue:</td> <td>Pin 1 (R)</td> <td>Pin 2 (T)</td> </tr> <tr> <td>DDC/Remote Power:</td> <td>Pin 4 (R)</td> <td>Pin 5 (T)</td> </tr> </table>  | Red:                            | Pin 7 (R)                        | Pin 8 (T)                        | Green:                           | Pin 3 (R)                        | Pin 6 (T)                       | Blue:                            | Pin 1 (R)                          | Pin 2 (T) | DDC/Remote Power:                      | Pin 4 (R) | Pin 5 (T)                               |
| Red:   | Pin 7 (R)  | Pin 8 (T)                       |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| Green:   | Pin 3 (R)  | Pin 6 (T)                       |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| Blue:  | Pin 1 (R)  | Pin 2 (T)                       |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| DDC/Remote Power:  | Pin 4 (R)  | Pin 5 (T)                       |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>Gain Adjustment</b>   | Gain control via brightness and sharpness potentiometers (Rev B)   |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>LED Indicators</b>  | Tx Balun: Power: One (1) green LED    Sync: One (1) green LED<br>Rx Balun: Power: One (1) green LED  |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>Cable</b>   | Category 5 or better twisted pair cable.<br>Transmitter requires additional VGA jumper cables (not included)   |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>Ground Loop Isolation</b>   | Up to -2VDC to +3VDC between PC and display ground.  |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>Power Supplies</b>  | Includes two (2) 110-240V/12VDC/0.5 power supplies with removable AC blades for North America and Continental Europe. 12VDC power jacks.   |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>Temperature</b>   | Operating: 0° to 40° C.    Storage:-10° to 70° C.<br>Humidity: up to 95% non-condensing.   |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>Enclosure</b>   | Black. ABS fire retardant plastic  |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>Dimensions</b>  | Tx: 4.5" x 3.0" x 1.25" (11.4 cm x 7.6 cm x 3.2cm)<br>Rx: 2.4" x 2.25" x 1.0" (6.1 x 5.5 x 2.5 cm) plus 6" cable lead  |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>Weight</b>  | 2 lbs, 0.9 Kg  |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>Regulatory</b>  | FCC/CE, RoHS   |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>Warranty</b>  | Two (2) years  |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |
| <b>Order Information</b>   | 500140: Active VGA Balun II Kit (Rev C)<br>500141: Active VGA Balun II, Transmitter (Source), No PSU<br>500142: Active VGA Balun II, Receiver (Display), No PSU (Rev C)<br>500144: Power Supply 100-240V/12VDC/.5A for 500141 or 500142  |                                 |                                  |                                  |                                  |                                  |                                 |                                  |                                    |           |  |           |   |

Typical Applications

