

TP1V-100 DATASHEET

The **C.A. Designs** VGA / SVGA / XGA twisted-pair video receiver **TP1V-100** is part of a line interface for the transport of video signals, throughout buildings wired with Cat.5 cable systems, to remote monitor screens.

A line driving module (**TP1E** or similar) transforms the video signal from a PC graphics adapter into differential form, suitably matched to level 5 UTP or FTP cable.

The line receiving module **TP1V-100** reconstructs a video output (with switchable sync pulse parameters) suitable for VGA input monitors.

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

Power is normally supplied from the driving end via the twisted-pair line, however if it is preferred not to run power through the Cat.5 cable, a local +12v external PSU may be used.

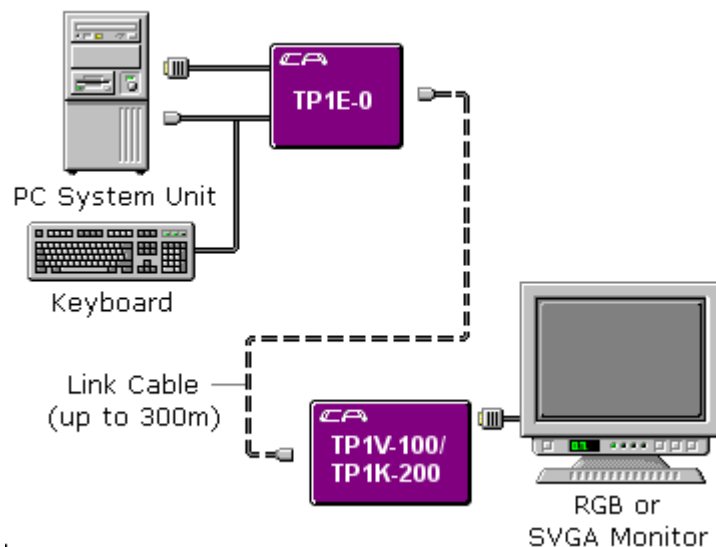
The twisted-pair cable used must be category 5 grade or better (depending on length and acceptable quality). Foil-screened cable is recommended for optimum EMC.

Excellent picture quality with resolutions up to 1280x1024 (non-interlaced) at short lengths, 1024x768 at lengths up to 200 metres, using level 5 twisted-pair cable is obtainable from:

- **TP1E-0** with a **TP1V-100** up to 100 metres
- **TP1E-0** with a **TP1K-200** up to 200 metres

Modules for driving multiple lines are available, e.g. **TP3B-0**

Typical Configuration



Specification

INPUT:

Video	<ul style="list-style-type: none"> • Composite analogue • Differential balanced 1V (from TP1E) • 100 ohm termination
Connector	<ul style="list-style-type: none"> • RJ45 (8-way shielded socket) • Optional +12v regulated dc power via 2.1mm coaxial

OUTPUT:

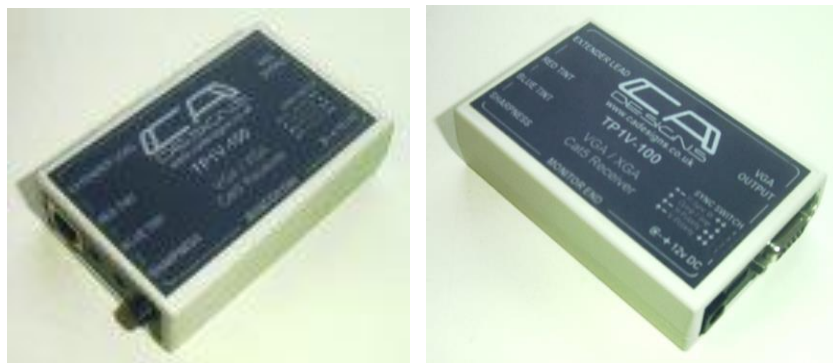
VGA Video Bandwidth	<ul style="list-style-type: none"> • > 70Mhz
Video Amplitude	<ul style="list-style-type: none"> • 0.7v fixed into 75 ohms
VGA Sync	<ul style="list-style-type: none"> • TTL level • Polarity switchable • Separate / Composite switchable • Horizontal sync pulse width switchable - 0.6uS / 2.5uS • Vertical sync pulse width - 120uS
Connector	<ul style="list-style-type: none"> • 15-way high density 'D' socket

MECHANICAL:

Description	<ul style="list-style-type: none"> • Beige plastic box, flame retardant to UL94-V0 • 29mm high x 60mm wide x 96mm deep
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INTERCONNECTING CABLE:

Description	<ul style="list-style-type: none"> • 4-pair twisted pair EIA 568 Category 5 (UTP or FTP) • Pairing: 1/2 3/6 4/5 7/8 • EIA 568 or AT&T 258A
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Sync Switch Configuration:

	Switch up	Switch down
H Sync Width	0.6uS	2.5uS
Output mode	Separate	Composite
H Polarity	Negative	Positive
V Polarity	Negative	Positive