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Disclaimer

While every precaution has been taken in the preparation of this manual, the manufacturer assumes no responsibility for errors or omissions. Neither does the manufacturer assume any liability for damages resulting from the use of the information contained herein. The manufacturer reserves the right to change the specifications, functions, or circuitry of the product without notice.

The manufacturer cannot accept liability for damage due to misuse of the product or due to any other circumstances outside the manufacturer’s control (whether environmental or installation related). The manufacturer shall not be responsible for any loss, damage, or injury arising directly, indirectly, or consequently from the use of this product.

Cautions and Notes

The following symbols are used in this guide:

**CAUTION.** This indicates an important operating instruction that should be followed to avoid any potential damage to hardware or property, loss of data, or personal injury.

**NOTE.** This indicates important information to help you make the best use of this product.

Safety Precautions and Installation Guidelines

To ensure reliable and safe long-term operation, please note the following installation guidelines:

- Only use in dry, indoor environments.
- Do not obstruct a unit’s ventilation existing holes.
- Do not place a power supply directly on top of a unit.

To safeguard against personal injury and avoid possible damage to equipment or property, please observe the following:

- Only use power supplies originally supplied with the product or manufacturer-approved replacements. Do not attempt to dismantle or repair any power supply. Do not use a power supply if it appears to be defective or has a damaged case.
- Connect all power supplies to grounded outlets. In each case, ensure that the ground connection is maintained from the outlet socket through to the power supply's AC power input.
- Do not attempt to modify or repair this product.

**EUROPEAN UNION DECLARATION OF CONFORMITY**

This is to certify that, when installed and used according to the instructions in this manual, together with the specified cables and the maximum cable length <3m, the Units: AC1038A are shielded against the generation of radio interferences in accordance with the application of Council Directive 89/336/EEC as well as these standards:

- EN 55022: 1999 Class A
- EN 55024: 1999
- IEC 61000-4-2: 2001
- IEC 61000-4-3: 2001
- IEC 61000-4-4: 2001
- EN 61000-3-2
- EN 61000-3-3

The device was tested in a typical configuration with PC.

Contacting Black Box Technical Support

<table>
<thead>
<tr>
<th>Country</th>
<th>Web Site/E-Mail</th>
<th>Phone</th>
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</tbody>
</table>

Shipping and Packaging

If you need to transport or ship your DVI2VGA Converter:

- Package it carefully. We recommend that you use the original container.
- If you are returning it, please include everything you received with it. Before you ship the Converter back to your dealer for repair or return, contact him to get a Return Authorization (RA) number.

http://www.blackbox.com

Black Box Network Services - The world’s largest network services company
We are, with 25 years of experience, the world leader in network infrastructure services.
1 Introduction
This DVI to VGA Converter is mainly designed to connect DVI-KVM Extenders local outputs to traditional VGA KVM-Switches. Additionally, they may be used to convert DVI signals of a graphic card, to be displayed on a VGA monitor – especially on older, expensive beamers etc. Depending on a strange behavior of some display drivers, it cannot be guaranteed, that it will work (on first attempt, without modifications) on each graphic card. For further information on this, please contact ‘Technical Support’.

2 Quick Setup
This section briefly describes how to install your DVI to VGA Converter. Unless you are an experienced user, we recommend that you follow the full procedures described in the rest of this manual.

3 Installation
For first-time users, we recommend that you carry out a test placement, confined to a single room, before commencing full installation. This will allow you to identify and solve any cabling problems, and experiment with the DVI to VGA Converter more conveniently.

3.1 Package Contents
You should receive the following items in your converter package:
- DVI-D to VGA Converter unit
- 1x 5V DC universal power supply for the DVI-D to VGA Converter
- This manual
- CPU cable (1.8m) DVI-D video (DVI-D single link male) connector – DVI-D video (DVI-D single link male) connector

3.2 System Setup
To install your DVI to VGA Converter:
1. Switch off all devices.
2. Connect the monitor to the Converter unit
3. Using the supplied CPU cable, connect the converter to your DVI-D graphic source.
4. Connect the 5V power supply to power the unit.

Only use the power supply originally supplied with this equipment or a manufacturer-approved replacement.

5. Power up the system.

3.3 Interconnection Cable Requirements
To connect the Converter unit you will need:
- DVI-D: Please ensure, that you use high quality DVI-D cables, to attach the system to your CPU. The length of the cable should not expire 1.8m (6ft). The device should also work with longer cables however this can never be guaranteed. To our experiences, lengths above of 5m normally fail.
- VGA: Please ensure, that you use high quality VGA cables, to attach the monitor to your Converter. The length of the cable should not expire 1.8m (6ft). The device should also work with longer cables however this can never be guaranteed. To our experiences, lengths above of 20m normally fail.

4 Device view

5 Supported Resolutions
The Converter can handle all known DVI resolutions up to 1920x1080. Nevertheless, there is only a selection of most common resolutions stored in the DDC (EDID) table. If the converter does not show any picture on the VGA output, it may depend on a missing resolution in the table or a malformed programmed driver, which is not able to use any other than the preferred resolution. In this case, please contact Technical Support, to program a user defined DDC-table.

Detailed Timings:
1.) (preferred) 1024x768 at 60Hz
   fh = 48kHz, fd = 65MHz
   2.) 1600x1200 at 60Hz
   fh = 75kHz, fd = 162MHz

Standard timings supported:
640x480/60Hz
640x480/72Hz
720x400/70Hz
800x600/56Hz
800x600/72Hz
832x624/75Hz
1024x768/60Hz
1024x768/75Hz
1152x870/75Hz
1280x720/50Hz
1280x1024/60Hz
1360x768/60Hz
1600x900/60Hz
1680x1050/60Hz
1280x960/60Hz
1280x1024/75Hz
1400x1050/60Hz
1600x1200/60Hz
1920x1080/60Hz

Timing characteristics:
VESA GTF support: Not supported
Horizontal scan range: 22-95kHz
Vertical scan range: 46-80kHz
Video bandwidth: 170MHz

6 Troubleshooting
There isn’t a picture.
- Check the power supply.
- Your DVI Source provides a 1920x1200 resolution. VGA cannot display the 1920x1200 resolution, because this has a timing with no black shoulders. VGA monitors cannot detect the synchronization signals, if there is no black shoulder.

The DVI2VGA Converter has a built-in, virtual ‘Digital DDC’ to show the graphic source, that a DVI monitor is attached. As there is no possibility, to translate ‘analogue DDC’ from the attached VGA monitor, this virtual DDC simulates the presence of a DVI monitor.

Some mal programmed drivers have strange reactions to this DDC information: Some do only display the preferred (native) resolution. Others do, if you have 1600x1200 for preferred resolution, not display 1920x1080 because 1920 is bigger than 1600. On the other hand, if you have 1920x1080 for maximum resolution, it will not display 1600x1200 because 1200 is bigger than 1080.

Under some circumstances, it is helpful, to deselect ‘Hide modes that this monitor cannot display’ in … ‘Graphic Properties’ – ‘Settings’ – ‘Advanced’ – ‘Monitor…'