



User Manual

ATLONA VGA/COMPONENT/DVI/HDMI EXTENDERS OVER FIBER OPTIC

MODELS: AT-RGBF30S-IR, AT-RGBF30R-IR, AT-DVIF30S-IR, AT-DVIF30R-IR, AT-DVIF20S, AT-DVIF20R, AT-DVIFW10S, AT-DVIFW10R, AT-HDF30R-IR, AT-HDF30S-IR, AT-HDF20S, AT-HDF20R, AT-HDFW10S AND AT-HDFW10R

AT-RGBF30S-IR AND AT-RGBF30R-IR



AT-HDF30S-IR AND AT-HDF30R-IR



AT-DVIF30S-IR AND AT-DVIF30R-IR



AT-DVIFW10S AND AT-DVIFW10R



AT-HDFW10S AND AT-HDFW10R



AT-DVIF20S AND AT-DVIF20R



AT-HDF20S AND AT-HDF20R



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INTRODUCTION

The Atlona family of fiber optic extenders includes VGA, Component, DVI and HDMI extenders which are all very similar and many of them can work together. All the extenders featured in this manual can operate on a single multi-mode fiber cable and able to transmit large amounts video/audio and data which results an ability of extremely high resolutions, lossless video and audio transition, and error free data.

All the extenders are capable of transmitting resolutions up to 1920x1200 or 1080p at the distance of 1300ft without any signal degradation. Some models below can also transmit bi-directional RS232, Bi-directional Audio and IR Signal as well.

- **AT-RGBF30S-IR** – VGA or Component Video + bi-directional RS232 + Stereo Audio + IR Transmitter Unit.
- **AT-RGBF30R-IR** - VGA or Component Video + bi-directional RS232 + Stereo Audio + IR Receiver Unit.
- **AT-DVIF30S-IR** - DVI + bi-directional RS232 + Stereo Audio + IR Transmitter Unit.
- **AT-DVIF30R-IR** - DVI + bi-directional RS232 + Stereo Audio + IR Receiver Unit.
- **AT-DVIF20S** – DVI Transmitter Unit
- **AT-DVIF20R** – DVI Receiver Unit
- **AT-DVIFW10S** – DVI Wall Plate Style Transmitter Unit
- **AT-DVIFW10R** – DVI Wall Plate Style Receiver Unit
- **AT-HDF20S** – HDMI Transmitter Unit
- **AT-HDF20R** – HDMI Receiver Unit
- **AT-HDFW10S** – HDMI Wall Plate Style Transmitter Unit
- **AT-HDFW10R** - HDMI Wall Plate Style Receiver Unit
- **AT-HDF30S-IR** - HDMI + bi-directional RS232 + Separate Stereo Audio + IR Transmitter Unit.
- **AT-HDF30R-IR** - HDMI + bi-directional RS232 + Separate Stereo Audio + IR Receiver Unit

Some models can work together, the groups are listed below:

(Models which support RS232/IR and Bi-Directional Audio can work together as well as mini modules and Wall plate models can work together)

- **AT-RGBF30S-IR** → AT-DVIF30R-IR or AT-HDF30R-IR
- **AT-DVIF30S-IR** → AT-DVIF30R-IR or AT-HDF30R-IR
- **AT-HDF30S-IR** → AT-HDF30R-IR or AT-DVIF30R-IR
- **AT-DVIF20S** → AT-DVIF20R or AT-DVIFW10R or AT-HDF20R or AT-HDFW10R
- **AT-DVIFW10S** → AT-DVIF20R or AT-DVIFW10R or AT-HDF20R or AT-HDFW10R
- **AT-HDF20S** → AT-HDF20R or AT-HDFW10R or AT-DVIF20R or AT-DVIFW10R
- **AT-HDFW10S** → AT-HDF20R or AT-HDFW10R or AT-DVIF20R or AT-DVIFW10R

PACKAGE CONTENTS

Depends on the model purchased

- 1 x transmitter or receiver (depending on the model purchased)
- 1 x 5v Power supplies (Universal 110/240V)
- 1 x Set of Wall Mounting Ears
- 4 x screws
- 1 x Instructions manual

Note: IR Cable will be includes with models which have IR support

FEATURES

For AT-RGBF30S-IR and AT-RGBF30R-IR:

- Transmits VGA or YPrPb (Component) with Stereo Audio, bi-directional RS232 and IR up to **1300ft** away on a single Multi-Mode Fiber Cable
- **Supports Full HD Video with resolutions up to 1920x1200**
- Supports high resolution Video VESA: 640x480, 800x600, 1024x768, 1280x800, 1280x768, 1280x1024, 1680x1050, 1600x1200, 1920x1080, 1920x1200
- **Bi-Directional RS232 support**, perfect for sending serial commands from control system to the display or another equipment at the display end and transmit the feedback commands back to the control system
- **Bi-Directional Audio support** allows user to send audio to the display or set of speakers as well as send Audio signals back.
- **IR support**, allows user to control sources from the display location with IR
- **DDC Support**, allows source to know exactly what is connected at the other end and configure the resolutions and video settings accordingly.
- Format Conversion function, allows the source to be component video and the display to be VGA, the format conversion is done within the transmitter module
- The AT-RGBF30S-IR is compatible with AT-RGBF30R-IR, AT-DVIF30R-IR and AT-HDF30R-IR, which means that the receiver module could either be VGA, DVI or even HDMI.
- Supports all VESA formats, perfect when used with specialized projectors or commercial LCD panels.
- Wall Mountable

For AT-DVIF30S-IR and AT-DVIF30R-IR:

- Transmits DVI-D (digital only) with Stereo Audio, bi-directional RS232 and IR up to **1300ft** away on a single Multi-Mode Fiber Cable
- **Supports Full HD Video with resolutions up to 1920x1200**
- Supports high resolution Video VESA: 640x480, 800x600, 1024x768, 1280x800, 1280x768, 1280x1024, 1680x1050, 1600x1200, 1920x1080, 1920x1200
- Supports HDCP 2.0
- Supports EDID
- **Bi-Directional RS232 support**, perfect for sending serial commands from control system to the display or another equipment at the display end and transmit the feedback commands back to the control system
- **Bi-Directional Audio support** allows user to send audio to the display or set of speakers as well as send Audio signals back.
- **IR support**, allows user to control sources from the display location with IR
- The AT-DVIF30S-IR is compatible with AT-DVIF30R-IR and AT-HDF30R-IR, which means that the receiver module could either be DVI or even HDMI.
- Supports all VESA formats, perfect when used with specialized projectors or commercial LCD panels.
- Wall Mountable

For AT-HDF30S-IR and AT-HDF30R-IR:

- Transmits HDMI (Digital Video with Digital Audio) + Stereo Audio, bi-directional RS232 and IR up to **1300ft** away on a single Multi-Mode Fiber Cable
- **Supports Full HD Video with resolutions up to 1920x1200 or 1080p**

- Supports high resolution Video VESA: 640x480, 800x600, 1024x768, 1280x800, 1280x768, 1280x1024, 1680x1050, 1600x1200, 1920x1080, 1920x1200, 480i/p, 720p, 1080i, 1080p (24, 30, 50, 60Hz)
- Supports HDCP 2.0
- Supports EDID
- Supports Digital Audio: up to Dolby True HD or DTS Master
- Supports 3D, all 7 formats are supported
- **Bi-Directional RS232 support**, perfect for sending serial commands from control system to the display or another equipment at the display end and transmit the feedback commands back to the control system
- **Bi-Directional Audio support** allows user to send audio to the display or set of speakers as well as send Audio signals back.
- **IR support**, allows user to control sources from the display location with IR
- The AT-HDF30S-IR is compatible with AT-HDF30R-IR and AT-DVIF30R-IR, which means that the receiver module could either be HDMI or even DVI.
- Supports all VESA formats, perfect when used with specialized projectors or commercial LCD panels.
- Wall Mountable

For AT-DVIF20S/AT-DVIF20R:

- Transmits DVI-D (digital only) up to 1300ft away on a single Multi-Mode Fiber Cable
- Supports Full HD Video with resolutions up to 1920x1200
- Supports high resolution Video VESA: 640x480, 800x600, 1024x768, 1280x800, 1280x768, 1280x1024, 1680x1050, 1600x1200, 1920x1080, 1920x1200
- Supports HDCP 2.0
- Supports EDID
- Small size allows to directly connect the transmitter or and receiver to the DVI port on the source/ display
- The AT-DVIF20S is compatible with AT-DVIF20R, AT-DVIFW10R, AT-HDF20R and AT-HDFW10R, which means that the receiver module could either be DVI or even HDMI as well as a wall plate style DVI/HDMI receiver could be used. The AT-DVIF20R (Receiver) could also be used with wall plate or mini DVI/HDMI transmitters.
- Supports all VESA formats, perfect when used with specialized projectors or commercial LCD panels.

For AT-DVIFW10S / AT-DVIFW10R:

- Transmits DVI-D (digital only) up to 1300ft away on a single Multi-Mode Fiber Cable
- Supports Full HD Video with resolutions up to 1920x1200
- Supports high resolution Video VESA: 640x480, 800x600, 1024x768, 1280x800, 1280x768, 1280x1024, 1680x1050, 1600x1200, 1920x1080, 1920x1200
- Supports HDCP 2.0
- Supports EDID
- Wall plate style
- The AT-DVIFW10S is compatible with AT-DVIFW10R, AT-DVIF20R, AT-HDF20R and AT-HDFW10R, which means that the receiver module could either be DVI or even HDMI as well as a wall plate style DVI/HDMI or miniature receivers could be used. The AT-DVIFW10R (Receiver) could also be used with wall plate or mini DVI/HDMI transmitters.
- Supports all VESA formats, perfect when used with specialized projectors or commercial LCD panels.

For AT-HDF20S/AT-HDF20R:

- Transmits HDMI (Digital Video with Digital Audio) up to 1300ft away on a single Multi-Mode Fiber Cable
- Supports Full HD Video with resolutions up to 1920x1200 or 1080p
- Supports high resolution Video VESA: 640x480, 800x600, 1024x768, 1280x800, 1280x768, 1280x1024, 1680x1050, 1600x1200, 1920x1080, 1920x1200, 480i/p, 720p, 1080i, 1080p (24, 30, 50, 60Hz)
- Supports HDCP 2.0
- Supports EDID
- Supports Digital Audio: up to Dolby True HD or DTS Master
- Supports 3D, all 7 formats are supported
- Small size allows to directly connect the transmitter or and receiver to the HDMI port on the source/ display
- The AT-HDF20S is compatible with AT-HDF20R, AT-HDFW10R, AT-DVIF20R and AT-DVIFW10R, which means that the receiver module could either be HDMI or even HDMI as well as a wall plate style DVI/HDMI receiver could be used. The AT-HDF20R (Receiver) could also be used with wall plate or mini DVI/HDMI transmitters.
- Supports all VESA formats, perfect when used with specialized projectors or commercial LCD panels.

For AT-HDFW10S/AT-HDFW10R:

- Transmits HDMI (Digital Video with Digital Audio) up to 1300ft away on a single Multi-Mode Fiber Cable
- Supports Full HD Video with resolutions up to 1920x1200 or 1080p
- Supports high resolution Video VESA: 640x480, 800x600, 1024x768, 1280x800, 1280x768, 1280x1024, 1680x1050, 1600x1200, 1920x1080, 1920x1200, 480i/p, 720p, 1080i, 1080p (24, 30, 50, 60Hz)
- Supports HDCP 2.0
- Supports EDID
- Supports Digital Audio: up to Dolby True HD or DTS Master
- Supports 3D, all 7 formats are supported
- Wall plate style
- The AT-HDFW10S is compatible with AT-HDFW10R, AT-HDF20R, AT-DVIF20R and AT-DVIFW10R, which means that the receiver module could either be HDMI or even HDMI as well as a wall plate style DVI/HDMI receiver could be used. The AT-HDFW10R (Receiver) could also be used with wall plate or mini DVI/HDMI transmitters.
- Supports all VESA formats, perfect when used with specialized projectors or commercial LCD panels.

CONNECTION AND OPERATION

1. Connect the transmitter unit to the source
2. Terminate or use pre-existing single multi-mode fiber cable SC type
3. Connect the receiver module to the display
4. Connect both modules with supplied power supplies
5. Connect terminated SC multi-mode cable to transmitter first and then to the receiver
6. You should receive an image on the display

SPECIFICATIONS

Model	AT-RGBF30S-IR and AT-RGBF30R-IR	AT-DVIF30S-IR and AT-DVIF30R-IR	AT-HDF30S and AT-HDF30R
Supported Resolutions	up to 1920x1200 or 1080p		
Terminal Block	Yes		
Supported Audio	2 channels stereo bi-directional via terminal block	2 channels stereo bi-directional via terminal block	2 channels stereo bi-directional via terminal block and up to Dolby True HD or DTS Master on the HDMI
In/Out Impedance	10k/50 Ohms (Stereo Audio)		
Max. Input/Output Level	5 dBu/4Vpp (Stereo Audio)		
Magnitude Freq. Response	20Hz to 20kHz @ -3dB /THD+N>70dB @ 1k Hz		
Serial direction	2-way		
Data Rate	Up to 57.6Kbaud		
Freq. Range	up to 38kHz		
Fiber Type	Multimode		
Number of Fibers	1		
Fiber Connector	SC		
Power Level (max.)	+5VDC @ 1.2A		
Operating Temperature	0 to +50°C		
Humidity	0 to 95% RH, non-condensing		
Dimension (H x W x D) – each unit	1.2" x 3.0" x 3.6"	1.2" x 3.0" x 3.6"	0.70" x 1.58" x 3.31
Weight (lb) – each unit	0.4	0.3	0.1

Model	AT-DVIF20S and AT-DVIF20R	AT-DVIFW10S and AT-DVIFW10R	AT-HDF20S and AT-HDF20R	AT-HDFW10S and AT-HDFW10R
Supported Resolutions	up to 1920x1200 or 1080p			
Terminal Block	No			
Supported Audio	no Audio	no Audio	up to Dolby True HD or DTS Master	up to Dolby True HD or DTS Master
Fiber Type	Multimode			
Number of Fibers	1			
Fiber Connector	SC			
Power Level (max.)	+5VDC @ 1.2A			
Operating Temperature	0 to +50°C			
Humidity	0 to 95% RH, non-condensing			
Dimension (H x W x D) – each unit	0.59" x 1.54" x 2.3	4.50" x 2.75" x 1.2"	0.70" x 1.58" x 3.31	4.50" x 2.75" x 1.2"
Weight (lb) – each unit	0.1	0.2	0.1	0.2

AT-RGBF30S-IR – dip switch configuration:

Switch	Switch Mode	Description
1	RGB	For RGBHV video
	YPbPr	For YPbPr video
2	Bypass	Bypass as YPbPr when input is YPbPr video
	RGB	Convert to RGB when input is YPbPr video

AT-DVIFW10S / AT-DVIFW10R / AT-HDFW10S / AT-DVIFW10R – Power Configuration:



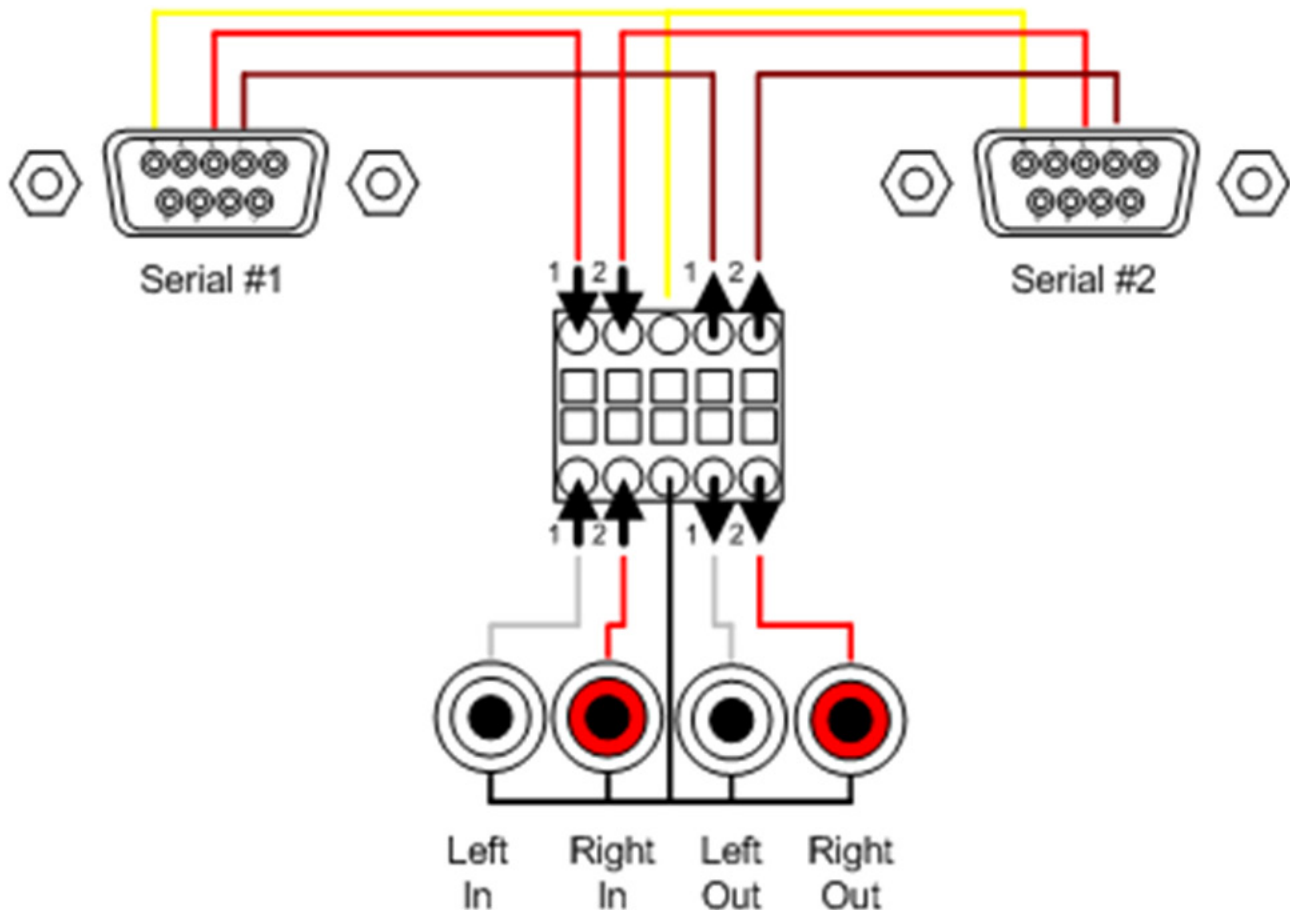
Connect it with 12V positive wires

TROUBLESHOOTING

- Please make sure that the wire is working properly. Most of the issues do come up from the incorrect termination. Please refer to the link below for connection termination:
http://www.fiberoptics4sale.com/Merchant2/terminating_sc_connectors.php
- If the signal is going in and out, please use fiber wipe and clean the fiber ends
- It is very important to keep the connections clean as greasy spots or dust can bring the transmission down.
- We recommend to use Multimode 62.5, 125 Micron or 50 Micron Fiber. The 50 Micron is considered better for the distance.
- If the POWER indicator is OFF, check for the following:
 - a. The line cord is plugged into the unit and your outlet has power.
- If the POWER indicator is ON, but the Optical Link indicator is OFF, check for the following:
 - a. Make sure the appropriate (Multimode) fibers are being used.
 - b. Fiber and fiber connectors are not broken.
 - c. For each unit, the transmit (TX) fiber is connected to the other unit's receiver (RX).
- If the POWER indicator and Optical Link indicator are ON, but the audio/video channels are not operating, then:
 - a. Check to see that the attached user equipment is turned on.

- b. Both ends of the link are connected to the corresponding equipment and to the same corresponding channel port.
- c. Cable connections at both the video/audio channels are securely fastened to each connector.
Turn the power off, then back on to reset the link.

TERMINAL BLOCK PIN-OUT



AUDIO

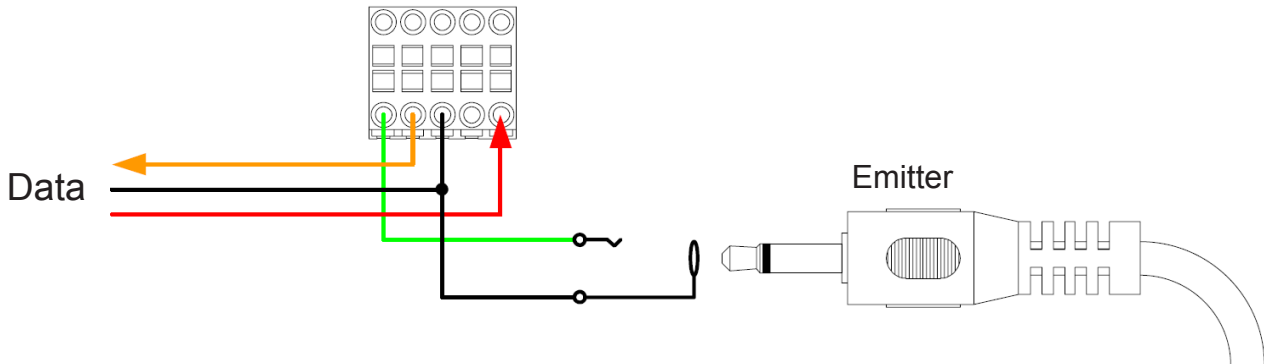
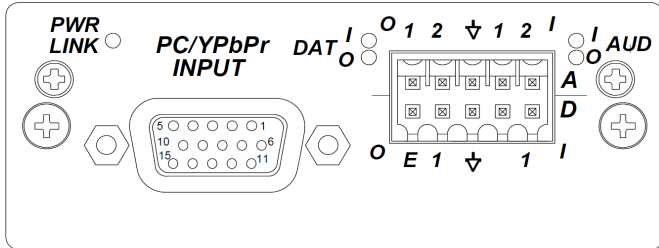
The audio interface supports two channel high fidelity transmissions. Two separate mono channels or one stereo channel is transmitted in each direction.

To send audio signals, label and connect two cables to the “AUDIO OUTPUT” connectors of the line level audio source. Connect the other end of the cables to the front panel terminal block connectors labeled “AUDIO IN”. For stereo channels, be sure to match the cables at both ends (L to L, R to R).

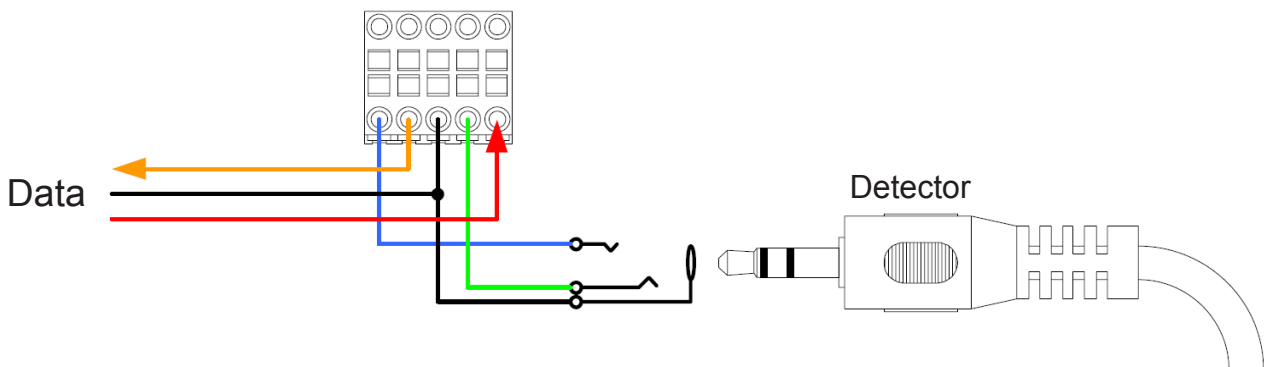
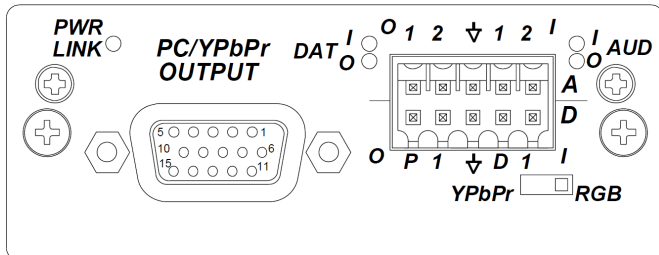
To receive audio signals, at the far-end location, label and connect two twisted shielded pair cables to the “AUDIO INPUT” connectors of the line level audio receiver. Connect the other end of the cables to the front panel terminal block connectors labeled “AUDIO OUT”. If using stereo channels, be sure to match the cables at both ends. (L to L, R to R).

RGB-IR PINOUTS

Transmitter



Receiver



SERIAL DATA AND IR DATA INTERFACE

The transmitter transmits two channels of unbalanced data signals. Follow the procedures for installing data terminal devices.

1. Label and connect one RS232 cable to the user's RS-232 device.
2. Connect the other end of this cable to the front panel data terminal block connector (as displayed on the picture above)

The transmitter transmits one (1) channel of IR data signal. Use the following steps for IR connection.

1. For the source side, (transmitter unit) connect IR Emitter cable to the IR connection.
2. For the monitor side (receiver unit), connect IR pick-up cable to the IR connection.

ATLONA PRODUCT REGISTRATION

Thank you for purchasing this Atlona product — we hope you'll enjoy it.

We also hope that you'll take a few moments to register your new purchase. Registration creates an ownership record if your product is lost or stolen and helps ensure you'll receive notification of performance issues and firmware updates.

At Atlona, we respect and protect your privacy and assure you that your registration information is completely secure. Of course, Atlona product registration is totally voluntary and failure to register will not diminish your limited warranty rights.

To register go to www.atlona.com/registration

SAFETY INFORMATION

Safeguards

To reduce the risk of electric shock, do not expose this product to rain or moisture.

If the wall plug does not fit into your local power socket, hire an electrician to replace your obsolete socket.

Do not modify the wall plug. Doing so will void the warranty and safety features.

This equipment should be installed near the socket outlet and the device should be easily accessible in case it requires disconnection.

Precautions

FCC Regulations state that any unauthorized changes or modifications to this equipment not expressly approved by the manufacturer could void the user's authority to operate this equipment.

Operate this product using only the included external power supply. Use of other power supplies could impair performance, damage the product or cause fires.

In the event of an electrostatic discharge, this device may automatically turn off. If this occurs, unplug the device, and plug it back in.

Protect and route power cords so they will not be stepped on or pinched by anything placed on or against them. Be especially careful of plug-ins, or cord exit points from this product.

Avoid excessive humidity, sudden temperature changes or temperature extremes.

Keep this product away from wet locations such as bathtubs, sinks, laundries, wet basements and swimming pools.

Use only accessories recommended by ATLONA to avoid fire, shock or other hazards.

Unplug the product before cleaning. Use a damp cloth for cleaning. Do not use cleaning fluid or aerosols, which could enter the unit and cause damage, fire or electrical shock. Some substances may also mar the finish of the product.

Never open or remove unit panels or make any adjustments not described in this manual. Attempting to do so could expose you to dangerous electrical shock or other hazards. It may also cause damage to your model. Opening the product will void the warranty.

Do not attempt to service the unit. Instead disconnect it and contact your Authorized ATLONA reseller or contact ATLONA directly.

1. LIMITED WARRANTY

Atlona Technologies warrants that (a) its products (the "Product") will perform substantially in accordance with the accompanying written materials for a period of 3 YEARS from the date of receipt and (b) that the Product will be free from defects in materials and workmanship under normal use and service for a period of 3 years. In the event applicable law imposes any implied warranties, the implied warranty period is limited to 3 years from the date of receipt. Some jurisdictions do not allow such limitations on duration of an implied warranty, so the above limitation may not apply to Customer.

2. CUSTOMER REMEDIES

Atlona Technologies and its suppliers' entire liability and Customer's exclusive remedy shall be, at Atlona Technologies' option, either return of the price paid for the Product, or repair or replacement of the Product that does not meet this Limited Warranty and which is returned to Atlona Technologies with a copy of Customer's receipt. This Limited Warranty is void if failure of the Product has resulted from accident, abuse, or misapplication. Any replacement Product will be warranted for the remainder of the original warranty period or 3 year, whichever is longer.

3. NO OTHER WARRANTIES

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, ATLONA TECHNOLOGIES AND ITS SUPPLIERS DISCLAIM ALL OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WITH REGARD TO THE PRODUCT AND ANY RELATED WRITTEN MATERIALS. THIS LIMITED WARRANTY GIVES CUSTOMER SPECIFIC LEGAL RIGHTS. CUSTOMER MAY HAVE OTHER RIGHTS DEPENDING ON THE JURISDICTION.

4. NO LIABILITY FOR DAMAGES

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT SHALL ATLONA TECHNOLOGIES OR ITS SUPPLIERS BE LIABLE FOR ANY DAMAGES WHATSOEVER (INCLUDING WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR INDIRECT DAMAGES FOR PERSONAL INJURY, LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, LOSS OF BUSINESS INFORMATION, OR ANY OTHER PECUNIARY LOSS) ARISING OUT OF THE USE OF OR INABILITY TO USE THIS PRODUCT, EVEN IF ATLONA TECHNOLOGIES HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN ANY CASE, ATLONA TECHNOLOGIES' AND ITS SUPPLIERS' ENTIRE LIABILITY UNDER ANY PROVISION OF THIS AGREEMENT SHALL BE LIMITED TO THE AMOUNT ACTUALLY PAID BY YOU FOR THE PRODUCT. BECAUSE SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, THE ABOVE LIMITATION MAY NOT APPLY TO YOU.