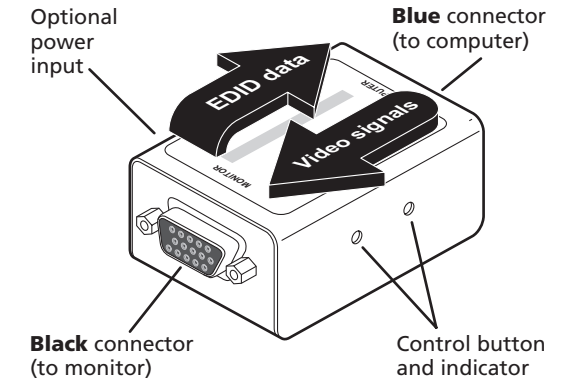## Safety information

- For use in dry, oil free indoor environments only.
- Not suitable for use in hazardous or explosive environments or next to highly flammable materials.
- Warning – the optional power adapter contains live parts.
- No user serviceable parts are contained within the module or the power adapter - do not dismantle.
- Do not use the power adapter if the power adapter case becomes damaged, cracked or broken or if you suspect that it is not operating properly.
- Replace the power adapter with a manufacturer approved type only.
- If you use a power extension cable with the optional power adapter, make sure the total ampere rating of the devices plugged into the extension cable do not exceed the cable's ampere rating. Also, make sure that the total ampere rating of all the devices plugged into the wall outlet does not exceed the wall outlet's ampere rating.
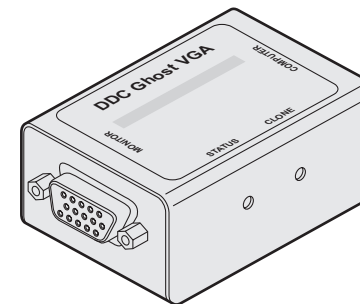
DDC Ghost

The DDC Ghost module is designed to attach in-line with a VGA connection in order to present Extended Display Identification Data (EDID) to the video controller independently of the actual monitor, switch or extender unit. Video signals are passed straight through the DDC Ghost.

The Extended Display Identification Data (EDID) information stored within the DDC Ghost can either be cloned from a monitor or used with a standard set of information (see Standard EDID Information).

Optional power input

Blue connector (to computer)

EDID data

Video signals

Black connector (to monitor)

Control button and indicator

What's in the box

DDC Ghost module

What you may additionally need

Mains to 5VDC power adapter
(if power cannot be obtained from the controlling computer via the video cable)

Video cable (15 pin D-type male to 15 pin D-type male)

Cloning EDID information

The DDC Ghost module contains a default set of EDID values which may be used immediately with most monitors (see Standard EDID Information). Alternatively, you can use a 'donor' monitor from which you can clone new EDID information.
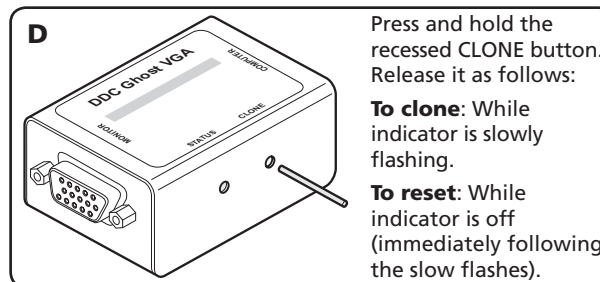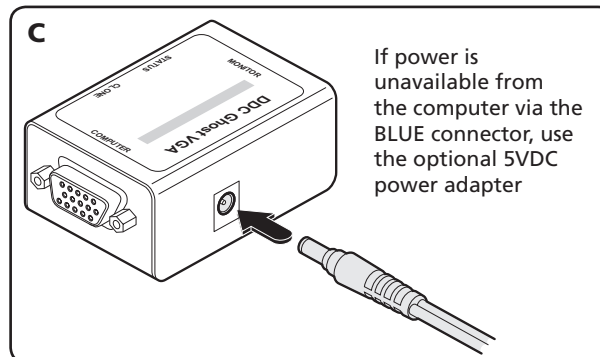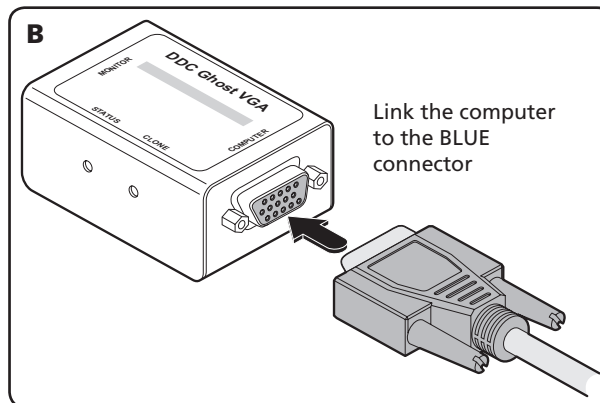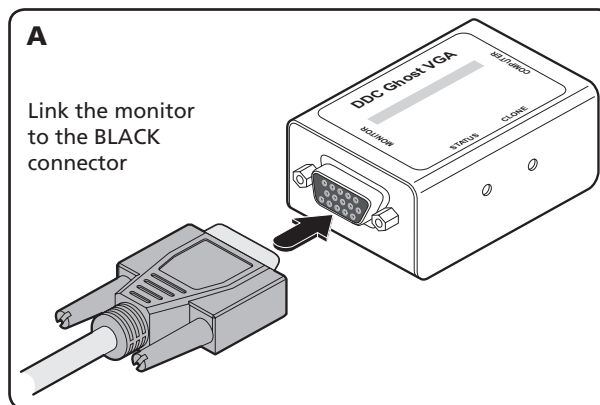
To clone EDID information

1 Link the BLACK connector of the DDC Ghost to the donor monitor (diagram A).

2 Provide power for the DDC Ghost module in one of two ways, either:

   • Link the BLUE connector of the DDC Ghost to a computer video output for the duration of the cloning operation (diagram B), or

   • Attach the optional 5VDC power adapter to the socket on the side of the DDC Ghost module (diagram C).

3 Ensure that the donor monitor and the DDC Ghost module are powered. The DDC Ghost red STATUS indicator should be on.

4 Using a narrow implement, press and hold the recessed button labelled CLONE on the side of the module (diagram D). The STATUS indicator will begin to flash slowly for five seconds. Release the button while the indicator is still slowly flashing.

   • If new EDID information is available, it will be copied to the DDC Ghost module memory.

   • If there is no EDID information to clone then the existing DDC Ghost memory will be not altered.

   • If there is an error during cloning then the DDC Ghost will be automatically reset to its standard values.

5 When the operation is complete, the STATUS indicator will flash rapidly five times. Disconnect the DDC Ghost module from the donor monitor.

Resetting EDID information

If required, you can reinstate the standard EDID values (see Standard EDID Information) into the DDC Ghost module memory.

To reset the EDID information

1 Ensure that the DDC Ghost is powered (either from the video output of a host computer or an optional power adapter) and check that the red STATUS indicator is on.

2 Using a narrow implement, press and hold the recessed button labelled CLONE on the side of the module (diagram D). The red STATUS indicator will flash slowly for five seconds and then will go off for a further five seconds.

3 Release the button while the red STATUS indicator is off, following the five slow flashes. The reset operation will take place and then the red STATUS indicator will flash rapidly five times to indicate a successful completion.

A

Link the monitor to the BLACK connector

B

Link the computer to the BLUE connector

C

If power is unavailable from the computer via the BLUE connector, use the optional 5VDC power adapter

D

Press and hold the recessed CLONE button. Release it as follows:

To clone: While indicator is slowly flashing.

To reset: While indicator is off (immediately following the slow flashes).

Installing for normal operation

During normal operation, the DDC Ghost module supplies either standardized or cloned EDID information to the computer instead of the data from the connected monitor.

To install for normal operation

1 Link the BLACK connector of the DDC Ghost to the monitor (diagram A).

2 Link the BLUE connector of the DDC Ghost to the computer video output (diagram B)

   Note: In operation, the red STATUS indicator should be on. If it is not then power is not being correctly supplied from the computer (pin 9 of the VGA connector). If this situation cannot be resolved, attach the optional 5VDC power adapter to the socket on the side of the DDC Ghost module (diagram C).

3 Switch on the computer and monitor in the normal manner.

Standard EDID information

The standard EDID information supplied within the DDC Ghost module represents a standard analogue monitor (with no manufacturer details) capable of resolutions up to 1600x1200@60Hz. Other presented information is as follows:

Manufacturer details

ID Manufacturer Name:	NON
Product ID Code:	0000
Last 5 Digits of Serial Number:	00000
Week of Manufacture:	00
Year of Manufacture:	1990
Complete Serial Number:	0000000000

Video input definition

Analog Signal: 0.700, 0.300 (1.000 Vp-p) Separate Syncs

Established timing I

720 X 400 @ 70Hz (IBM,VGA)
640 X 480 @ 60Hz (IBM,VGA)
640 X 480 @ 75Hz (VESA)
800 X 600 @ 60Hz (VESA)

Established timing II

800 X 600 @ 75Hz (VESA)
1024 X 768 @ 60Hz (VESA)
1024 X 768 @ 75Hz (VESA)
1280 X 1024 @ 75Hz (VESA)

Standard timing identification

1280 X 1024 @60Hz
1600 X 1200 @60Hz
1152 X 864 @75Hz

Note: The DDC Ghost module has the capacity to store one standard EDID data block plus one extension block.