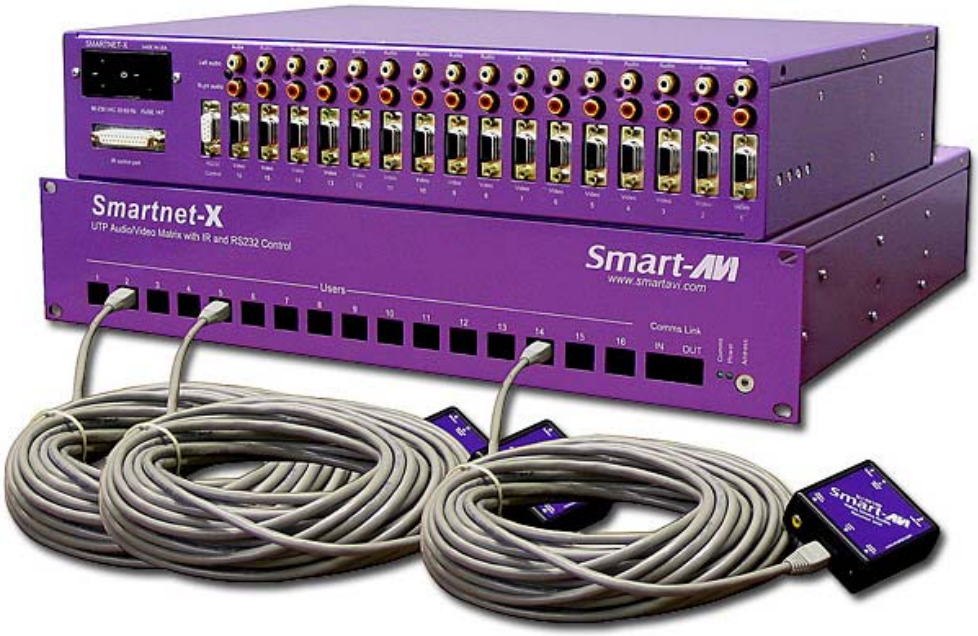
SmartNet-X routes up to 16 XVGA and Stereo Audio Sources to 16 Remote Monitors and Speakers located at up to 600ft and connected with Inexpensive CAT5.



The Smartnet-X series of products provide an unprecedented range of switching and distribution equipment for XVGA and stereo Audio. By combining the features of High quality Video matrix, High quality Audio matrix, Signal distribution via Cat 5 cable, Interactive Infrared control and Windows control Sofware.

The SMARTNET-X creates an extremely powerful and cost effective product for use in high quality Video switching, security and data distribution. Housed in standard 19" rack mounting cases, various models are available allowing multiple configurations and applications providing a high quality signal conversion from the Cat 5 cable to the plasma, computer or other display device.

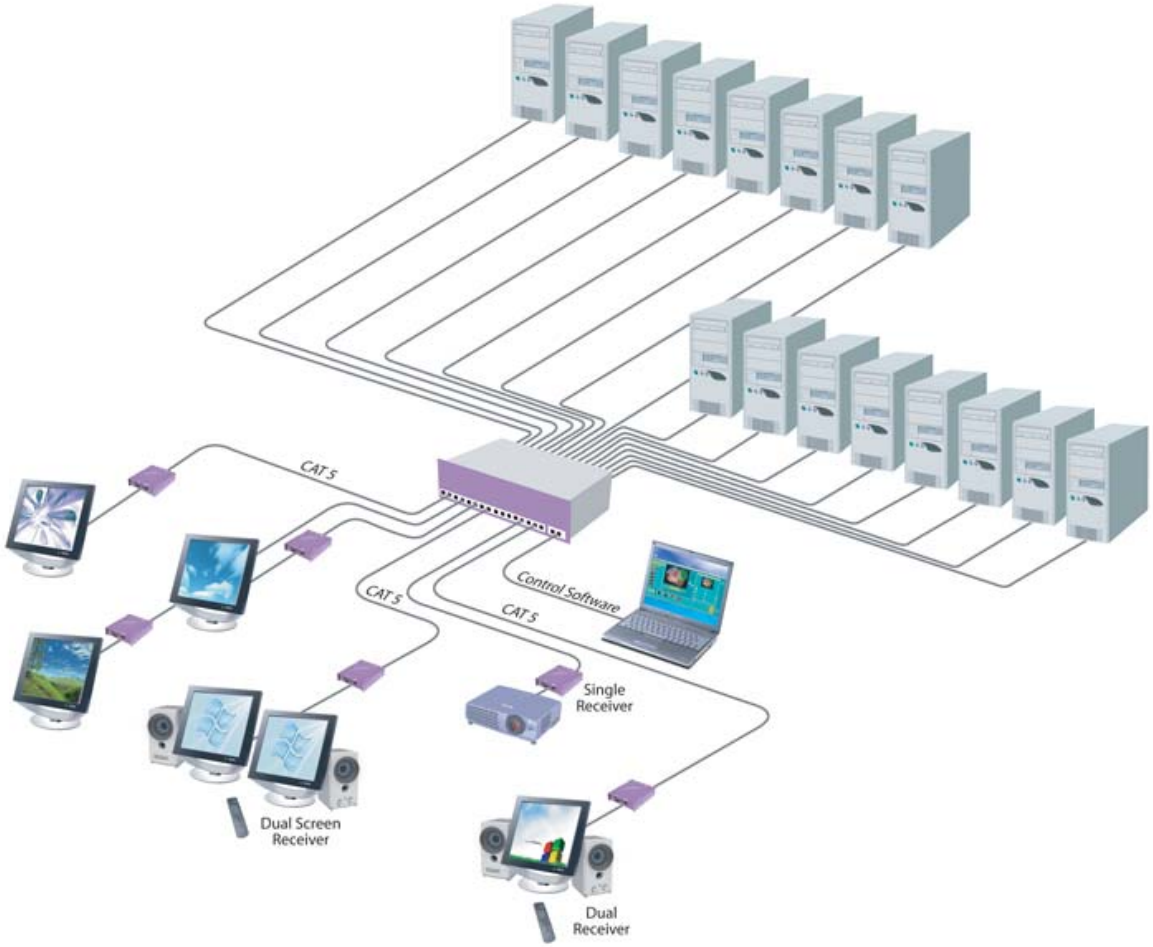
FEATURES

- ***Very high quality Audio switching***
- ***Very high quality Video switching***
- ***High resolution up to 1600 x 1200***
- ***Infra Red and RS422 control***
- ***PC Windows software control***
- ***Integral UTP distribution***
- ***Cable compensation up to 300m***
- ***Compact metal housing for receivers***
- ***Can be mixed with other video signal (RGB, YUV, RGBS)***

XVGA-AUDIO-MATRIX

SMARTNET-X

Application Diagram



Applications

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

Overview

The Smartnet-X is a high-quality switching matrix for video and stereo audio type signals. All signal formats are catered for including VGA, SVGA, XGA, UXGA. Standard VGA connectors (HD15 sockets) are used on the rear for ease of installation for video connectivity and standard computer audio.

The units contain a very high bandwidth routing matrix for the Red, Green and Blue video channels and separate switching layers for stereo audio. The color signals and are then balanced internally and combined with the audio signals. This combined signal is then driven out through standard RJ45s on the front panel.

Standard Smartpath receiver units are used at the end on each Cat 5 cable to recover the signals. High quality receiver circuits incorporating cable loss compensation provide excellent results up to resolutions of 1600 x 1200 @85Hz.

Compatible with all types of UTP and STP cable, the receivers can have optional internal skew compensation fitted, which solves the problem of delay errors found in the higher specification structured cabling.

The Main Transmitter

Signal distribution

All signals are distributed balanced and driven differentially, this method provides for the best immunity to external noise and interference. Sending signals balanced also minimizes emissions, as any interference transmissions from the cable are cancelled out. 3 Pairs of the Cat 5 cable are used for the three colors and the stereo audio. Pair 4 is used for inline power and the returned Infrared signals from the user.

Control

Each unit can be controlled via a RS422 port connecting via a RJ45 on the front of the main chassis. Two connectors are provided for expansion, allowing a simple Cat5 patch cable to link to additional units. An adjustable rotary switch allows each to unit be assigned a unique ID, read when the unit is first powered up. An optional Windows application (SmartNetControl) is available including a RS232 to RS422 converter.

In addition to the centralized control from a computer, each output can be selected individually. Each Smartpath receiver unit also has an optional IR eye. Using a handset or other third party system each output can be selected by simply pressing the appropriate number corresponding to the input number. Once selected the source device can now be controlled from the remote location providing full IR interactivity.

Local audio output

To help accommodate multi-room audio systems there is an option for local audio output on the front of the unit. The audio is presented as dual RCAs for the stereo pair. Output drivers allow the audio to be connected to any amplifier input at line level. The audio will follow whichever source device is selected.

The Receiver

The dual screen receiver with control

The dual screen receiver has the capability to allow the user to select the each device from his remote position using RS232 control or Infrared, This is also capable for driving the same video and audio signals to two independent devices,

The single screen receiver

The compact single screen receiver is used when no control is required. Being single screen, the units is designed to drive a single display but also can be configured for multiple video formats.

Cable compensation

Owing to the losses in the UTP cable provision is made for compensating the attenuation in the Video signal. For each colour there is an equalization adjustment. Turning the potentiometer clockwise increases the equalization and can compensate for more than 300m of Cat 5 cable.

There is an indicator on the side of the unit denoting local power status. The LED will illuminate when the receiver unit is connected to the appropriate transmitter to show inline power. An optional DC connection is also available, this feature is used in a point to point application to enable powering of the transmitter from the receiver unit.

MATRIX SPECIFICATIONS

ITEM	DESCRIPTION
Video	
Bandwith	400MHz
Input Signal Level	1Volt pk-pk into 75R
Output Impedance	100 Ohms
Input Impedance	75R Ohms
Connector	HD15 socket
Format	VGA/SVGA/XGA/RGBHV/RGsB/CVBS/YC/YUV/RGBS
Syncs	TTL5VDC
Bandwith	Horizontal Sync up to 85KHz
Audio	
Signal	15KHz 0dB unbalanced 100ohms impedance
Connector	RCA or 3.5mm Stereo Jack
Power	
Voltage	90-230V IEC 1A A/S 50/60 Hz
Control	
IR	Individual Control
RS422	Dual RJ45 Sockets
Dimensions	
Height x Width x Depth	2U (88mm) x 19" x 450mm
Weight	20 lbs.

RECEIVERS SPECIFICATIONS

RECEIVER TYPE A		RECEIVER TYPE B	
Video		***Video***	
Bandwith	250MHz	Bandwith	250MHz
Signal Level	1 Volt	Signal Level	1 Volt
Impedance	75 ohms	Impedance	75 ohms
Connector	High density HD15	Connectors	2 High density HD15
Audio		***Audio***	
Bandwith	15KHz	Bandwith	15KHz
Signal Level	0dB unbalanced	Signal Level	0dB unbalanced
Output Impedance	100 ohms	Output Impedance	100 ohms
Connector	3.5mm Stereo Jack	Connector	3.5mm Stereo Jack
Power		***Power***	
Requirements	24V @100mA(inline)	Requirements	24V @100mA(inline)
Optional Connector	2.1mm DC jack (center +ve)	Optional Connector	2.1mm DC jack (center +ve)
		Control	
		Infrared Control	IR control @ 38kHz RC5
		Infrared Interactivity	IR up to IrDA
		Windows Software	RS232
Physical		***Physical***	
Dimensions	95 x 80 x 23 mm	Dimensions	95 x 110 x 23 mm
Weight	0.15 Kg	Weight	0.15 Kg

ORDER INFO

Model	Description
SNX1616	Smartnet-X XVGA Matrix 16 x 16
SNX1616-A	Smartnet-x XVGA and Audio Matrix 16 x 16
SNXRA	1 Port Receiver
SNXRB	2 Port Receiver with RS232 and IR Control

SmartAVI, Inc.
3111 Winona Ave, Suite 101 Burbank, CA 91504
Tel (818) 565-0011 • Fax (818) 565-0020
Email: info@smartavi.com • www.smartavi.com

SMAVI-B121903V1