

Smart-AM

SMART AUDIO VIDEO INNOVATION

User Manual

HDTV Router



**Multi-format non-blocking audio, video, RS-232
and infrared distribution 8x8 matrix.
Controlled via software, remote control or over the Internet.**

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Chapter 1: Introduction

What's in the box:

Matrix	
HDC-MXS	HDTV Component or UXGA + Audio over CAT5 8x8 Matrix with RS232 Control. Includes: [HDC-MX0808, CCRS232MF06, SM-CSW & (CCPWR06US)]
Receivers	
XTP-RXS	XTPRO UXGA/Audio/RS232/IR CAT5 Receiver with Dual Video support VGA connector for video and 3.5mm jack for audio
XTP-RXLS	XTPRO UXGA/Audio/RS232/IR CAT5 Long Range Receiver with Dual Video support VGA connector for video and 3.5mm jack for audio
XTA-RXS	XT-AV UXGA/Audio Receiver with VGA connector for video and jack 3.5mm for audio
HDXP-RXS	HDTV Video/Audio/RS232/IR CAT5 Receiver with Dual Video support 3 x RCA connector for video and RCA for audio
HDC-VX-RXS	Composite Video/Audio/IR CAT5 Point to Point Receiver 3 X RCA connector for video and RCA for audio
Cables & Accessories	
SM-TCPS	TCP/IP Control. Includes: [SMTCP, (CCRS232MM) & (PS5VD1A)]
SM-EYE	External Infrared Receiver; IR range of 10 to 30 ft.
SM-LED	IR Emitter 6 ft. single LED
SM-CSW	GUI software for source/destination selection and name editing for all SmartAVI Matrixes/routers
CCVGAMM06	6' male-to-male UXGA cable
CCVGARCAMM06	6' VGA male-to-RCA male
AD3.5MM2RCA	Audio adapter from 3.5mm to 2 RCAs
SM-RMT	Remote Control type 1

Chapter 1: Introduction

Overview

At times multiple AV signals need to be transferred to multiple nearby output monitors. The HDTV Router allows multiple VGA/audio inputs to be routed to multiple outputs simultaneously, by way of a direct connection into the router.

The HDTV Router is a high-quality switching matrix for VGA type signals. All signal formats are catered for including VGA, SVGA, XGA, RGBHV and sync on green (SOG) applications. For ease of installation, Standard VGA connectors (HD15 sockets) are used for the input as well as the output video signal. All that is required is a standard pin-to-pin VGA cable to connect to the signal source.

Stereo audio can also be routed to multiple outputs. The audio can either be routed independently or together with the video signal using the SmartControl software that is very easy to use.

Note: for maximum signal performance, use only high quality cable that has internal coaxial cable for each color.

The units contain a very high bandwidth routing matrix for the Red, Green and Blue video channels.

Applications

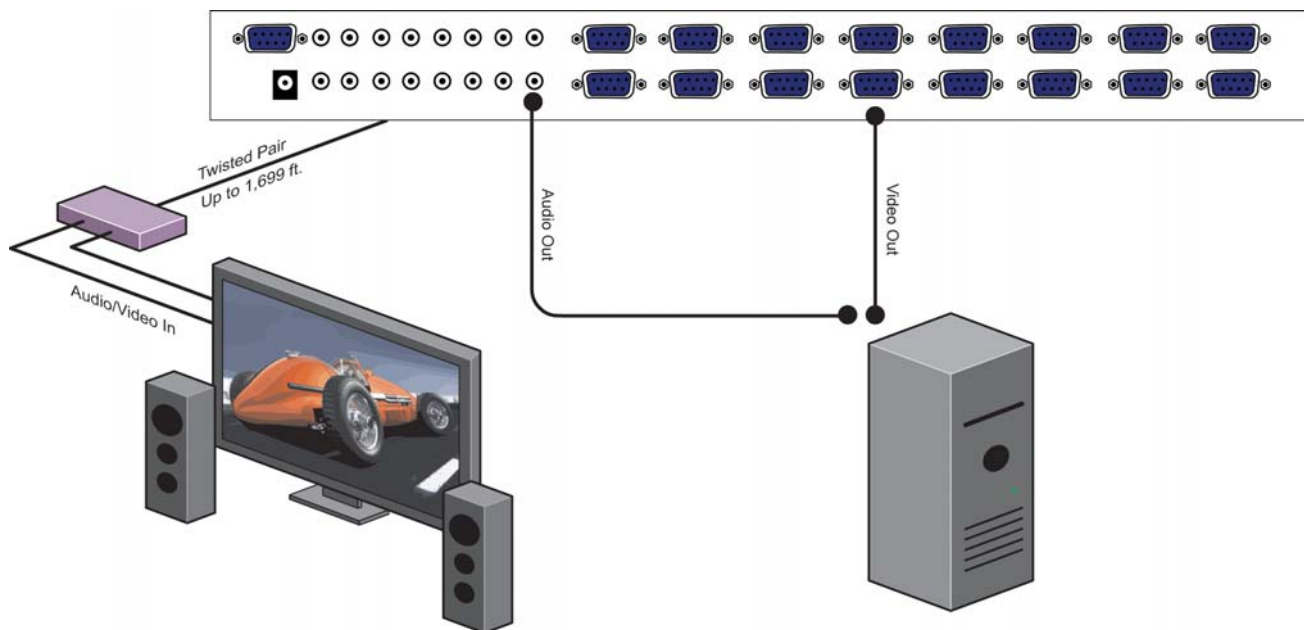
- Wall Displays
- Audio Visual Presentation
- Digital media
- Shopping centers
- Airports
- Security
- Dealer rooms
- Point of sale
- Control rooms
- Hotels

Chapter 2: Installation

Connecting the HDTV Router (Quick Start)

Warning: As a precaution, we recommend that you disconnect all power cords and make sure that all devices are turned off.

1. Plug in all external audio/video sources to the back of the HDTV Router. (Inputs)
2. Connect all external monitors and speakers to the back of the HDTV Router. (Outputs)
3. Connect a serial cable from the RS-232 port on your computer to the RS-232 port located on the back panel of the HDTV Router unit.
4. Plug power cable into the HDTV Router unit.
5. Install SmartControl software.
6. Power on the HDTV Router.



Chapter 2: Installation

Connecting the HDTV Router (Detailed Instructions)

Video and Audio Inputs

The video input for the HDTV Router is a standard HD15 connection.

Connect all of the Input video sources to the back of the HDTV Router unit.

Hint: You may want to label the input video connections so as not to lose track of where the signal is coming from. Later on when the software is installed you will be able to give each connection a name and the software will remember it for you. This way you can switch the video connections without having to look at the physical connections on the back of the unit. (You can also use the included page at the end of this manual in order to keep track of the connections as you make them.)

The audio inputs for the HDTV Router are standard 3.5 mm Stereo Miniplug connectors.

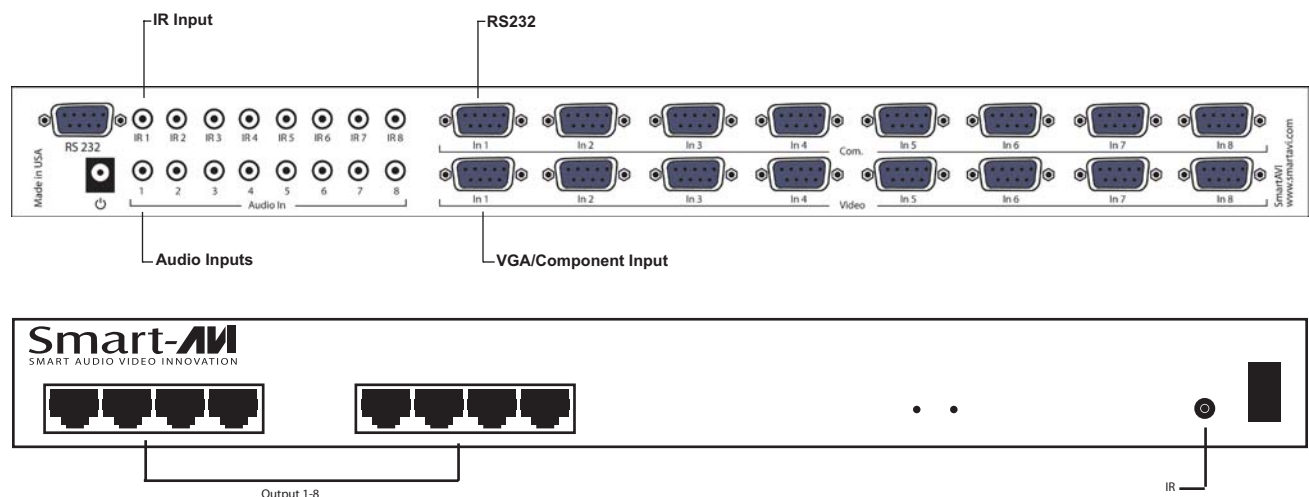
Connect all of the audio inputs to the back of the HDTV Router unit. Many computer audio sources use this standard connection but there is other equipment such as receivers, and VCRs where a special adapter cable will be needed. Such as a 3.5mm miniplug to stereo RCA cable.

Make sure that the audio and video are coming from the same source and are plugged the same input number. For example, if the audio from one computer is connected to input 1, then the video should also be connected to input 1.

Video and Audio Outputs

The video and audio connections for the HDTV Router outputs are exactly the same. The only difference is that they are located on the left side of the back panel

Connect all of the external video monitors and corresponding speakers to the output connections located on the back of the SuperMatrix unit.

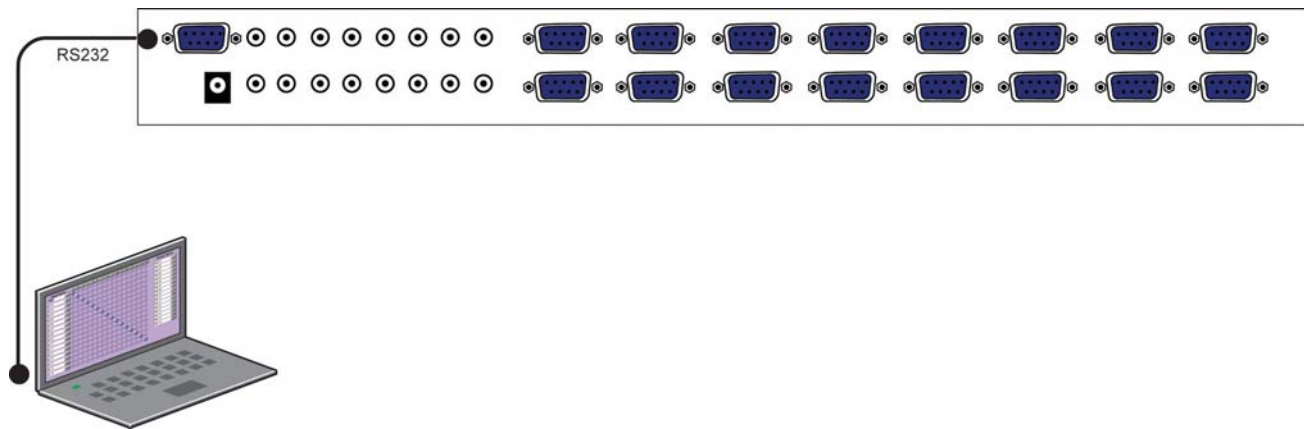


Chapter 2: Installation

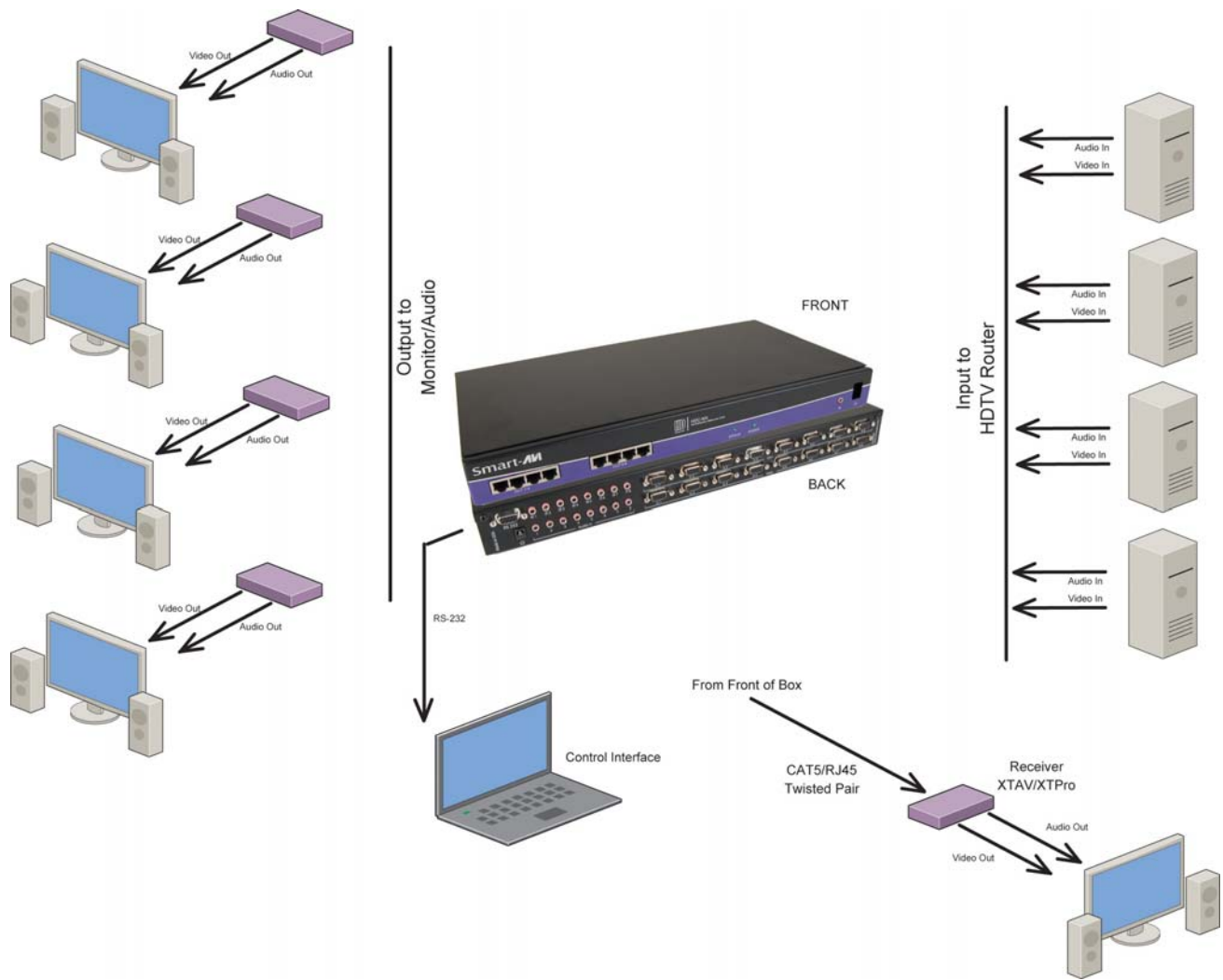
Connecting the Communication Cable: RS-232

Each unit can be controlled by a RS-232 port connected from the back of the chassis. The SmartControl software will be used to control the units.

1. Connect the RS-232 cable the control computer by connecting the female RS-232 connector into the male RS-232 connector of the PC. Turn the side screws so that it does not accidentally become disconnected
2. Connect RS-232 cable connector to the male RS-232 connector on the back of the chassis.



Chapter 2: Installation



HDTV Router connection diagram

System Power ON

You are now ready to turn on the system. Make sure that all connections are plugged in and all video monitors and speakers that you wish to use are connected.

1. Plug in the power cord to the back of the HDTV Router unit. Connect this power cord to the wall.
2. Turn computer on and make sure that the boot up process has completed.
3. Observe to see if LEDs are lit. The HDTV Router unit has two. One of those LEDs is for the power and the other is to indicate that the unit is functioning properly.
4. Power on all external monitors and speakers.

Chapter 3: Software Installation & Operation

Find the Installation CD that came with your HDTV Router unit. This CD has the SmartControl software that you will need in order to control the unit using a computer.

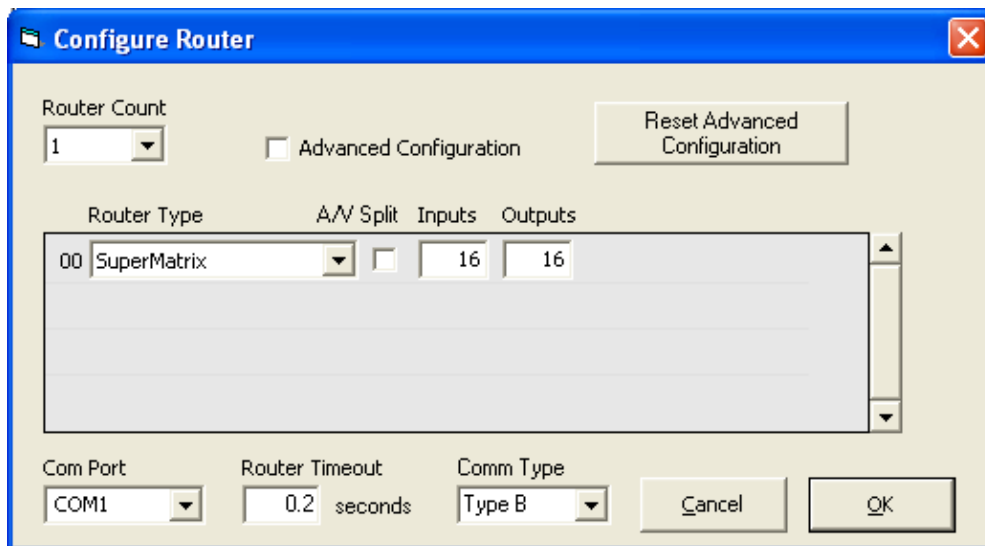
Insert the CD into your CD-ROM. On the CD you should see:

- SmartControl Installer.exe
- SmartControl Help File
- HDTV Router Manual in PDF format

Double click SmartControl.exe in order to initiate software installation. Click Install. After installation has completed, click CLOSE.

In order to use the software, click on the START button>Programs>SmartControl. There you should see a help file, the SmartControl launcher as well as a shortcut to uninstall SmartControl. Click on SmartControl in order to launch the software.

When the software starts you will see a screen like this.



Advanced Configuration: If you have more than one Router installed you will want to check this box.

Router Type: Select SuperMatrix.

A/V Split: Check this box if you need to route audio and video independently, regardless from which source they originated from. Leave unchecked if you want audio and video signals from the same input to remain together.

For example, if you wanted to route different video feeds to different locations but wanted all of them to have the same audio, you should check the box.

Chapter 3: Software Installation & Operation

Inputs/Outputs: Enter the number of Inputs/Outputs your HDTV Router has. For now we will assume that there are 16 inputs and 16 outputs.

Com Port: Select the appropriate com port that your computer is using to access the router.

Router Timeout: By default this is 0 meaning the computer acknowledges commands almost instantly. Sometimes a computer takes longer to respond. This setting should be left at 0. If you need to change it, it should be no higher than 0.2.

After you have entered in the necessary information click OK.

This will now take you to the Main Routing Window where you can route the different video/audio connections.



On this screen you will notice the input buttons running down the left side while the output buttons run across the top. They are each labeled 1 through 16.

Note: The three small colored buttons at the lower right labeled ALL, VIDEO, and AUDIO are not available if AV Split was not checked when you configured your router.

Chapter 3: Software Installation & Operation

The Main Routing Window enables you to control the router(s) connections by means of the matrix panel, the button panel, or with pre-recorded routes called macros.

Matrix Panel: This is probably the simplest way to route the connections. Simply click on the cross point itself. The input on the left will then be routed to the output above.

Note: Inputs can be routed to several different outputs, but each output can only have a single input at any one time. So you can have several connections horizontally but not vertically.



The Button Panel: These are the numbered buttons across the top and left sides. Click an output button on the top, and then click an input button on the left.

Options for using the Button Panel

- **Output Options:**

To select multiple outputs next to each other, click on one output, then hold the shift key down and click the last output. When the input is clicked, it is routed to all selected outputs

To select multiple outputs individually, hold the control key down and click on any number of outputs. When the input is clicked, it is routed to all selected outputs.

- **Input Options:**

To route an input to all the outputs at once, hold the control key down and click on an input.

To leave the outputs selected after the route is made, hold the shift key down and click on an input.

Chapter 3: Software Installation & Operation

Macros: This section of the window is used to save and play back macros. Macros store a set sequence of routes.

To record a macro:

1. Click on the Record button (last button shown above). A blinking “recording” message below this button will be displayed to indicate that all routes are being recorded.
2. Select the desired cross points. (See Matrix Routing for details on making these routes.) There is no limit on the number of routes you may record.
3. If you click a macro button while in the record mode, the macro will be executed, and these routes will be added to the recording. This makes it possible to combine the routes of two or more macros into one bigger macro.
4. When finished, click the “Save Macro” button. You will be instructed to then click on one of the macro buttons. Doing this will save the recorded routes to that button.

To cancel saving the macro, click the “Cancel Save” button.

5. To play back a macro, simply click on one of the 50 macro buttons. Use the scrollbar to bring any of these into view.
6. The macros are automatically saved in the current configuration file. They are also saved when you select the File/Save Configuration... menu.

To save macros in a separate file for a special purpose, select the File/Save Macros...menu.

Chapter 4: Technical Information

HDTV Router SPECIFICATIONS	
Video	
Bandwidth	400 MHz
Input Signal Level	1 Volt pk-pk into 75R
Output Impedance	100 Ohms
Input Impedance	75 Ohms
Connector	8 x HD15 socket female
Format	VGA/SVGA/XGA/RGBHV/RGsb/ CVBS/YC/YUV/RGBS
Syncs	TTL5VDC
Bandwidth	Horizontal Sync up to 85KHz
RS-232	8 x RS232 DB9 Female, TX, RX, GND
Infrared	8 x IR 3.5mm Jack to IR emitter
Back Panel	8 x RJ45 with video, audio and data modulated within single UTP
Audio	
Signal	15KHz 0dB unbalanced 100 Ohms impedance
Connector	RCA or 3.5 Stereo Jack x 8
Control	
IR	3.5mm connector with 38khz x 8
DB9	female RS232 or RS422 @ 9600bps - DB9 Female
Power Supply	
5V DC-3A	
Dimensions	
Height X Width X Depth	2.73" (69.34mm) x 19"(482.6mm) x 17.72"(450mm)
Weight	9 lbs.

Chapter 4: Technical Information

XTPRO SPECIFICATIONS

Receiver with dual monitors, Audio and IR/RS-232 support

VGA Data

Format	RGBHV, RGsB, YUV, Y/C, CVBS
Resolution	Up to 1900 x 1200 VGA, SVGA, XGA, SXGA
Connector Type	HD 15 socket

Audio

Signal Type	Stereo unbalanced
Connector Type	3.5mm jack socket

Infrared

Signal Type	30 to 110Khz
Connector Type	3.5mm socket

RS-232

Speed	2400 to 115Kbps
Connector Type	DB9 Male

Power

Requirements	5VDC @.5A
Connector	2.1mm DC jack (center +ve)

Physical

Dimensions	135 x 90 x 23mm (26 with pegs)
Weight	.8 lbs or .36 kg



XTAV SPECIFICATIONS

Receiver with Video and Audio support

VGA Data

Format	RGBHV, RGsB, YUV, Y/C, CVBS
Resolution	Up to 1900 x 1200 VGA, SVGA, XGA, SXGA
Connector type	HD 15 socket

Audio

Signal Type	Stereo unbalanced
Connector	3.5mm jack socket

Power

Requirements	5VDC @.5A
Connector	2.1mm DC jack (center +ve)

Physical

Dimensions	90 x 90 x 23mm (26 with pegs)
Weight	.6 lbs or .36 kg



HD-Lite SPECIFICATIONS

TRANSMITTER AND RECEIVER

Video

Bandwidth 400MHz, Analog signal Level 1 volt, Impedance 75 ohms

Connector

3 RCA

Format

YPbPr analog component video

Audio

Bandwidth 20 KHz, Signal level OdB, Impedance 10K ohms, Connector RCA Left and Right

System and Cable

Type Cat5 UTP EIA 568A, Connector RJ45

Power

Requirements 5V DC @500mA, Connector 5x2.1 DC Jack



HD-XT SPECIFICATIONS

TRANSMITTER AND RECEIVER

Video

Bandwidth 400MHz, Analog signal Level 1 volt, Impedance 75 ohms

Connector

3 RCA

Format

YPbPr analog component video

Audio

Bandwidth 20 KHz, Signal level OdB, Impedance 10K ohms, Connector RCA Left and Right

System and Cable

Type Cat5 UTP EIA 568A, Connector RJ45

Power

Requirements 5V DC @500mA, Connector 5x2.1 DC Jack

RS232

DB9 Male/Female, baudrate up to 115,000bps

IR

IR Emitter Output, IR Frequency Range:30KHz to 80KHz
Emitter Distance: Up to 10', Connector: 3.5mm stereo jack for emitter



Chapter 5: Communication Protocol

Where;

<Source> =Single Byte, Switch Input channel -1

<Destination> =Single Byte, Switch output channel number -1

Response: If successful the unit will respond with an ACK (0x06)

Examples

1. Sending the following byte string sets Source 1 to Destination 1 on chassis 0
0xBE,0xEF,0x00,0x00,0x00,0x00,0x00,0x51,
2. Sending the following byte string sets Source 2 to Destination 1 on chassis 0
0xBE,0xEF,0x00,0x00,0x00,0x01,0x00,0x50,
3. Sending the following byte string sets Source 2 to Destination 2 on chassis 0
0xBE,0xEF,0x00,0x00,0x00,0x01,0x01,0x51,
4. Sending the following byte string sets Source 16 to Destination 16 on Frame 15
0xBE,0xEF,0x0F,0x00,0x00,0x0F,0x0F,0x5E,

7.2 Send Message Command : CMD = 0x01

Writes message to specified On Screen Display.

Send:

<0xBE><0xEF><Address><0x00><0x01><Destination><OSDLine><Message>
<BCC>

Where;

<Destination> =Switch output channel number – 1

<OSDLine> =Screen Line number

<Message> =This section MUST be 28 bytes long
(Please see the following text for more details on this)

Due to the limitations of both the On Screen Display and the amount of available non-volatile memory in the SmartNet it is necessary for the Host system to perform some pre-processing of the message to be displayed.

The characters in the message to be displayed need to be translated using the rules detailed in Appendix B.

Response: If successful the unit will respond with an ACK (0x06)

Examples

1. Sending the following byte string sends the text "Message" to Line 2, destination 1 of Switch 0

BE,EF,00,00,01,00,02,18,2E,3C,3C,2A,30,2E,0B,5B,

2. Sending the following byte string sends the message "Abandon Ship!" to line 6, destination 6 of switch 5

BE,EF,04,00,01,05,06,0C,2B,2A,37,2D,38,37,0B,1E,31,32,39,0B,0B,0B,0B,0B,0B,0B,0B,0B,0B,0B,0B,0B,0B,0B,0B,60,

Set Video Only Crosspoint

Cmd = 3

Databytes = destination, source

i.e. to switch video on output 3 to input 4

CMD = 3

Databytes = 3,4

Chapter 5: Communication Protocol

Set Audio Only Crosspoint

Cmd = 4

Databytes = destination, source

i.e. to switch audio on output 3 to input 4

CMD = 3

Databytes = 3,4

Mute Video on specified output

Cmd = 5

Databytes = Destination, State (0=off, 1 = on)

i.e. to turn video off on output 3

CMD=5

Databytes = 3,0

i.e. to turn video on on output 3

Mute Audio on specified output

Cmd = 6

Databytes = Destination, State (0=off, 1 = on)

i.e. to turn audio off on output 3

CMD=6

Databytes = 3,0

i.e. to turn video on on output 3

CMD=6

Databytes = 3,1

Split Crosspoints - Video and Audio Differently

Cmd = 7

Not specified yet but will exist

Get Current Status

CMD 8 = current Status all

Databytes = Destination. (1-16 = specific output, 0xff = all)

i.e. to read the status of output 3 send;

CMD = 8

Databyte = 3

i.e. to read the status of all outputs

CMD=8

Databytes = 0xff

Unit will return Valid PSU as above where databytes is;

a single byte indicating currently selected source if specific destination was requested

or a string of 16 bytes indicating currently selected source for each destination starting with destination 1.

Chapter 5: Communication Protocol

The command to make the end of CAT5 line receiver (SLRX-RX300) switch between its local and remote sources is as follows;

<0xBE><0xEF><Frame Address><Reserved><CMD><DATA BYTES><BCC>

Where;

<0xBE> **always** 0xBE

<0xEF> **always** 0xEF

<Frame Address> Frame address. Set by Hex switch on unit or position in Rack frame.

<RESERVED> **always** 0x00

<CMD> 50 (0x32)

<DATABYTES> is Two bytes <DESTINATION><SOURCE> 0L = Receiver LOCAL Video/Audio, 1 = Receiver REMOTE Video/Audio

<BCC>

So if switching the Receiver on output 3 of Frame 2 to its local source send

<0xBE><0xEF><0x02><0x00><0x32><0x02><0x00><0x63>

Get System Information

Cmd = 0xff

Databytes = NULL (none)

Unit will return a valid PSU as detailed above where Databytes are as follows

<product type>, <switch configuration> , <version>

Where Product Type =

1 Byte;

0 = SmartNet V

1 = SmartNet X

3 = SLX-TX550

4 = SLX-RX300

Where Switch configuration =

2 Bytes;

<inputs><outputs>

Where Version =

3 bytes

<Version><issue><release>

Appendix A: RS232/422 Converter and Comms Cable

RS232/RS422 Converter

A suitable RS232/RS422 product can be purchased from KK Systems in Brighton, East

Chapter 5: Communication Protocol

Comms Cable

DB9 cable ended plug	Function	UTP Wire Colours (RJ45)
1	-	-
2	RX-(A)	Orange
3	TX+(B)	White & Brown
4	0V	Blue
5	-	-
6	0V	Green
7	RX+(B)	White & Orange
8	TX-(A)	Brown
9	-	-

You will also require a cable that sits between the RS422 port of the K2 converter and the Frame. It should be wired as shown below. (Tip: Cut the end off a CAT5 Patch lead and attach a DB9 Plug)

Appendix B: On Screen Display Message Processing Rules.

Available on SmartNet-V only

Due to the limitations of both the On Screen Display and the amount of available non-volatile memory in the SmartNet it is necessary for the Host system to perform some pre-processing of the message to be displayed.

The message string needs to be parsed character by character and the values translated according to the table below.

Characters	Translation Rule	Comment
"0" Through "9"	Chr\$(Asc(sChar) - 48)	Subtract 48 from ASCII value of character
"A" Through "Z"	Chr\$(Asc(sChar) - 53)	Subtract 53 from ASCII value of character
"a" Through "z"	Chr\$(Asc(sChar) - 55)	Subtract 55 from ASCII value of character
","	Chr\$(&H27)	Substitute the character "," for ASCII value 0x27
" " (space)	Chr\$(&H0b)	Substitute the character " " for ASCII value 0x0b
":"	Chr\$(&H26)	Substitute the character ":" for ASCII value 0x26
"/"	Chr\$(&H28)	Substitute the character "/" for ASCII value 0x28
"" (Apostrophe)	Chr\$(&H29)	Substitute the character "'" for ASCII value 0x29
"-"	Chr\$(&H0A)	Substitute the character "-" for ASCII value 0x0a
"?"	Chr\$(&H70)	Substitute the character "?" for ASCII value 0x70
"*"	Chr\$(&H5F)	Substitute the character "*" for ASCII value 0x5f
"="	Chr\$(&H78)	Substitute the character "=" for ASCII value 0x78
">"	Chr\$(&H7A)	Substitute the character ">" for ASCII value 0x78
"<"	Chr\$(&H7B)	Substitute the character "<" for ASCII value 0x7b
"["	Chr\$(&H61)	Substitute the character "[" for ASCII value 0x61
"]"	Chr\$(&H62)	Substitute the character "]" for ASCII value 0x62

Please see the following page for a working example of these rules in the form of a Visual BASIC function.

Chapter 5: Communication Protocol

Appendix B: Continued..... (Sample Translation routine in Visual BASIC)

Function LookUpOSDString(sTextMessage As String) As String

' Look up chars and translate to message for OSD

Dim iLoop As Integer
Dim sNewMess As String
Dim sChar As String

sNewMess = Space\$(MAX_SCREEN_CHAR)

For iLoop = 1 To Len(sTextMessage)

sChar = Mid\$(sTextMessage, iLoop, 1)

Select Case sChar

Case "0" To "9"

Mid\$(sNewMess, iLoop, 1) = Chr\$(Asc(sChar) - 48)

Case "A" To "Z"

Mid\$(sNewMess, iLoop, 1) = Chr\$(Asc(sChar) - 53)

Case "a" To "z"

Mid\$(sNewMess, iLoop, 1) = Chr\$(Asc(sChar) - 55)

Case "."

Mid\$(sNewMess, iLoop, 1) = Chr\$(&H27)

Case " "

Mid\$(sNewMess, iLoop, 1) = Chr\$(&HB)

Case ":"

Mid\$(sNewMess, iLoop, 1) = Chr\$(&H26)

Case "/"

Mid\$(sNewMess, iLoop, 1) = Chr\$(&H28)

Case ""

Mid\$(sNewMess, iLoop, 1) = Chr\$(&H29)

Case "-"

Mid\$(sNewMess, iLoop, 1) = Chr\$(&HA)

Case "?"

Mid\$(sNewMess, iLoop, 1) = Chr\$(&H70)

Case "*"

Mid\$(sNewMess, iLoop, 1) = Chr\$(&H5F)

Case "="

Mid\$(sNewMess, iLoop, 1) = Chr\$(&H78)

Case ">"

Mid\$(sNewMess, iLoop, 1) = Chr\$(&H7A)

Case "<"

Mid\$(sNewMess, iLoop, 1) = Chr\$(&H7B)

Case "("

Mid\$(sNewMess, iLoop, 1) = Chr\$(&H61)

Case ")"

Mid\$(sNewMess, iLoop, 1) = Chr\$(&H62)

Case Else

Mid\$(sNewMess, iLoop, 1) = Chr\$(&HB)

End Select

Next iLoop

LookUpOSDString = sNewMess

End Function

Chapter 6: Appendices

Limited Warranty Statement

A. Extent of limited warranty

1. SmartAVI Technologies, Inc. warrants to the end-user customers that the SmartAVI product specified above will be free from defects in materials and workmanship for the duration of 1 year, which duration begins on the date of purchase by the customer. Customer is responsible for maintaining proof of date of purchase.
2. SmartAVI limited warranty covers only those defects which arise as a result of normal use of the product, and do not apply to any:
 - a. Improper or inadequate maintenance or modifications
 - b. Operations outside product specifications
 - c. Mechanical abuse and exposure to severe conditions
3. If SmartAVI receives, during applicable warranty period, a notice of defect, SmartAVI will at its discretion replace or repair defective product. If SmartAVI is unable to replace or repair defective product covered by the SmartAVI warranty within reasonable period of time, SmartAVI shall refund the cost of the product.
4. SmartAVI shall have no obligation to repair, replace or refund unit until customer returns defective product to SmartAVI.
5. Any replacement product could be new or like new, provided that it has functionality at least equal to that of the product being replaced.
6. SmartAVI limited warranty is valid in any country where the covered product is distributed by SmartAVI.

B. Limitations of warranty

TO THE EXTENT ALLOWED BY LOCAL LAW , NEITHER SMARTAVI NOR ITS THIRD PARTY SUPPLIERS MAKE ANY OTHER WARRANTY OR CONDITION OF ANY KIND WHETHER EXPRESSED OR IMPLIED , WITH RESPECT TO THE SMARTAVI PRODUCT , AND SPECIFICALLY DISCLAIM IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY , AND FITNESS FOR A PARTICULAR PURPOSE

C. Limitations of liability

To the extent allowed by local law the remedies provided in this warranty statement are the customers sole and exclusive remedies

TO THE EXTENT ALLOWED BY LOCAL LAW , EXCEPT FOR THE OBLIGATIONS SPECIFICALLY SET FORTH IN THIS WARRANTY STATEMENT , IN NO EVENT WILL SMARTAVI OR ITS THIRD PARTY SUPPLIERS BE LIABLE FOR DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES WHETHER BASED ON CONTRACT , TORT OR ANY OTHER LEGAL THEORY AND WHETHER ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

D. Local law

To the extent that this warranty statement is inconsistent with local law, this warranty statement shall be considered modified to be consistent with such law.

Chapter 6: Appendices

Input	Description	Output	Description
1		1	
2		2	
3		3	
4		4	
5		5	
6		6	
7		7	
8		8	
9		9	
10		10	
11		11	
12		12	
13		13	
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15		15	
16		16	
17		17	
18		18	
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22		22	
23		23	
24		24	
25		25	
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