

IN1403

Video Scaler with 4 x 1 Switcher and On-Screen Control Menus



The **IN1403** is a full featured video scaler that combines digital video decoding, advanced video scaling / line multiplication and a 4-input A/V switcher into a single product.

Superb Video Scaling Technology - Employing sophisticated video de-interlacing, scaling, and filtering techniques, the **IN1403** offers an output signal with superb image detail and enhanced brightness that is entirely free of visible scan lines. The scaler automatically senses the type of input source material and selects the optimal motion compensation formula to eliminate motion artifacts in the output image. The **IN1403** employs high bandwidth digital signal processing and high speed digital to analog conversion, combined with effective filtering and sharpness circuitry to maintain and enhance image detail, even at the highest output resolutions.

Advanced Quad Standard Video Decoder - A high quality video decoder in the **IN1403** provides accurate video decoding for composite video and S-Video signals in the NTSC, PAL, SECAM and NTSC 4.43 video standards. The video decoder employs an advanced 3-line adaptive comb filter for composite video input signals that greatly reduces cross-color interference and hanging dots while maintaining maximum image bandwidth and detail.

Pick the Perfect Resolution - The **IN1403** offers a wide range of output resolutions to match the optimum or native resolution of virtually any display device. The **IN1403** provides a progressive scan output signal at standard VGA resolutions and refresh rates, ensuring optimal compatibility and exceptional image quality with a wide range of CRT, LCD, DMD, ILA, D-ILA, HDLV and plasma display devices.

Selectable Refresh Rate - The **IN1403** output vertical refresh rate is adjustable from 60Hz to 120Hz. By converting PAL (50Hz) and NTSC (60Hz) input signals to higher, more ergonomic refresh rates, the **IN1403** makes it possible to display a remarkably solid, flicker-free image when using CRT monitors and projectors. Since the unit converts 50 Hz PAL and SECAM input signals to higher refresh rates with standard VGA timings, this provides enhanced compatibility with virtually all data display devices. The chart on the reverse side indicates the output resolutions and refresh rates available on the **IN1403**.

4-Input Video / Audio Switcher - The **IN1403** provides multiple inputs and flexible switching capability to accommodate a variety of applications. Inputs 1, 2 and 3 can each accept a composite video signal or an S-Video signal. Input 4 is a 15-Pin HD VGA pass-through connector for a computer video signal (passive - no scaling). Stereo audio-follow-video switching is provided for all four inputs.

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FEATURES

- Superb Quality Video Scaling with Advanced Motion Compensation
- Quad Standard Video Decoder with Adaptive Comb Filter
- 4-Input A/V Switching Capability: Inputs 1 - 3 Accept Composite Video or S-Video, Input 4 is a VGA Passive Input, Stereo Audio Connectors Provided For Each Input
- Selectable Output Resolutions: 640 x 480 up to 1365 x 1024
- Selectable Refresh Rate: 60 Hz to 120 Hz
- Comprehensive Image Controls: Position, Size, Aspect Ratio, Edge Blanking, Hue, Saturation, Brightness, Contrast, Gamma, Sharpness
- RS-232 Control of All Functions

SPECIFICATIONS

INPUT:

Connectors: Composite Video: (3) BNC female
S-Video: (3) 4-Pin Mini DIN female for Y/C
RGB: (1) 15-pin HD male (passive)
Audio: (4) Pairs female RCA for Stereo L/R

Signal: Video/Luma: 0.7 Vp-p typical, 75 Ohm impedance
Chroma: 0.3 Vp-p typical, 75 Ohm impedance

Standards Supported: NTSC / PAL / SECAM / NTSC 4.43

OUTPUT:

Connectors: RGBHV: (5) BNC female & (1) 15-Pin HD female
Audio: (1) Pair female RCA for Stereo L/R

RGB Video: 0.7 Vp-p typical, 75 Ohm impedance

Sync Format: Selectable: RGBHV (default), RGBS, RGB

Resolution: 640x480 to 1365x1024 (see chart on back)

Vertical Refresh Rate: 60 - 120 Hz (see chart on back)

GENERAL:

RS-232 Control: 1200 to 38400 baud, N, 8, 1; 3-pin Phoenix

Power Supply: Internal Switch Mode: 90 to 260 VAC; 47 to 63Hz

Power Consumption: 25 Watts

Shipping Weight: 7 lbs. / 3.5 kg Product Weight: 3.5 lbs. / 1.6 kg

Dimensions: 1.75" x 17" x 12.2" / 4.4cm x 43.2cm x 31.0cm

Included Accessories: IN9123B Rack Ears

Regulatory Approvals: UL1950, CAN/CSA-22.2 No.950, Third Edition
CE: EN55022 (1987), EN50081-1 (1991), EN50082-1 (1992 and 1994), EN60950-92

IN1403 - Available Output Resolutions & Refresh Rates

Resolution	Mode	Aspect Ratio	Refresh Rate (Hz)						
			60	72	75	85	96	100	120
640 x 480	VGA	4:3							
800 x 600	SVGA	4:3							
852 x 480	SDTV	16:9							
1024 x 768	XGA	4:3							
1152 x 864		4:3							
1280 x 720	HDTV - 720p	16:9							
1280 x 1024	SXGA	5:4							
1365 x 768	Wide XGA	16:9							
1365 x 1024		4:3							

Volume Control and Mute - can be controlled from the front panel or using RS-232 serial commands. Unique volume levels can be saved for each input and automatically recalled each time an input is selected.

Blank - Located adjacent to the input selector buttons, the **Blank** button allows the video image to be blanked. When Blank is engaged, the output signal goes to black but the sync signals continue, ensuring that the data display device retains sync lock. When the Blank button is pressed again, the previously selected input once again displayed. The Blank feature can also be engaged or disengaged using an RS-232 serial command. Video blank is functional for Inputs 1, 2 and 3. It has no effect on Input 4 which is a passive input.

Digital Freeze Frame - provides a high quality still image, useful for applications that require close examination of a specific video frame. Freeze Frame can be enabled / disabled using the front panel **Freeze** button or using an RS-232 serial command. Freeze is functional for Inputs 1, 2 and 3. It has no effect on Input 4 which is a passive input.

On Screen Menus provide easy control over video adjustments including hue, color, contrast, brightness, gamma, sharpness, image size, image position, and edge blanking. Unique image settings can be optimized and stored for each input. Each time an input is selected all image settings stored for that input are automatically recalled. The on screen menus also make it easy to verify and adjust advanced settings such as output signal resolution / refresh rate / sync format, RS-232 control options and reset to factory defaults. **System Info** is a handy menu option that uses the on screen display to show comprehensive information about the input signal and output signal and scaler settings.

Image Size, Position and Edge Blanking Controls with individual horizontal and vertical image adjustments make it easy to precisely fit the active video image to the display area and also provide for multiple aspect ratios. The digital **Freeze Frame** feature can be activated using a front panel button or via RS-232 serial commands.

The **Blue Screen** feature provides a full screen blue image for set up and testing purposes. The blue screen output signal (activated via on-screen menu) is always available, even when the input signal is missing. Blue screen acts as a test signal and is ideal for setting up the output resolution, refresh rate and position settings and to verify connection to the output display device.

RS-232 Serial Control is provided for all scaler functions including input selection, image adjustments and output settings. The **IN1403's** comprehensive RS-232 control capability facilitates complete system integration and effortless control when combined with a third-party control system.

Dual Outputs - The **IN1403** features a 5-BNC output and a 15-Pin HD output. Since both outputs are active simultaneously, the **IN1403** can directly drive two separate displays.

Rack Mountable - The **IN1403** can be mounted in a 1U rack space using the rack ears provided.