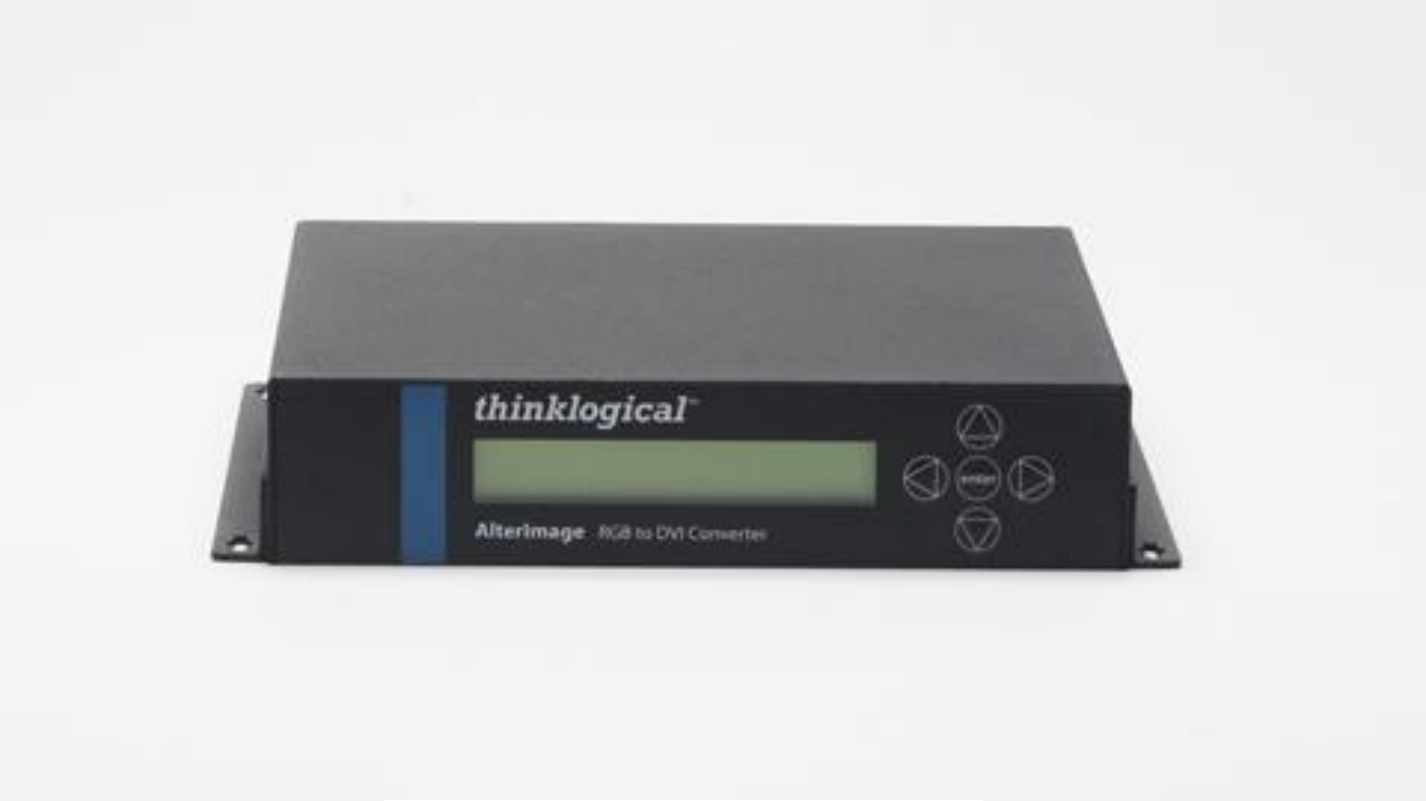
AlterImage

RGB to DVI Converter

Product Manual



thinklogical™
The Future of Access and Control

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1. Introduction

1.1. Contents

When you receive your Thinklogical AlterImage Converter , you should find the following items:

- AlterImage RGB to DVI Converter
  - Converter Version – AIC-000001
- AC Power Supply – PWR-000022-R
- DVI-D Male to Male Cable, 2 meters – CBL000009-002MR (Quantity 2)
- HD15 Male to Male Cable, 2 meters – CBL000020-002MR (Quantity 1)
- AlterImage Product Manual – MAN-000019

1.2. Overview

The Thinklogical™ AlterImage Converter (AIC-1) is designed to take advantage of advanced displays with the DVI-D interface using an existing RGB source. Industry standard RGB video formats up to 108MHz are flawlessly converted to DVI and transported over multi-mode fiber.

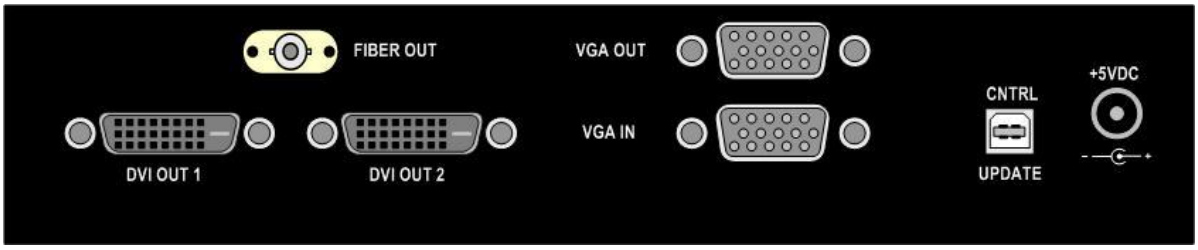


FIGURE 1: *Rear View of AlterImage Converter.*

All models listed are available from Thinklogical:

AIC-000001 **AlterImage RGB to DVI Converter**

2. System Features

2.1. General System Features

Each system consists of a single unit capable of converting VGA (analog video signals) into compatible DVI (digital video signals). Each unit has the ability to drive two independent DVI outputs. The unit has a VGA loop-thru to connect a VGA monitor. The unit also can be ordered with a **fiber output option** to transport the converted signals up to 1000 meters (3280 feet).

The **AIC-1 (AlterImage Converter)** converts an RGB source into two DVI-D signals.

Each AlterImage includes the following features:

- Converts VGA to DVI
- Built in 2 port DVI Video Distribution Amplifier (DVI Splitter)
- Loop through VGA port
- DDC EEPROM with VESA standard formats
- Front panel video timing and phase adjustment capability
- Fully compatible with all Thinklogical™ DCS Matrix Switches and VIS or EVS Series Fiber Optic Receivers

2.2. Technical Specifications

Video Resolution	RGB 1280 x 1024 @ 60Hz
Supply Voltage	+5.0 V DC
DC Adapter	AC/DC adapter universal input 90-264 VAC (supplied)
Power Consumption	8 Watts
Operating Temperature and Humidity	0 to 50 °C (32 to 122 °F); 5 to 95% RH, non-condensing
Storage Temperature	-20 to 70°C (-4 to 158°F), 10 to 90% RH, non-condensing
Front Panel Display	2 x 24 Liquid Crystal Display
Panel Connectors	**AlterImage Converter Version** Video – RGB HD15 (2) Video – DVI DVI-D (2) Software Updates USB B (1) Power 2.5mm threaded connector

	Refer to Section 3.1.1 for more details on the Rear Panel
Enclosure Dimensions	Approx. 7.8 in x 7.9 in x 1.75 in (19.8 cm x 20.1 cm x 4.45 cm) Tolerance: ± .039 in; .100 cm
Copper Cables	(2) DVI-D Male to Male Cable, 2 meters Thinklogical Part Number: CBL000009-002MR (1) HD15 Male to Male Cable, 2 meters Thinklogical Part Number: CBL000020-002MR
Weight	2 lbs (0.91 kg)
Shipping Weight	9 lbs (4.09 kg)
Warranty	12 months from date of shipment Extended warranties available

2.3. Product Overview

2.3.1. Setting Up the AlterImage

The AlterImage unit is a desktop device, therefore, rubber feet are provided. When setting up on your desktop or shelf, the front panel display should be visible and front panel buttons need only to be accessible if initial setup of the system is required. All connections are made to the rear of the chassis. The AlterImage chassis does not need to be opened or accessed. The sturdy metal case allows units to be stacked, as required.

2.3.1.1. Rack Mount

You may choose to rack mount your AlterImage unit. The rack mounted brackets are not supplied with the system. Please contact a Thinklogical sales representative for ordering information.

With rack mount brackets, the AlterImage may be installed in an EIA-standard 19 inch rack (1U tall).

2.3.2. Front Panel Display and Buttons

The front-panel LCD display should be visible and accessible for system setup. The front panel buttons are used to configure special video settings and to review existing AlterImage Converter configurations. More detailed information on the Front Panel can be found in ***Section 3.1 Front Panel View***.

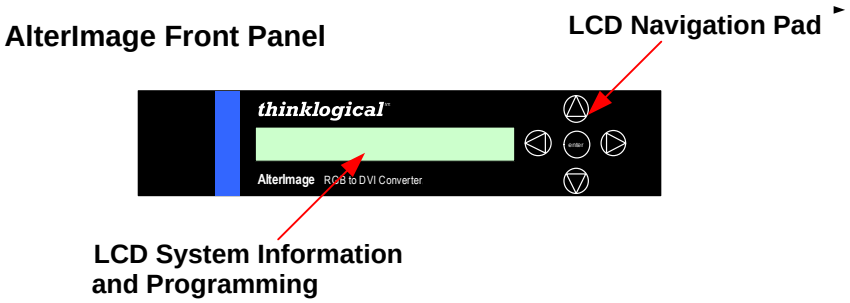


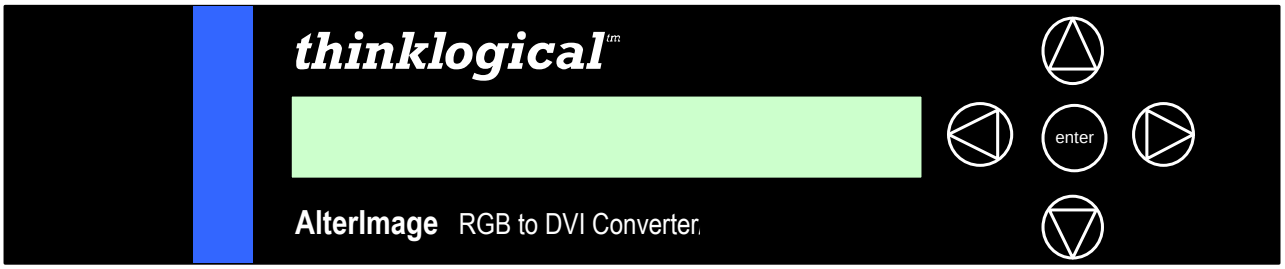
FIGURE 2: *AlterImage Converter Front Panel LCD Display*

3. Connecting the AlterImage Converter

All physical connections to the product use industry-standard connectors. All connections are found on the rear of the unit.

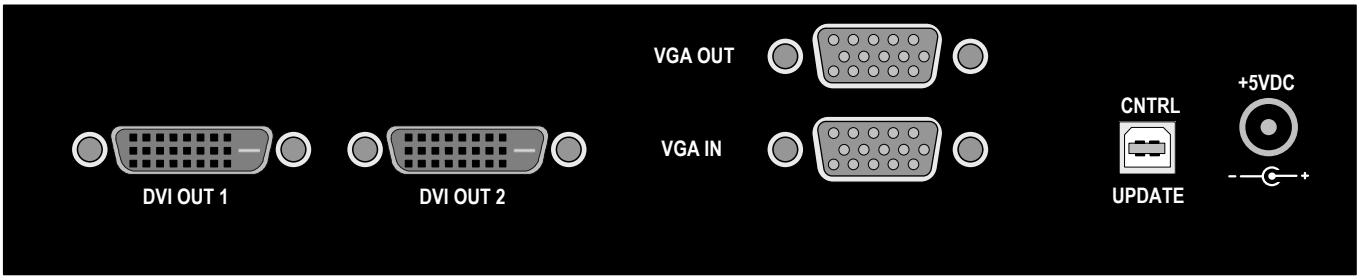
3.1. Front Panel View

3.1.1. Converter Version – AIC-000001



3.2. Rear Panel View

3.2.1. Converter Version – AIC-000001



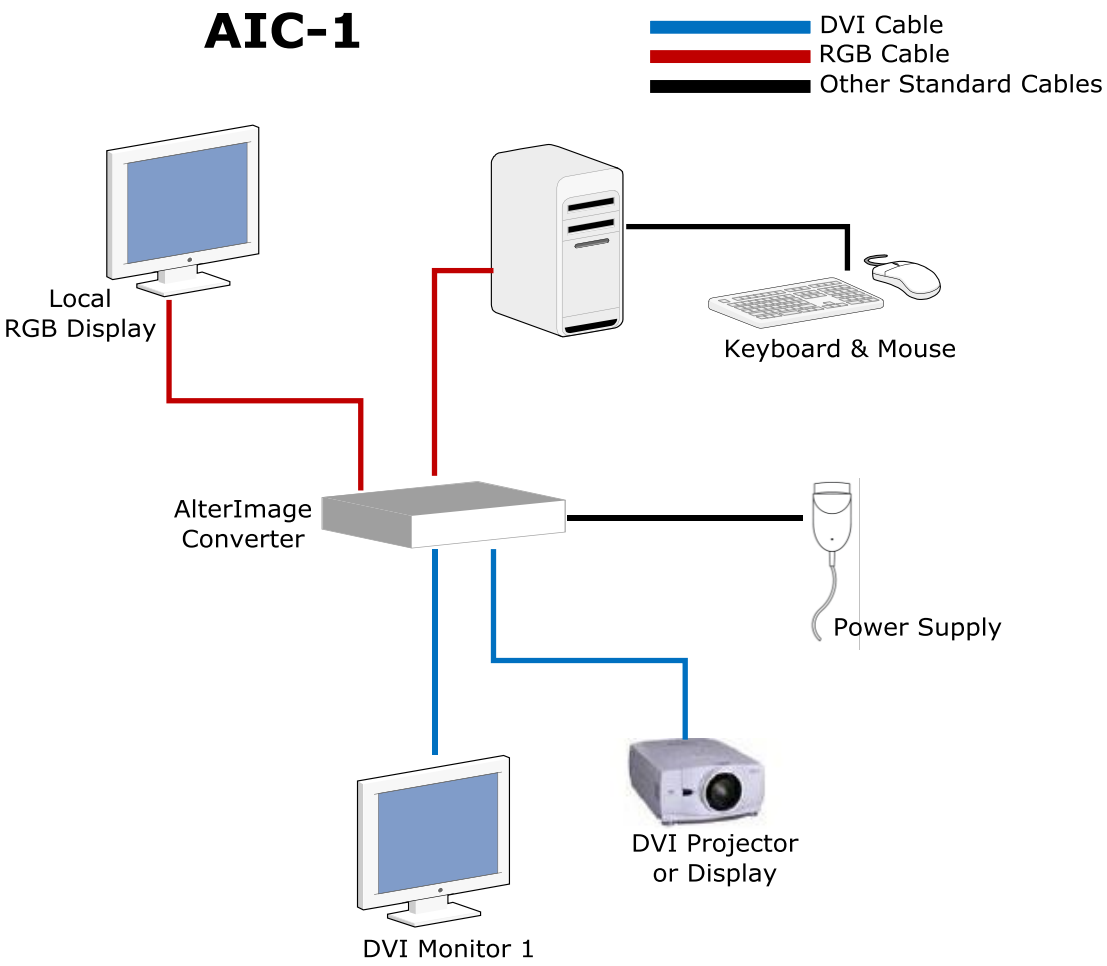
3.3. Cables

3.3.1. DVI-D Male to Male Cable, 2 meters – Qty 2

3.3.2. HD15 Male to Male Cable, 2 meters – Qty 1

4. Installation

4.1. Converter Version AIC-000001



The AlterImage converts VGA (analog video signals) into compatible DVI (digital video signals).

1. Plug the supplied HD15 cable (CBL000002-002MR) from the RGB CPU to the **VGA IN** (HD15) connector. Plug keyboard and mouse cables into the CPU at this time. Turn **ON** the CPU.

   NOTE: Do not hot plug the keyboard and mouse PS2 cables.

2. Plug the RGB Monitor into the **VGA OUT** (HD15) connector. Turn **ON** the monitor.

3. Plug the supplied DVI-D cable (CBL000009-002MR) from the DVI display to the **DVI OUT 1** (DVI) connector. Turn **ON** the monitor.

4. Plug the supplied DVI-D cable (CBL000009-002MR) from the DVI display to the **DVI OUT 2** (DVI) connector. Turn **ON** the device.

5. Connect the power supply (PWR-000022-R) to the Converter and connect the power plug into a suitable power source.

Your AlterImage Converter is now properly connected.

5. Regulatory and Safety

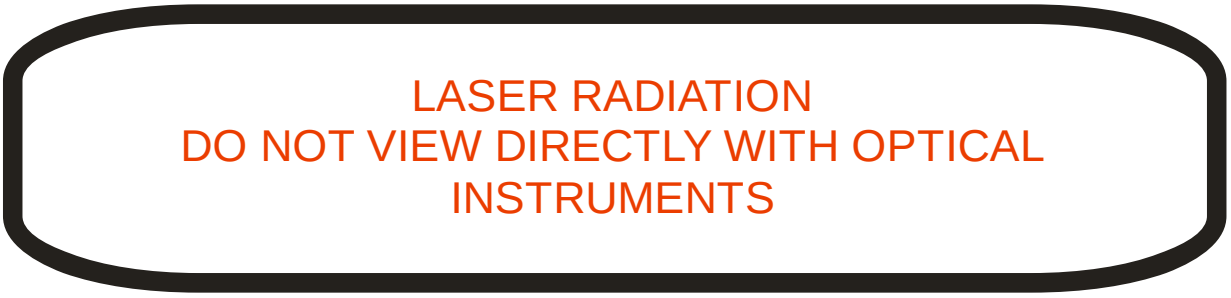
Testing is pending at this time.

5.1. Safety Requirements

5.1.1. Symbols Found on Product

Markings and labels on the product follow industry-standard conventions. Regulatory markings found on the products comply with requirements.

5.1.1.1. Class 1 Laser Labeling



5.2. Regulatory Compliance

The Thinklogical Inc. ALTERIMAGE products are designed and made in the USA. The ALTERIMAGE products have been tested by a nationally recognized testing laboratory and found to be compliant with the following standards (both domestic USA and many international locations).

5.2.1. North America

These products comply with the following standards:

Safety

- UL60950:2000
- CAN/CSA C22.2 No. 60950-00

Laser Safety

- CDRH 21 CFR 1040.10
- Class 1 laser Product
- Accession Number TBD

Electromagnetic Interference

- FCC CFR47, Part 15, Class A
- Industry Canada ICES-003 Issue 2, Revision 1

5.2.2. Australia & New Zealand

This is a Class A product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

5.2.3. European Union

5.2.3.1. Declaration of Conformity

Manufacturers name and address:

Thinklogical, a subsidary of Logical Solutions Inc.
100 Washington Street
Milford, CT 06460 USA
Telephone (203)647-8700

Product name

- Model: ALTERIMAGE Video Extension System

These products comply with the requirements of the Low Voltage Directive 72/23/EEC and the EMC Directive 89/336/EEC.

5.2.4. Standards with which the Products Comply

Safety

- IEC60950:1992 +A1,A2,A3,A4,A11

Laser Safety

- IEC60825:2001 Parts 1 and 2
- Class 1 laser Product

Electromagnetic Emissions

- EN55022: 1994 (IEC/CSPIR22:1993)
- EN61000-3-2/A14:2000
- EN61000-3-3:1994

Electromagnetic Immunity

- EN55024:1998 Information Technology Equipment-Immunity Characteristics
- EN61000-4-2:1995 Electro-Static Discharge Test
- EN61000-4-3:1996 Radiated Immunity Field Test
- EN61000-4-4:1995 Electrical Fast Transient Test
- EN61000-4-5:1995 Power Supply Surge Test
- EN61000-4-6:1996 Conducted Immunity Test
- EN61000-4-8:1993 Magnetic Field Test
- EN61000-4-11:1994 Voltage Dips & Interrupts Test

5.2.5. Supplementary Information

The following statements may be appropriate for certain geographical regions and might not apply to your location.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference to radio communications at his own expense.

NOTE: This Class A digital apparatus complies with Canadian ICES-003 and has been verified as being compliant within the Class A limits of the FCC Radio Frequency Device Rules (FCC Title 47, Part 15, Subpart B Class A), measured to CISPR 22: 1993 limits and methods of measurement of Radio Disturbance Characteristics of Information Technology Equipment.

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numerique de la classe A respecte toutes les exigencies du Reglement sur le material brouilleur du Canada.

WARNING: This is a Class A product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

NOTE: The user may notice degraded audio performance in the presence of electromagnetic fields.

5.2.6. Product Serial Number

The ALTERIMAGE products have a unique serial number, imprinted on a small silver label that is placed on the bottom of the chassis. The serial number includes a date-code. The format for the date-code is two digits for the month; two digits for the day and four digits for the year and two or three digits for a unique unit number. This serial number is also found on the original shipping carton.

6. How to Contact Us

6.1 Customer Support

Thank you for choosing a Thinklogical product for your application. We appreciate your business and are interested in helping you successfully use our product. Thinklogical is here to help you.

Thinklogical is an engineering company; you receive the information you require from the key engineer. We believe that the first line of support is the design engineer that developed the product. Therefore, your questions will be handled promptly by an engineer.

To contact Thinklogical, use the following telephone numbers and internet-based methods.

6.1.1 Website

Check out our website for current product offerings, support information and general information about all of the products we offer.

Our internet website offers product information on all current systems, including technical specification sheets and installation guides (for viewing online or for download), product diagrams showing physical connections and other information you might need.

Internet: www.thinklogical.com

***NOTE:** Most online documents are stored as Adobe Acrobat "PDF" files. If you do not have the Adobe Acrobat reader needed to view PDF files, visit www.adobe.com for a download.

6.1.2 Email

Thinklogical is staffed Monday through Friday from 8:30am to 5:00pm, Eastern Time Zone. We will try to respond to your email inquiries promptly, use the following email addresses for your different needs:

info@thinklogical.com – Information on Thinklogical and our products.

sales@thinklogical.com – Sales Department - orders, questions or issues.

support@thinklogical.com – Product support, technical issues or questions, product repairs and request for Return Authorization.

6.1.3 Telephone

Telephone Sales: Contact our expert, technically oriented sales staff via telephone in Milford, CT at **(203) 647-8700** or if in the continental US, you may use our **toll-free number (800) 291-3211**. We are here Monday through Friday from 8:30am to 5:00pm, Eastern Time Zone. Ask for their direct dial phone number when you call.

Telephone Product Support: Contact Product Support via telephone in Milford, CT at **(203) 647-8700**. The support lines are manned Monday through Friday, 9am to 5pm, Eastern Time Zone.

International Sales: Please contact our US sales staff in Milford, CT at **(203) 647-8700**. We are here Monday through Friday, 8:30am to 5:00pm, Eastern Time Zone (same as New York City). If leaving a voice message, please provide a "best time to call back" so we may reach you at your convenience.

Our switchboard attendant will direct your call during regular business hours. We have an automated attendant answering our main telephone switchboard after regular business hours and holidays. You can leave voice messages for individuals at any time. Our Sales Representatives have direct numbers to speed up your next call to us.

6.1.4 Fax

Our company facsimile number is **(203) 783-9949**. Please indicate the nature of the fax on your cover sheet and provide return contact information.

6.2 Product Support

Thinklogical's support personnel are available Monday through Friday from 8:30am to 5:00pm, Eastern Time Zone. If your application might require assistance at some time outside of our normal business hours, please contact us beforehand and we will do our best to make arrangements to help you with your Thinklogical products.

6.2.1 Warranty

Thinklogical, LLC ("Thinklogical") warrants this product against defects in materials and workmanship for a period of one (1) year from the date of delivery (ordinary wear and tear excluded). This limited warranty does not cover defects resulting from (i) use of the product other than as described in the applicable documentation for the product; (ii) modifications to or repairs of the product that are made by any party other than Thinklogical or a party acting on Thinklogical's behalf, or (iii) combination of the product with third party products that is not consented to by Thinklogical. Occurrences of events described in (i) – (iii) shall void the foregoing warranty. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Except for the express warranty set forth above, to the fullest extent permitted under applicable law, Thinklogical, LLC and its suppliers disclaim any and all other warranties, express and implied, including without limitation the implied warranties of merchantability, fitness for a particular purpose, title and non-infringement.

If the defective product is returned to the authorized dealer within one (1) year of the delivery date, repair or replacement of the product will be made. Repairs may be made with refurbished parts. If repair or replacement is not possible, Thinklogical may keep the defective product and refund the amount that you paid for the defective product. These are Thinklogical's sole obligations, and your exclusive remedies, for a breach of the limited warranty set forth above.

To return a defective product, contact the Thinklogical authorized dealer from whom you purchased the product. Do not return a product directly to Thinklogical without prior authorization from your dealer.

If you have received prior authorization from your dealer and are returning a product directly to Thinklogical:

1. Contact your sales representative, or call Customer Support at (800)291–3211 or + (203)647–8700.
2. Describe the defect with the product and Customer Support will issue a Return Merchandise Authorization Number (RMA#).
3. Pack the product in all of its original packing, if possible, and write the RMA number on the box.
4. Return the product to:
   Thinklogical, LLC
   Attn: RMA# [Insert the RMA# issued to you, by Thinklogical, here.]
   100 Washington Street
   Milford, CT 06460 USA

6.2.2 Our Address

If you have any issue with the product, have product questions or need technical assistance with your Thinklogical system, please call us at **800-291-3211 (USA only)** or **(203) 647-8700** and let us help. If you'd like to write us, we are located at:

Thinklogical Inc.
100 Washington Street
Milford, CT 06460 USA