Blonder Tongue

SOLUTIONS FOR ALL YOUR APPLICATIONS

High-Definition Demodulator Module

HDDM

MPEG-2/H.264 Decoder

1xHD-SDI to 2xIP Streams (2xSPTS)

6683	High Definition Decoder with HD-SDI/HDMI/Component/Composite output
6674	Zixi Link License required for Point-to-Point Links

Status	Date	Document No.	Issue No.	Author
ACTIVE	June 07, 2018	651240700C-1	3	KK
OBSOLETE	February 17, 2017	651240700B	2	KK
OBSOLETE	July 21, 2016	651240700A	1	KK

800-523-6049

www.blondertongue.com

We recommend that you write the following information in the spaces provided below.

Purchase Location Name:	
Purchase Location Telephone Number:	
HDDM Serial Number:	

Product and Documentation Updates

Download the latest User Manual (PDF) by visiting our website. Navigate to the product page by entering the full Model Name or Stock Number in the search field. Upon reaching the product page, the "User Manual" download link will be located beneath the product image. **Firmware Updates** are available under "Tech Support" in the "Resources" section of the website. General instructions for the FTP site, as well as updating your firmware, are provided on this page.

Returning Product for Repair (or Credit)

A Return Material Authorization (RMA) Number is required on all products returned to Blonder Tongue, regardless if the product is being returned for repair or credit. Before returning product, please contact the Blonder Tongue Service Department at 1-800-523-6049, Ext. 4256 or visit our website: **www.blondertongue.com** for further information.

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Section 1 — General & Safety Instructions

STOP	The STOP sign symbol is intended to alert you to the presence of REQUIRED operating and maintenance (servicing) instructions that if not followed, may result in product failure or destruction.
⚠	The YIELD sign symbol is intended to alert you to the presence of RECOMMENDED operating and maintenance (servicing) instructions.
⚡	The LIGHTNING flash symbol is intended to alert you to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electrical shock.

TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER FROM THIS UNIT.

NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE
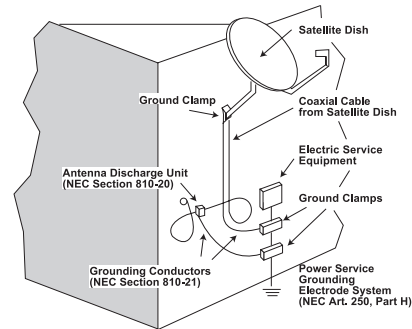
NOTE TO CATV SYSTEM INSTALLER

This reminder is provided to call the CATV System Installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

⚠ **You should always follow these Instructions to help ensure Against injury to yourself and damage to your equipment.**

➡ Elevated Operating Ambient - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature per Section 2.3.

➡ Reduced Air Flow - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.

➡ Mechanical Loading - Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.

➡ Circuit Overloading - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

➡ Reliable Earthing - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit (e.g. use of power strips).

➡ Read all safety and operating instructions before you operate the unit.

➡ Retain all safety and operating instructions for future reference.

➡ Heed all warnings on the unit and in the safety and operating instructions.

➡ Follow all installation, operating, and use instructions.

➡ Unplug the unit from the AC power outlet before cleaning. Use only a damp cloth for cleaning the exterior of the unit.

➡ Do not use accessories or attachments not recommended by Blonder Tongue, as they may cause hazards, and will void the warranty.

➡ Do not operate the unit in high-humidity areas, or expose it to water or moisture.

➡ Do not place the unit on an unstable cart, stand, tripod, bracket, or table. The unit may fall, causing serious personal injury and damage to the unit. Install the unit only in a mounting rack designed for 19" rack-mounted equipment.

➡ Do not block or cover slots and openings in the unit. These are provided for ventilation and protection from overheating. Never place the unit near or over a radiator or heat register. Do not place the unit in an enclosure such as a cabinet without proper ventilation. Do not mount equipment in the rack space directly above or below the unit.

➡ Operate the unit using only the type of power source indicated on the marking label. Unplug the unit power cord by gripping the plug, not the cord.

➡ The unit is equipped with a three-wire ground-type plug. This plug will fit only into a ground-type power outlet. If you are unable to insert the plug into the outlet, contact an electrician to replace the outlet. Do not defeat the safety purpose of the ground-type plug.

➡ Route power supply cords so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.

➡ Be sure that the outdoor components of the antenna system are grounded in accordance with local, federal, and National Electrical Code (NEC) requirements. Pay special attention to NEC Sections 810 and 820. See the example shown in the following diagram:

➡ We strongly recommend using an outlet that contains surge suppression or ground fault protection. For added protection during a lightning storm, or when the unit is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the lines between the unit and the antenna. This will prevent damage caused by lightning or power line surges.

➡ Do not locate the antenna near overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing the antenna, take extreme care to avoid touching such power lines or circuits, as contact with them can be fatal.

➡ Do not overload wall outlets or extension cords, as this can result in a risk of fire or electrical shock.

➡ Never insert objects of any kind into the unit through openings, as the objects may touch dangerous voltage points or short out parts. This could cause fire or electrical shock.

➡ Do not attempt to service the unit yourself, as opening or removing covers may expose you to dangerous voltage and will void the warranty. Refer all servicing to authorized service personnel.

➡ Unplug the unit from the wall outlet and refer servicing to authorized service personnel whenever the following occurs:

❑ The power supply cord or plug is damaged;
❑ Liquid has been spilled, or objects have fallen into the unit;
❑ The unit has been exposed to rain or water;
❑ The unit has been dropped or the chassis has been damaged;
❑ The unit exhibits a distinct change in performance.

➡ When replacement parts are required, ensure that the service technician uses replacement parts specified by Blonder Tongue. Unauthorized substitutions may damage the unit or cause electrical shock or fire, and will void the warranty.

➡ Upon completion of any service or repair to the unit, ask the service technician to perform safety checks to ensure that the unit is in proper operating condition.

Section 2 — Product Summary

2.1 Revision History & Reason

Issue 3: User Manual updated for use with firmware v1.5.0 - v1.5.7 (current as of 06/07/18).
Issue 2: User Manual updated for use with firmware v1.4.2 - v1.4.4.
Issue 1: User Manual created 7/20/16. Firmware release v1.0.6.

2.2 Product Application & Description

Application:

The HDDM (High-Definition Demodulator Module) is a low cost professional video decoder that can decode a single IP transport stream, off-air digital 8VSB channel, or a program from a clear QAM source. The unit accepts content in either MPEG-2 or H.264 video formats and outputs simultaneously 1xSDI, 1xHDMI, 1xComponent, and 1xComposite video interfaces with embedded audio or separate analog audio. SDI outputs are available in 3G-SDI, HD-SDI, or SD-SDI formats.

The unit can be used as a stand-alone high quality decoder, or used in conjunction with other IP encoders, to provide an end-to-end IP video delivery solution.

Comprehensive remote monitoring and control is accomplished using any standard Web browser via a rear-panel 10/100 Ethernet connection.

Features:

• Decodes Off-Air, Clear QAM, and IP

• Supports simultaneous video outputs

• Supports MPEG-2 and H.264 content

• Closed Captioning support on SDI output

• Rack-mountable, two across in 1RU

• Accepts VBR (Variable Bit Rate) and CBR (Constant Bit Rate) video streams

• Unicast or Multicast (IGMPv2 & IGMPv3)

• Separate Web-based management port for local and remote control

• Front Panel Display with on-screen menus for easy IP configuration setup

• IP Security Camera Decoding (VLC Compatible)

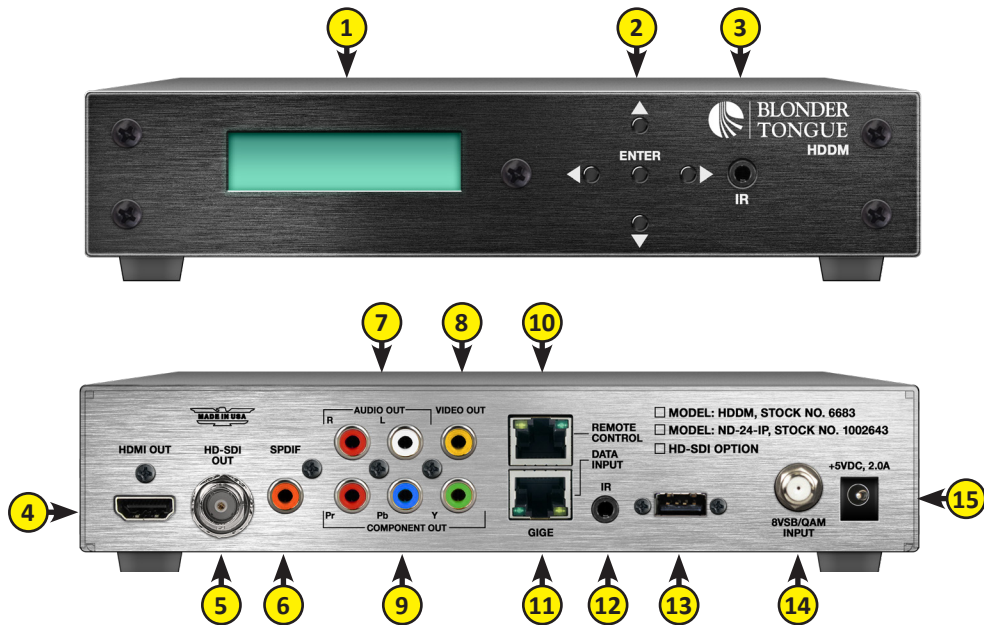**HDDM-RP-2 (stk # 6672) - Rack Panel for two (2) HDDM Decoders**

When the HDDM is used with our LiveCast encoder or our HDIP encoder, along with a Zixi Link license it can provide a reliable IP video transport from anywhere in the world with an internet connection. The HDDM can also be used in a point to multipoint application, where the HDDM would decode the IP based Zixi protocol stream from a Zixi Broadcaster. The combination of Blonder Tongue's **encoding** and **decoding** technology along with Zixi software, provides content-aware bandwidth optimization, error correction, and packet loss recovery over IP networks.

Model	Stock #	Description
Zixi Link License	6674	Zixi Link License required for point-to-point links
LC-S	6322	LiveCast HD-SDI Encoder (Copper SFP Included)
HDIP w/Zixi opt	6324 Z	High Definition IP encoder with Zixi Output option

2.2 Product Application & Description (continued)

Description:

Front and Rear Panel connectors and controls:

FRONT PANEL

(1) **LCD Display:** used for Network Settings

(2) **Controls:** used for Network Setting

(3) **Infared Remote Control** (future firmware release)

REAR PANEL

(4) **HDMI Out:** HDMI A/V Output

(5) **HD-SDI Out:** HD/SD SDI Output *[1]

(6) **SPDIF:** S/PDIF Digital Audio Output

(7) **Audio Out:** Analog L+R Audio Output

(8) **Video Out:** Composite Analog Video Output *[1]

(9) **Component Out:** Component Video Output

(10) **Remote Control:** GigE Ethernet Port for User Interface

(11) **Data Input:** GigE Ethernet Port for IP Input

(12) **IR:** IR extender (future firmware release)

(13) **Expansion Port** (not used)

(14) **8VSB/QAM Input:** Digital Tuner Input

(15) **+5VDC, 2.0A:** DC supplied from included AC adapter.

*[1] Note - Current firmware allows for SD-SDI or composite video. When the video resolution is 480i and SD-SDI is set to "Enable", you'll get SD-SDI, but NOT composite. If SD-SDI is set to "Disable", you'll get composite, but not SD-SDI. If the video resolution is anything other than 480i, this has no effect.

2.3 Product Specification

Input

IP Mode

Connectors:	RJ-45
Standard:	100/1000Base-T Ethernet
UDP/RTP:	Supported
Protocols:	IGMPv3/IGMPv2 Supported

Stream Portfolio

SPTS and MPTS:	Null Packet Deletion
Bit Rate:	Variable and Constant

8VSB Mode

Connectors:	1x "F" Female
Standard:	ATSC Digital Television A/53E
Tuning Range:	UHF (Ch.14-69), VHF (Ch.2-13)
Data Rate:	19.392 MHz
Bandwidth:	6 MHz
Power Level:	-20 to +20 dBmV
Impedance:	75 Ω

QAM Mode

Connectors:	1x "F" Female
Standard:	ITU-T J.83; Annex A and B (64 and 256 QAM)
Tuning Range:	CATV Ch. 2-158 (STD, HRC, IRC)
Data Range:	38.8 Mbps (QAM 256); 26.97 Mbps (QAM 64) — Auto Detect
Bandwidth:	6 MHz
Power Level:	-15 to 20 dBmV (@ QAM 256)
	-20 to 20 dBmV (@ QAM 64)
Impedance:	75 Ω

Alarms/Monitoring/Control

Local Monitoring:	Front-panel LCD screen
Local Control:	Front-panel Navigational Key-pad
Remote Monitoring/ Control:	GUI-based menu via Web browser (1x RJ45 rear-panel connector; 10/100Base-T)

Output

HD/SD-SDI

Connectors:	1x BNC
Standards:	SMPTE 424M (3G), SMPTE 292M (HD) & SMPTE 259M (SD)
Video Resolution:	480i, 720p, 1080i, & 1080p
Audio:	Embedded PCM

HDMI

Connectors:	1x HDMI
Video Resolution:	480i, 720p, 1080i, & 1080p
Audio:	Embedded PCM

Composite

Connectors:	1x RCA for Video (Y)
Video Resolution:	480i
Audio:	2x RCA for Analog Audio (L,R)

Component

Connectors:	3x RCA for Video (Y, Pb, Pr)
Video Resolution:	480i, 720p, & 1080i
Video Aspect Ratio:	4:3 & 16:9
Audio:	2x RCA for Analog Audio (L,R)

Digital Audio (SPDIF)

Connectors:	1x RCA

General

Dimensions (W x D x H):	8.69 x 8.0 x 1.97 inches (220.7 x 203 x 50.0 mm)
Power:	5 VDC External Power Supply
Power Dissipation:	20 W
Weight:	3.0 lbs (1.36 kg)
Operating Temperature:	32 to 122 °F (0 to 50 °C)
Storage Temperature:	-13 to 158 °F (-25 to 70 °C)
Operating Humidity:	0 to 95% RH @ 35 °C max, non-condensing
Storage Humidity:	0 to 95% RH @ 35 °C max, non-condensing

Section 3 – Installation & Power-up

3.1 Unpacking

You will find the following items in the box:

- HDDM Network Decoder (QTY=1)
- HDDM Quick Guide
- HDDM AC Adapter (QTY=1)

3.2 Installation

The HDDM is designed to be mounted in the close proximity to a 120 VAC – 60 Hz power plug.

> ⚠ **FOR SAFE AND RELIABLE OPERATION, DO NOT BLOCK AIRFLOW.**

3.3 Power-up

Plug the AC Adapter into the back of the HDDM unit at the input marked "+5VDC, 2.0A" and then into an AC power plug (120 VAC – 60 HZ).

Section 4 - Network Settings

The HDDM has two rear panel network ports labeled Remote Control and Data Input. These ports are configured through the front panel.

⚠ **IMPORTANT! THE CONTROL PORT (MANAGEMENT PORT) AND THE DATA PORT MUST BE ON DIFFERENT SUBNETS.**

Press 'ENTER' on the front panel and the following will appear.

> Control (eth1)

> Data (eth0)

Select port you wish to configure with 'Up' 'Down' arrows.

> Edit Cfg (ethx) where x specifies the port

MENU HIERARCHY

Network Settings
```
|
|-- Control (eth1)
|   |
|   |- Edit Cfg (eth1)*
|   |   |- Enable DHCP
|   |   |- Edit Address**
|   |   |- Edit Netmask**
|   |   |- Edit Gateway**
|   |
|   |- Display IP
|   |- Display MAC
|   |- Display Netmask
|
|-- Data (eth0)
|   |
|   |- Edit Data (eth0)*
|   |   |- Enable DHCP
|   |   |- Edit Address**
|   |   |- Edit Netmask**
|   |   |- Edit Gateway**
|   |
|   |- Display IP
|   |- Display MAC
|   |- Display Netmask
```

* Changes will not be applied until backing out of the "Edit XXX (ethX)" menu for an interface, at which point you will be prompted to confirm changes. Selecting "No" at the prompt will retain existing settings for that interface.

** Edit Address/Netmask/Gateway options will not be displayed if DHCP is enabled on the interface.

MENU NAVIGATION

The UP ARROW and DOWN ARROW keys allow moving an item selection cursor, indicated on screen by a right-arrow symbol, up and down between menu items.

In general, the ENTER key will enter the selected menu item, which may be either another sub-menu, a read-only status item (e.g Display MAC), or an editable items (e.g. "Edit Address").

For menu and read-only status items, the LEFT ARROW key acts as "back" button, returning to the previous level in the hierarchy.

For editable items, e.g. "Edit Address", the LEFT ARROW and RIGHT ARROW keys will move the cursor left and right, the UP ARROW and DOWN ARROW keys will modify the value at the cursor, and the ENTER key will accept the new value and return the previous menu.

Section 5 - Login Screen

To begin setup, connect the appropriate input and output video cables and plug in the HDDM power cable.

ETHERNET ACCESS:

Local or remote communication with the unit is only possible through a GUI-based menu via any standard web browser Chrome or Firefox is recommended, for IE use IE11 minimum. Before you can communicate with the unit you must configure your computer's IP address to be on the same subnet as the HDDM's Control IP address. To do so, follow these steps:

Connect an Ethernet cable from your computer to the Control GigE port on the rear panel of the HDDM.

1. The following steps explain how to do this for a computer with **Windows XP** operating software:

a) On your computer, open the "Control Panel"

b) Double-click on "Network Connections"

c) Right-click on the "Local Area Connection", and then click on the "properties".

d) A dialog box entitled "Local Area Connection Properties" will appear. In this box, double-click on the "Internet Protocol (TCP/IP)".

e) A dialog box entitled "Internet Protocol (TCP/IP) Properties" will appear. Select the "Use the following IP address" option and enter the following addresses:

> **IP address:** same subnet as Control IP (eg.172.16.80.xxx where xxx is another value than used for the HDDM)
> **Subnet mask:** 255.255.255.0
> No need to enter a value for the **Default Gateway** for local access.

Click **OK** to close the dialog box. Now your computer is ready to communicate with the unit.

<div align="center">**- OR -**</div>

2. The following steps explain how to do this for a computer with **Windows 7**, **Windows 8.x** or **Windows 10** operating software:

a) On your computer, navigate to the "Network and Sharing Center".
   (Note: This can be found using the search box in the Start Menu or for Windows 8.x, the Start Screen)

b) Once open, click on "Change Adapter Settings" on left hand side of the window.

c) Right-click on the "Local Area Connection", and then click on the "Properties".

d) A dialog box entitled "Local Area Connection Properties" will appear. In this box, double-click on the "Internet Protocol Version 4 (TCP/IPv4)".

e) A dialog box entitled "Internet Protocol Version 4 (TCP/IPv4) Properties" will appear. Select the "Use the following IP address" option and enter the following addresses:

> **IP address:** same subnet as Control IP (eg. 172.16.80.xxx where xxx is another value than used for the HDDM)
> **Subnet mask:** 255.255.255.0
> No need to enter a value for the **Default Gateway** for local access.

Click **OK**.

Open a web browser on your computer and enter the URL address (Control IP Address). Once the HDDM web server has been loaded from your browser, you should see the Control Panel as shown in the following sections.

Section 6 - Configuring the Unit

6.1.0 "Player Control" Tab

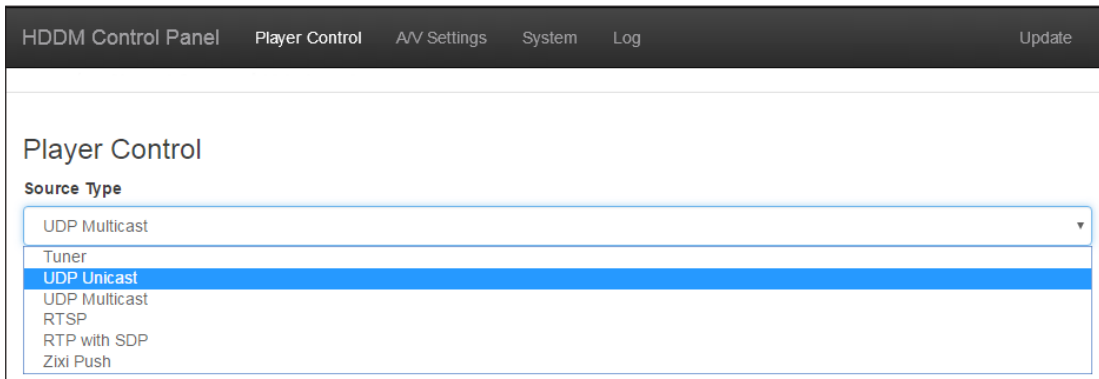The "Player Control" Tab configurable settings are determined by the selected "Source Type" (Figure 6.1.0) .

Figure 6.1.0 - "Player Control" - Source Type selections
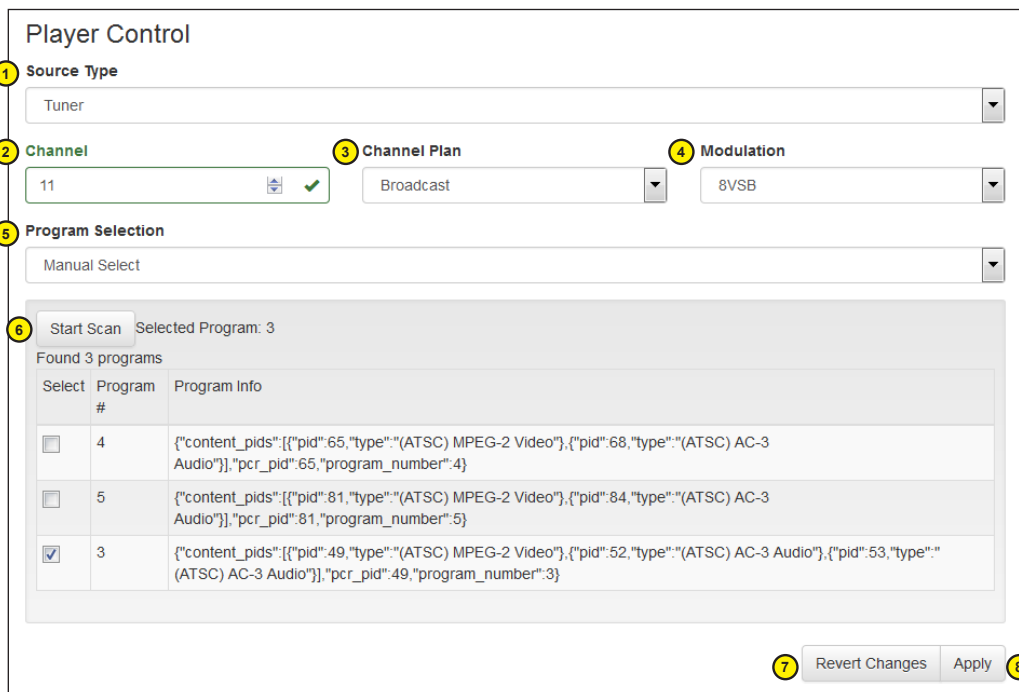
6.1.1 "Player Control" Tab - Tuner

Figure 6.1.1 - "Player Control" - Tuner

① **Source Type:** Tuner

② **Channel:** RF channel to receive. Channels are dependent on "Channel Plan" (③). Use up-down buttons or direct channel entry for desired channel.

③ **Channel Plan:** CATV (STD,IRC,HRC) channel range 2 to 158. Broadcast channel range 2 to 69.

④ **Modulation:** Select QAM for CATV or 8VSB for Broadcast channel plans.

6.1.1 "Player Control" Tab - Tuner (continued)

(5) Program Selection:

> Auto - Selects the first program in the PAT table
>
> Program Number - User enters the desired program number to receive.
>
> Manual Select - When selected "Start Scan" button (**(6)**) will be displayed.

(6) Start Scan: Available only when in Manual Select Program mode. Clicking on the scan button will display all available programs. Select the desired program by checking the respective Select box.

(7) Revert Changes: Returns to previous settings after the last "Apply".

(8) Apply: Enters the current displayed settings into the decoder.

6.1.2 "Player Control" Tab - UDP Unicast

Figure 6.1.2a - "Player Control" - UDP Unicast

(1) Source Type: UDP Unicast

(2) UDP Port: Enter in port number to be used.

(3) Program Selection:

> Auto - Selects the first program in the PAT table
>
> Program Number - User enters the desired program number to receive.
>
> Manual Select - When selected "Start Scan" button (**(4)**) will be displayed.

Clicking on the "Start Scan" button will display all available programs. Select the desired program by checking the respective Select box.

Figure 6.1.2b - "Program Selection" - Start Scan

(5) Revert Changes: Returns to previous settings after the last "Apply".

(6) Apply: Enters the current displayed settings into the decoder.
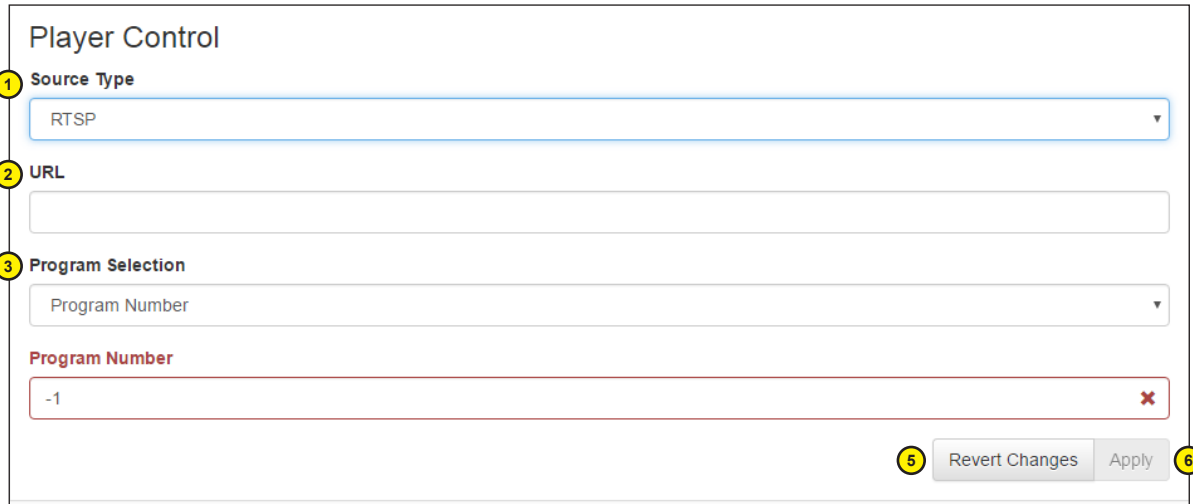
6.1.3 "Player Control" Tab - UDP Multicast

Figure 6.1.3a - "Player Control" - UDP Multicast

1 **Source Type:** UDP Multicast

2 **Multicast Group:** Enter IP address

3 **Port:** Enter in port number to be used.

4 **IGMP Version:** Supports either IGMPv2 or IGMPv3

5 **Program Selection:**

Auto - Selects the first program in the PAT table
Program Number - User enters the desired program number to receive.

Manual Select - When selected "Start Scan" button (6) will be displayed.

Clicking on the "Start Scan" button will display all available programs. Select the desired program by checking the respective Select box.

Figure 6.1.3b - "Program Selection" - Start Scan

7 **Revert Changes:** Returns to previous settings after the last "Apply".

8 **Apply:** Enters the current displayed settings into the decoder.
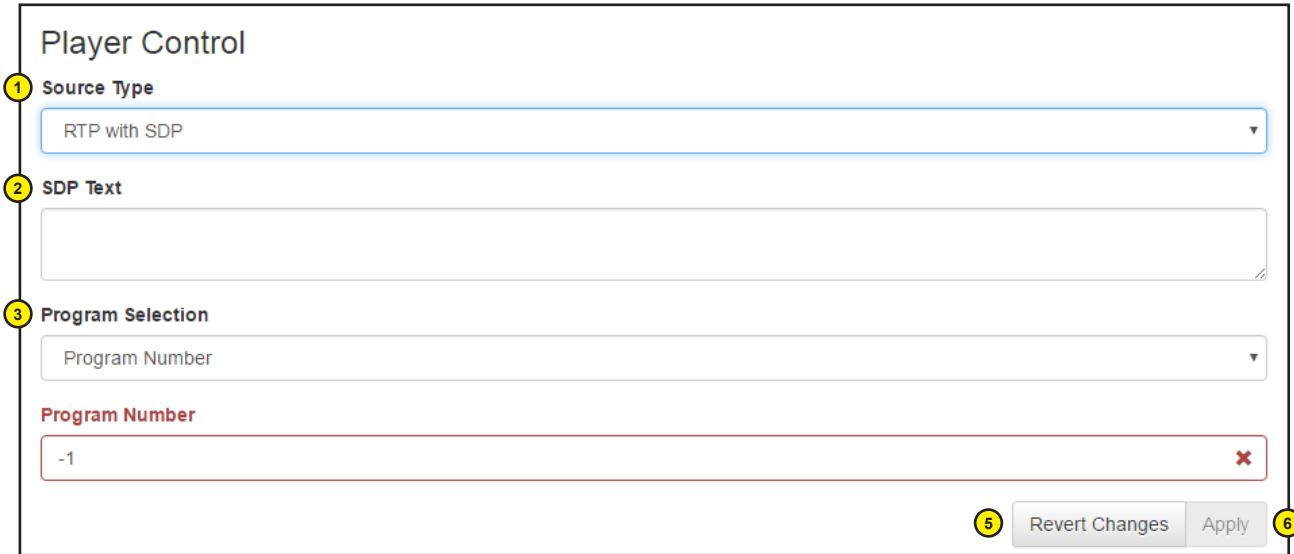
6.1.4 "Player Control" Tab - RTSP

Figure 6.1.4a - "Player Control" - RTSP

1 **Source Type:** RTSP

2 **URL:** Enter URL address in RTSP protocol format.

RTSP URL format: *rtsp://<user>:<pass>@<ipaddress>/<parameters>*

"*rtsp://*" - The type of protocol to enable streaming of the IP output of camera.
"*<user>*:*<pass>*" - The login and password information for the camera (refer to camera manual).
"*@<ipaddress>*/" - Insert the IP address of the camera.
"*<parameters>*" - This is related to each camera (refer to camera manual).

3 **Program Selection:**

Auto - Selects the first program in the PAT table

Program Number - User enters the desired program number to receive.

Manual Select - When selected "Start Scan" button (**4**) will be displayed.

Clicking on the "Start Scan" button will display all available programs. Select the desired program by checking the respective Select box.

Figure 6.1.4b - "Program Selection" - Start Scan

5 **Revert Changes:** Returns to previous settings after the last "Apply".

6 **Apply:** Enters the current displayed settings into the decoder.

6.1.5 "Player Control" Tab - RTP with SDP

Figure 6.1.5a - "Player Control" - RTP with SDP

① **Source Type:** RTP with SDP

② **SDP Text:** SDP (Session Description Protocol) profile text here in order to use with RTP (Real-time Transport Protocol) Source Type.

③ **Program Selection:**

Auto - Selects the first program in the PAT table

Program Number - User enters the desired program number to receive.

Manual Select - When selected "Start Scan" button (**④**) will be displayed.

Clicking on the "Start Scan" button will display all available programs. Select the desired program by checking the respective Select box.

Figure 6.1.5b - "Program Selection" - Start Scan

⑤ **Revert Changes:** Returns to previous settings after the last "Apply".

⑥ **Apply:** Enters the current displayed settings into the decoder.

6.1.6 "Player Control" Tab - Zixi Push Input

If a Zixi Link License is not pre-installed with the unit for point-to-point links over the public internet, a separate Zixi Link License (Part #6674) will be required.

Figure 6.1.6 - "Player Control" - Zixi Push Input

(1) Source Type: Zixi Push will display in drop down menu only after the License Key has been entered.

(2) Zixi Port: specify Zixi Port

(3) Channel/Stream ID: must match either a PEG encoder ID for point to point or Zixi server stream ID for broadcast applications

(4) Password: must match either a PEG encoder password for point to point or Zixi server stream password for broadcast applications

(5) Program Selection:
      Auto - Selects the first program in the PAT table
      Program Number - User enters the desired program number to receive.
      Manual Select - When selected "Start Scan" button ((6)) will be displayed.

(6) Start Scan: Available only when in Manual Select Program mode. Clicking on the scan button will display all available programs. Select the desired program by checking the respective Select box.

(7) Revert Changes: Returns to previous settings after the last "Apply".

(8) Apply: Enters the current displayed settings into the decoder.
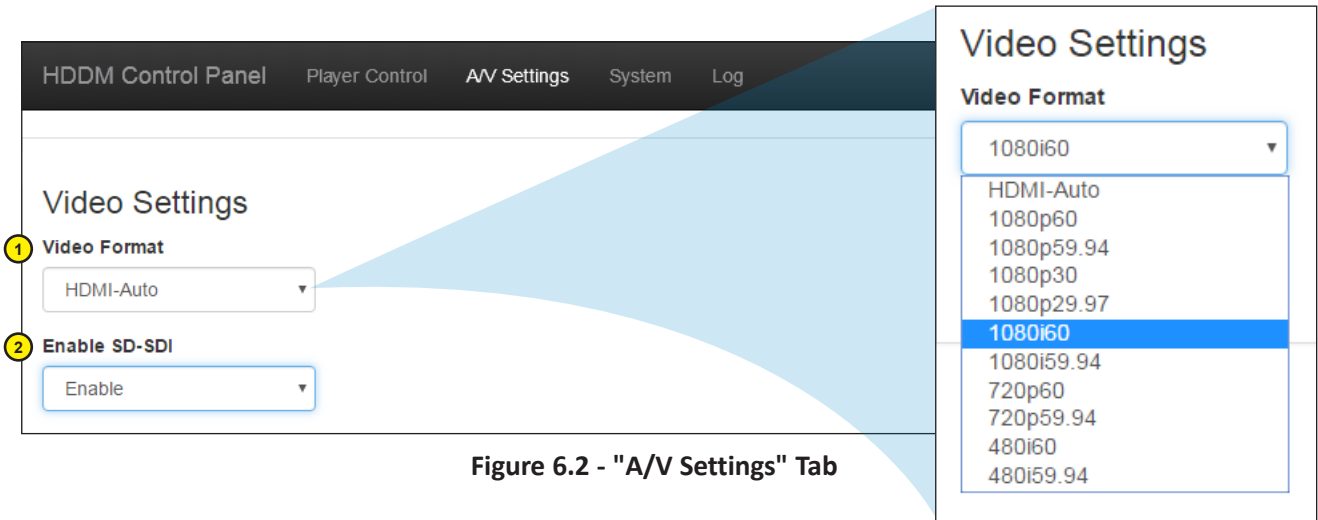
6.2 "A/V Settings" Tab

Figure 6.2 - "A/V Settings" Tab

(1) **Video Format:** Used to select the video format from the following options:

HDMI Auto, 1080p60, 1080p59.94, 1080p30, 1080p29.97, 1080i60, 1080i59.94, 720p60, 720p59.94, 480i60 or 480i59.94

> ⚠ **HDMI AUTO SHOULD NOT BE SELECTED WHEN USING HD-SDI OUTPUT. REASON IS HDMI AUTO SETTING UPSCALES INPUT STREAM TO MAX RESOLUTION (1080P) WHICH SHUTS OFF THE HD-SDI OUTPUT AS IT DOES NOT DO 3G-SDI.**

(2) **Enable SD-SDI:** Enable or Disable.

> *Note: Current firmware allows for SD-SDI or composite video. When the video resolution is 480i and SD-SDI is set to "Enable", you'll get SD-SDI, but NOT composite. If SD-SDI is set to "Disable", you'll get composite, but not SD-SDI. If the video resolution is anything other than 480i, this has no effect.*

6.3 "System" Tab

"System Information" is predominately a "read-only" screen providing key information on the decoder.

SOFTWARE FEATURES

(1) **Built-In Features:** will display Zixi if Link License is pre-installed from factory.

(2) **License Key:** user can enter a Zixi Link License key (ordered separately #6674) for Zixi point-to-point links. To enter, user clicks on the pencil icon next to "License Key". User can then enter the key in the field and click the "Apply" button to install. After this is done, Zixi Push will then be an option on the Player Control tab's Source Type pull down menu.

(3) **Add-on Features:** Indicates installed add-on features. Zixi will display here after the license key has been entered.

SOFTWARE VERSION

(4) **Version:** Indicates currently installed software version name.

(5) **Unique Build ID:** A machine-generated unique identifier for each software release.

(6) **Debug:** A value of 0 indicates production software. A non-zero value indicates a testing / engineering software release.

(7) **Date:** Timestamp generated when producing a software release image.

6.3 "System" Tab (continued)

Figure 6.3 - "System Info" Tab (Read-Only)

HARDWARE INFO

(8) **Serial Number:** Indicates unit serial number.

(9) **Model Name:** Indicates the HDDM model name.

(10) **Hardware Version:** May be used to distinguish between hardware variants in future versions of the product.

(11) **Control Port MAC:** Indicates MAC address of the "Remote Control" ethernet port.

(12) **Data Port MAC:** Indicates MAC address of the "Data Input" ethernet port.

(13) **Capabilities:** Numeric code that indicates optional software and hardware.

(14) **Board Rev:** Indicates revision of the main circuit board.

6.3 "System" Tab (continued)

(15) **Board Number:** Indicates the part number of the main circuit board in the product. May be of use in resolving customer support or warranty issues.

REBOOT DECODER

(16) **Reboot System:** Select Reboot System to reboot the decoder.

6.4 "Log" Tab

The "Log" tab (Figure 6.4) is a "read-only" screen which documents and displays all unit activity.

Figure 6.4 - "Log" Tab (Read-Only)

6.5 "Update" Tab

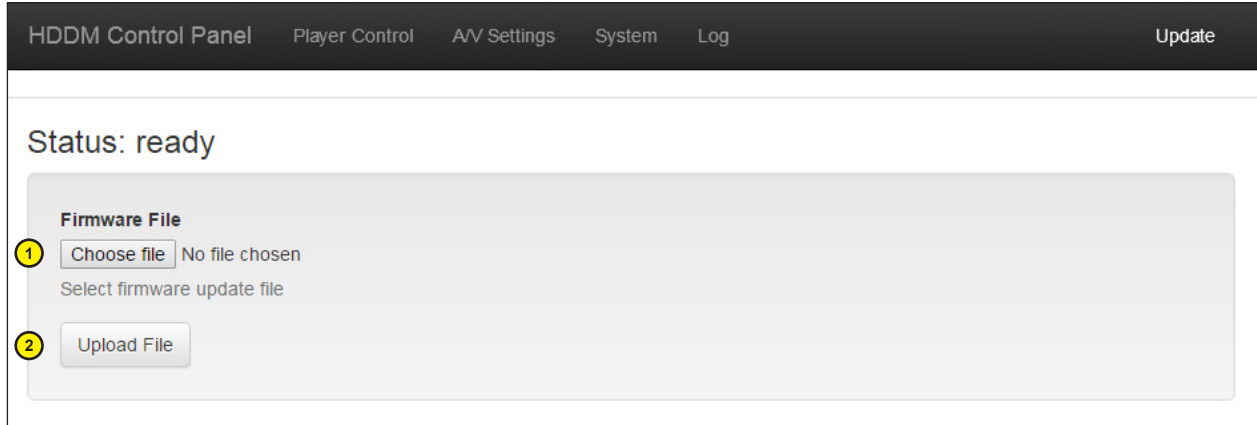The "Update" Tab (Figure 6.5) allows the user to update the unit's firmware.

Figure 6.5 - "Update" Tab

① **Firmware File:** download firmware update file and select

② **Upload File:** press to initiate firmware update

NOTES

NOTES

Extended Warranty Program

STANDARD TERMS & CONDITIONS OF THE EXTENDED WARRANTY

A.   THE EXTENDED WARRANTY AGREEMENT (EWA)

If during the period following the expiration of the Blonder Tongue Manufacturers' Standard Warranty (Copy Included) the products which constitute the subject matter of the extended warranty, manifest any manufacturing or similar such defects then Blonder Tongue shall at its option repair or replace the product. It is emphasized that the extended warranty is in effect an extension of the Blonder Tongue Warranty and covers the items stipulated in Paragraph B to the exclusion of the terms in Paragraph C of this agreement. Eligibility to purchase EW is limited to 90 days following initial shipment on selected products of sufficient value.

The product/products included in this extended warranty agreement are listed in the invoice that accompanies the EWA. Term of the extension will be _____ year(s). Purchase Order is required for extended warranty coverage.

B.   WHAT IS COVERED?
1.   If a product has been determined to have failed, which falls within the Terms & Conditions of this EWA, Blonder Tongue Inc. may at its sole discretion repair, modify or replace its component parts that are defective at 100% coverage for parts and labor.
2.   A loaner unit may be available on request; PO required.
3.   Product is manufactured by Blonder Tongue.
4.   Extended warranty period is up to and not to exceed 24 months and sold in increments of 12 months. Order # 9981 for 1 year and #9982 for 2 year extensions.
5.   Return of repair or replaced product shipping costs for ground shipments.
6.   Firmware upgrades at no charge with automatic notification.

C.   WHAT IS NOT COVERED?
1.   The warranty does not cover any defects caused by foreign objects /connection errors .
2.   Use other than by the customer at the declared address appearing in this document.
3.   Failure by the end user to comply with the manufacturers' instructions for installation, maintenance or use.
4.   The use of accessories which have not been approved by Blonder Tongue.
5.   The application and/or use of any incorrect or abnormal electrical supply to the product.
6.   Any defect in wiring or electrical connections which does not form part of the product at the time of the original purchase.
7.   Neglect, misuse, or willful abuse of the product.
8.   Any repairs or attempted repairs of the product by any person other than Blonder Tongue Service Department.
9.   Any modification of the product by any person other than Blonder Tongue Service Department.
10.   Fire, flood, war, civil disturbance, industrial action, acts of God or any other causes beyond the reasonable control of Blonder Tongue.
11.   Any defect caused by lightning strike or power surges.
12.   Shipping costs to return products to Blonder Tongue for warranty service.
13.   Blonder Tongue will not in any circumstances be liable for any consequential loss or damages suffered by the customer whether directly or indirectly related defect in the product to the extent permissible by law.
14.   Repairs may not be effected without prior authorization from Blonder Tongue Laboratories.

D.   GENERAL
1.   The customer shall notify Blonder Tongue Laboratories in writing within ten days of any change of his or her address.
2.   Customer must provide original *purchase receipt* and *serial number* to initiate extended warranty coverage.
3.   The fee paid for the warranty is not refundable under any circumstances unless cancelled within seven days of purchase.
4.   The customer shall take all reasonable precautions to maintain the product is maintained in good working order.
5.   The warranty contract ceases to exist if the product is replaced or a credit is given to the customer. Any monies paid for the warranty contract are forfeited and not refundable. This is only applicable when the product is out of the manufacturer's warranty.
6.   The extended warranty period as stated on the Extended Warranty Agreement shall be the governing period notwithstanding any additional supplier warranty on specific components.
7.   The warranty shall in no way effect the terms and conditions of the sale agreement in terms of which the customer bought the product.
8.   The extended warranty is limited to the terms and conditions herein contained
9.   No agreement, varying, adding to, amended, deleting, or cancelling this warranty shall be effective unless given in writing (email is acceptable) and signed by or on behalf of both parties.
10.   The cost of the extended warranty is 8% of the purchase price for a 1 or 2 year extension beyond the Blonder Tongue standard warranty. e.g. A product price of $1000 will be $80 for the 1st year (12 mos) and additional $80 for 2 year (24 mos) extension for a total of $160.
11.   Warranty product return postage paid to: Blonder Tongue Laboratories, Inc.
Attn: Warranty Service Dept.
1 Jake Brown Road
Old Bridge, NJ 08857

Contact Blonder Tongue at 800-523-6049 ext. 555 to order extended warranty service.

Limited Warranty

Seller will at its sole option, either repair or replace (with a new or factory reconditioned product, as Seller may determine) any product manufactured or sold (or in the case of software, licensed) by Seller which is defective in materials or workmanship or fails to meet the applicable specifications that are in effect on the date of shipment or such other specifications as may have been expressly agreed upon in writing: (i) for a period of three (3) years from the date of original purchase for all stock hardware products (other than those specifically referenced herein below having a shorter warranty period); (ii) for a period of one (1) year from the date of original purchase, with respect to all MegaPort™, IPTV products, test equipment and fiber optics receivers, transmitters, couplers and integrated receiver/distribution amplifiers; (iii) for a period of one (1) year from the date of original purchase (or such shorter period of time as may be set forth in the license agreement specific to the particular software being licensed from Seller) with respect to all software products licensed from Seller (other than Core Product Software) that is (a) developed for a specific function or application, (b) complimentary to and does not function without the Core Product Software, and (c) listed with a specific model number and stock number in Seller's Price List ("**Non-Core Software**"); (iv) for a period of ninety (90) days from the date of original purchase, with respect to non-serialized products and accessories, such as parts, sub-assemblies, splitters and all other products sold by Seller (other than Core Product Software and Refurbished/Closeout Products) not otherwise referred to in clauses (i) through (iii) above. The warranty period for computer programs in machine-readable form included in a hardware product, which are essential for the functionality thereof as specifically stated in the published product specifications ("**Core Product Software**") will be coincident with the warranty period of the applicable hardware product within which such Core Product Software is installed.

Software patches, bug fixes, updates or workarounds do not extend the original warranty period of any Core Product Software or Non-Core Software.

Notwithstanding anything herein to the contrary,

(i) Seller's sole obligation for software that when properly installed and used does not substantially conform to the published specifications in effect when the software is first shipped by Seller, is to use commercially reasonable efforts to correct any reproducible material non-conformity (as determined by Seller in its sole discretion) by providing the customer with: (a) telephone or e-mail access to report non-conformance so that Seller can verify reproducibility, (b) a software patch or bug fix, if available or a workaround to bypass the issue if available, and (c) where applicable, replacement or damaged or defective external media, such as CD-ROM disk, on which the software was originally delivered;

(ii) Seller does not warrant that the use of any software will be uninterrupted, error-free, free of security vulnerabilities or that the software will meet the customer's particular requirements; and the customer's sole and exclusive remedy for breach of this warranty is, at Seller's option, to receive (a) suitably modified software, or part thereof, or (b) comparable replacement software or part thereof;

(iii) Seller retains all right, title and interest in and to and ownership of all software (including all Core Product Software and Non-Core Software) including any and all enhancements, modifications and updates to the same; and

(iv) in some cases, the warranty on certain proprietary sub-assembly modules manufactured by third-party vendors and contained in Seller's products, third party software installed in certain of Seller's products, and on certain private–label products manufactured by third-parties for resale by Seller, will be of shorter duration or otherwise more limited than the standard Seller limited warranty. In such cases, Seller's warranty with respect to such third-party proprietary sub-assembly modules, third-party software and private-label products will be limited to the duration and other terms of such third-party vendor's warranty, if any. In addition, certain products, that are not manufactured by Seller, but are resold by Seller, may carry the original OEM warranty for such products, if any. The limited warranty set forth above does not apply to any product sold by Seller, which at the time of sale constituted a Refurbished/Closeout Product, the limited warranty for which is provided in the following paragraph.

Seller will at its sole option, either repair or replace (with a new or factory-reconditioned product, as Seller may determine) any product sold by Seller which at the time of sale constituted a refurbished or closeout item ("**Refurbished/Closeout Product**"), which is defective in materials or workmanship or fails to meet the applicable specifications that are in effect on the date of shipment of that product or fails to meet such other specifications as may have been expressly agreed upon in writing between the parties, for a period of ninety (90) days from the date of original purchase. Notwithstanding the foregoing, in some cases the warranty on certain proprietary sub-assembly modules manufactured by third-party vendors and contained in Seller products, third party software installed in certain of Seller's products, and on certain private–label products manufactured by third-parties for resale by Seller will be of shorter duration or otherwise more limited than Seller limited warranty for Refurbished/Closeout Products. In such cases, Seller's warranty for Refurbished/Closeout Products constituting such third party proprietary sub-assembly modules, third party software, and private-label products will be limited to the duration and other terms of such third-party vendor's warranty, if any. In addition, notwithstanding the foregoing, (i) certain Refurbished/Closeout Products that are not manufactured (but are resold) by Seller, may carry the original OEM warranty for such products, if any, which may be longer or shorter than Seller's limited warranty for Refurbished/Closeout Products. All sales of Refurbished/Closeout Products are final.

To obtain service under this warranty, the defective product, together with a copy of the sales receipt, serial number if applicable, or other satisfactory proof of purchase and a brief description of the defect, must be shipped freight prepaid to Seller at the following address: One Jake Brown Road, Old Bridge, New Jersey 08857.

This warranty does not cover failure of performance or damage resulting from (i) use or installation other than in strict accordance with manufacturer's written instructions, (ii) disassembly or repair by someone other than the manufacturer or a manufacturer-authorized repair center, (iii) misuse, misapplication or abuse, (iv) alteration, (v) exposure to unusual physical or electrical stress, abuse or accident or forces or exposure beyond normal use within specified operational or environmental parameters set forth in applicable product specifications, (vi) lack of reasonable care or (vii) wind, ice, snow, rain, lightning, or any other weather conditions or acts of God.

OTHER THAN THE WARRANTIES SET FORTH ABOVE, SELLER MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND, EXPRESS OR IMPLIED, AS TO THE CONDITION, DESCRIPTION, FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR AS TO ANY OTHER MATTER, AND SUCH WARRANTIES SET FORTH ABOVE SUPERSEDE ANY ORAL OR WRITTEN WARRANTIES OR REPRESENTATIONS MADE OR IMPLIED BY SELLER OR BY ANY OF SELLER'S EMPLOYEES OR REPRESENTATIVES, OR IN ANY OF SELLER'S BROCHURES MANUALS, CATALOGS, LITERATURE OR OTHER MATERIALS. IN ALL CASES, BUYER'S SOLE AND EXCLUSIVE REMEDY AND SELLER'S SOLE OBLIGATION FOR ANY BREACH OF THE WARRANTIES CONTAINED HEREIN SHALL BE LIMITED TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT F.O.B. SHIPPING POINT, AS SELLER IN ITS SOLE DISCRETION SHALL DETERMINE. SELLER SHALL IN NO EVENT AND UNDER NO CIRCUMSTANCES BE LIABLE OR RESPONSIBLE FOR ANY CONSEQUENTIAL, INDIRECT, INCIDENTAL, PUNITIVE, DIRECT OR SPECIAL DAMAGES BASED UPON BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT TORT LIABILITY OR OTHERWISE OR ANY OTHER LEGAL THEORY, ARISING DIRECTLY OR INDIRECTLY FROM THE SALE, USE, INSTALLATION OR FAILURE OF ANY PRODUCT ACQUIRED BY BUYER FROM SELLER.

All claims for shortages, defects, and non-conforming goods must be made by the customer in writing within five (5) days of receipt of merchandise, which writing shall state with particularity all material facts concerning the claim then known to the customer. Upon any such claim, the customer shall hold the goods complained of intact and duly protected, for a period of up to sixty (60) days. Upon the request of Seller, the customer shall ship such allegedly non-conforming or defective goods, freight prepaid to Seller for examination by Seller's inspection department and verification of the defect. Seller, at its option, will either repair, replace or issue a credit for products determined to be defective. Seller's liability and responsibility for defective products is specifically limited to the defective item or to credit towards the original billing. All such replacements by Seller shall be made free of charge f.o.b. the delivery point called for in the original order. Products for which replacement has been made under the provisions of this clause shall become the property of Seller. Under no circumstances are products to be returned to Seller without Seller's prior written authorization. Seller reserves the right to scrap any unauthorized returns on a no-credit basis. Any actions for breach of a contract of sale between Seller and a customer must be commenced by the customer within thirteen (13) months after the cause of action has accrued. A copy of Seller's standard terms and conditions of sale, including the limited warranty, is available from Seller upon request. Copies of the limited warranties covering third-party proprietary sub-assembly modules and private-label products manufactured by third-parties may also be available from Seller on request. **(Rev 0713)**