

## **TP1E-0 VIDEO DISTRIBUTION AMPLIFIER** **DATASHEET**

**Extends VGA video signals up to 100m along Cat. 5 TP cable to drive VGA monitors**

Boxed units joined by Cat. 5 UTP / FTP cable with RJ45 ends wired to EIA568B

**C.A. Designs** twisted-pair video distribution amplifier products comprise a collection of modules capable of high quality picture and data transmission over category 5 (4-pair) UTP or FTP cables. This typically allows the transport of PC video signals using twisted-pair cables throughout office complexes (wired with structured cable systems) to remote monitor screens.

Each video link has a line-driving module and line-receiving module. Available versions cover different distances, number of outputs, signal formats, power supply, enclosures, etc.

The **TP1E-0** is a line driving module which transform the video signal into a form matched to Cat.5 UTP or FTP cable.

It accepts inputs of VGA type monitor signals from which a proprietry video output is constructed, modified by gating and time delays then amplified to differentially drive a balanced transmission line.

Cable length compensation may be made at the receiving end for up to 100 metres (using **TP1V-100**).

It is housed in a small, flame retardant, plastic case, and takes power from an external regulated 12V power supply (**MP7**) or from a PC keyboard port using an adaptor.

Line receiving modules are required at the display end of the Cat.5/6 extension cable to reconstruct the video signal from the transmission line into a compatible output signal for an appropriate monitor.

The **TP1V-100** receiver is used to output VGA type monitor signals with switchable TTL sync polarity (some monitors sense this to set picture size)

Balanced differential input amplifiers reduce unwanted common-mode interference and compensate for cable losses (adjustable from 0 to 100 metres) improving picture sharpness.

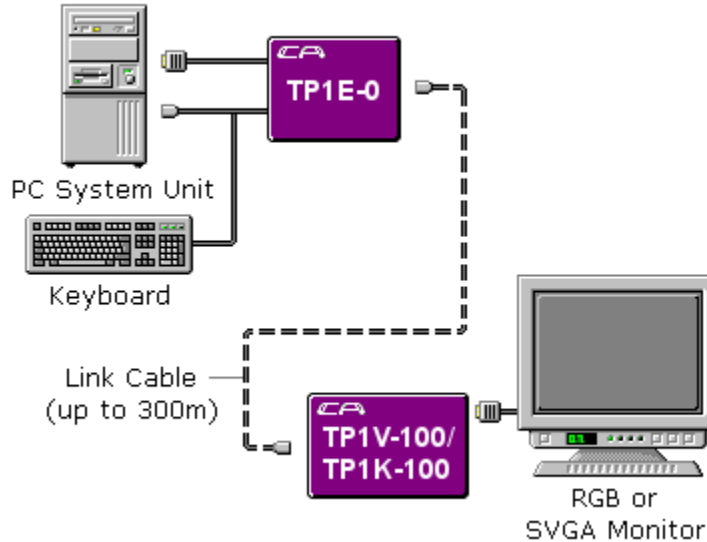
These line-receiving units take their power from the twisted-pair line and require no external power supply. The twisted-pair cable used must be category 5 (or cat.5e) grade cable.

If it is necessary to use cat.6 or 7 cable then it may be necessary to use a line receiver with SKEW compensation **TP1K-100** – particularly at high resolutions or long distances.

Foil screening is recommended for optimum EMC.

Excellent picture quality is obtainable with resolutions up to 1280x1024 (non-interlaced), depending on cable length and quality.

## Typical Configuration



## Specifications

<b>General:</b>		
<b>Video Bandwidth</b>		<ul style="list-style-type: none"> <li>&gt; 100Mhz</li> </ul>
<b>Input Signals:</b>		
<b>TP1B-0</b>		<ul style="list-style-type: none"> <li>Analogue RGB (256) levels</li> <li>0.7v positive, 75 ohm termination</li> <li>Separate TTL horizontal and vertical syncs (+ or -)</li> <li>15 pin High Density D plug on flying lead</li> </ul>
<b>Output Signals:</b>		
<b>TP1B-0</b>		<ul style="list-style-type: none"> <li>3 analogue channels (red, green and blue)</li> <li>0.7v positive, 100 ohm termination</li> <li>0.3v negative composite Sync mixed on green</li> <li>RJ45 connector (shielded)</li> </ul>
<b>Power:</b>		
<b>TP1B-0</b>	either or	<ul style="list-style-type: none"> <li>12v @ 0.2A max. (supplied from <b>MP7</b> psu)</li> <li>5v@ 0.4A max. (supplied from PC)</li> </ul>
<b>Mechanical:</b>		
<b>TP1B-0</b>		<ul style="list-style-type: none"> <li>Beige ABS plastic box, flame retardant to UL94-V0</li> <li>30mm high x 130mm wide x 100mm deep</li> </ul>
<b>INTERCONNECTING CABLE:</b>		
<b>Description</b>		<ul style="list-style-type: none"> <li>4-pair twisted pair EIA568B Category 5/5e (UTP or FTP)</li> <li>Pairing: 1/2 3/6 4/5 7/8 EIA568B or AT&amp;T 258A</li> </ul>