

System 5 IP

Five Input Integrated A/V Switcher with Audio Amplifier and IP Link™ Ethernet Control



NEW



DESCRIPTION

The Extron **System 5 IP** is a five input, one output integrated A/V active switcher that provides an all-in-one, affordable solution for small-scale A/V installations in classrooms, boardrooms, conference rooms, and multimedia environments. It includes such features as configurable inputs, easy-to-use IR learning, customized display control via RS-232, relays for room control, an integrated 40-watt (20 watts per channel) audio amplifier, and IP Link™ Ethernet Control.

Universal Projector Control

The System 5 IP offers two methods of projector control: RS-232 or IR. The switcher can learn IR signals from remote controls. This enables the switcher to communicate with the display and sources such as VCRs and DVD players. IR learning makes setup and operation simple and customizable. Virtually any RS-232 controllable projector or display device can be used with the System 5 IP. Extron creates and administers a wide selection of commonly used projector control drivers that enable the System 5 IP to control basic projector functions such as power and input selection. Users can create their own drivers or go to the Extron Web site to download RS-232 drivers configured for the latest and most popular projectors. In addition, a custom configuration mode is available to allow for user-defined IR or RS-232 commands.

Room Control

The System 5 IP also offers room control capability, so room lighting, screen settings, and other device functions may be controlled through the switcher's six internal relays. By providing projector control, room control, universal compatibility with displays, and system audio capabilities, the System 5 IP consolidates functions that would typically require up to six different products into one integrated solution.

Preamp Line Level and Integrated Audio Amplifier

The System 5 IP provides preamp line level audio for fixed and variable outputs on captive screw terminals for use with an external amplifier or self-powered speakers. Fixed audio outputs provide an audio signal that is unchanged by adjustments to an external audio amplifier's volume control, which is effective when the switcher is used with mixing or recording equipment. Variable audio outputs enable the audio signal's levels to be adjusted by the switcher's volume control. The System 5 IP is also equipped with an internal, 40-watt (20 watts per channel into a 4 or 8 ohm load) audio amplifier for output on four-position screw terminals connected to non-powered speakers.

IP Link™ Ethernet Control

The System 5 IP is equipped with Extron's IP Link™, an IP integration technology specifically engineered to meet the needs of professional A/V environments—from large universities and businesses to small residential installations. IP Link provides these advantages:

- **Powerful scripting capability** – All IP Link products can run sophisticated user-programmable scripts. This feature enables automated functions to operate based on assignable criteria, such as turning connected equipment on or off at predetermined times and alerting individuals if a unit is disconnected from the network.

- **Global compatibility** – All IP Link products use industry standard Ethernet communication protocols, including ARP, DHCP, ICMP (ping), TCP/IP, Telnet, HTTP, and SMTP.
- **High performance architecture** – Web pages are served up to 50 times faster (6 Mbit/sec transfer rate) than many similar products.
- **Multi-user support** – 200 simultaneous connections enable each IP Link device to support many concurrent users and improve system throughput by sending information in parallel.
- **IP Link Global Viewer** – The included management application software allows the user to control, monitor, and schedule various functions of serially-controlled products connected to IP Link products.

Control Options

System switcher control is provided via front panel operation, the optional IR 402 remote control, or optional SCP 150 Series hard-wired control pads. The front panel backlit input buttons of the System 5 IP can be individually labeled to ensure precise identification of video and audio input settings. In addition, the front panel includes buttons for display functions such as power, mute, video modes, and room controls—such as lowering or raising a display screen, or powering lights on or off. As a simplified and cost-effective option, the System 5 IP is offered without front panel controls, but still provides the front panel 15-pin HD input connector for RGBHV.



IR 402 remote control

The optional IR 402 remote and SCP 150 control pad both duplicate the System 5 IP's front panel functions and enable users to remotely control the switching, projector, and room functions of the switcher. The SCP 150 AAP includes openings for up to four single space Architectural Adapter Plates (AAPs). There are hundreds of AAPs to choose from, some of which offer pass-through connections, as well as IR control options. Either control pad can be mounted in a wall, podium, or table, and is available in gray, black, or white to blend in with the environment.



SCP 150 control pad

FEATURES

- **Five inputs/one output** – Two inputs are configurable for composite video, S-video, or RGBHV on BNC connectors, two inputs are configurable for composite video or S-video on BNC and 4-pin mini DIN connectors, and one for RGBHV on the front panel 15-pin HD connector.
- **Bandwidth** – 350 MHz (-3dB) video bandwidth maintains signal integrity.
- **Universal projector control** – The System 5 IP provides universal projector control via IR learning capabilities, which allow it to operate with any IR-controllable display. The System 5 IP is also equipped with a dedicated RS-232 projector control port.
- **Pre-configured drivers** – Extron offers downloadable, pre-configured RS-232 or IR control drivers for many projectors. A configuration port is conveniently located on the front panel of the switcher.
- **Room control** – Lighting, screen settings, and other device functions may be controlled through the System 5 IP room function via six relays. The relays may be controlled through the front panel, IR 402 remote, SCP 150 control pad, or RS-232.
- **VCR and DVD player control** – The System 5 IP is capable of performing IR learning which enables it to control various source devices when using optional IR control modules (IRCMs) such as the IRCM-DV+.



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- **Preamp line level and integrated audio amplifier** – The System 5 IP provides preamp line level audio for fixed and variable outputs, as well as amplified 40-watt output (20 watts per channel into a 4 or 8 ohm load).
- **Inactivity timer**– Adjustable timer can automatically shut down a display device to preserve energy, prevent plasma burn-in, and extend projector lamp life.
- **IP Link** – An IP integration technology developed by Extron specifically engineered to meet the needs of professional A/V environments that enables the System 5 IP to be controlled and proactively monitored over a LAN, WAN, or the Internet.
- **Rack-mountable** – Housed in a 1U, full rack width metal enclosure. Mounting brackets are included for mounting in a rack or under a table.
- **Backlit buttons** - Backlit input buttons on the front panel of the System 5 IP can be individually labeled to ensure precise identification of video and audio input settings.

MODEL	PART #
System 5 IP	60-397-01
System 5 IP (without front panel controls)	60-397-10

OPTIONAL ACCESSORIES

IR 402	70-207-01 (page 427)
UC 50' (50 feet/15 meters)	26-518-01 (page 421)
SCP 150 (gray, black, or white)	60-495-0X (page 430)
SCP 150 AAP (gray, black, or white)	60-496-0X (page 430)
Under-desk mount kit	70-077-01 (page 442)
CSR 6 Captive Screw to RCA F adapter	26-575-01 (page 418)
IR Emitter	70-283-01 (page 429)
IR Emitter Dual	70-283-02 (page 429)
IR Link (gray, black, or white)	60-401-0x (page 429)
9-pin DBF to 2.5mm TRS cable	26-564-01

NEW

*The System 5 IP also works with most of Extron's MLCs, IRCMs, and RCMs.

SPECIFICATIONS

VIDEO

Gain	Unity
Bandwidth	350 MHz (-3dB), fully loaded
Differential phase error	1.5° at 3.58 MHz and 4.43 MHz
Differential gain error	1.5% at 3.58 MHz and 4.43 MHz
Crosstalk	-50dB @ 5 MHz
Switching speed.....	5 ms (max.)

VIDEO INPUT

Number/signal type	1 RGBHV, RGBS, RGSB, RsGsBs 2 RGBHV, RGBS, RGSB, RsGsBs, S-video, or composite video 2 S-video or composite video
Connectors	(1) 15-pin HD female (RGB input) 2 x 5 female BNCs (RGB, S-video, or composite video) 2 x 1 female BNC (composite video), & (1) 4-pin mini DIN (S-video)
Nominal level.....	1V p-p for Y of S-video, and for composite video 0.7V p-p for RGB 0.3V p-p for C of S-video
Minimum/maximum levels	Analog: 0.3V to 2.0V p-p with no offset at unity gain
Impedance	75 ohms
Horizontal frequency	15 kHz to 150 kHz
Vertical frequency	30 Hz to 150 Hz
Return loss	<-45dB @ 5 MHz
Maximum DC offset.....	1.5V

VIDEO OUTPUT

Number/signal type	1 RGBHV, RGBS, RGSB, RsGsBs 1 S-video 1 composite video
Connectors	5 female BNCs for RGB 2 female BNCs for S-video 1 female BNC for composite video
Nominal level.....	1V p-p for Y of S-video, and for composite video 0.7V p-p for RGB 0.3V p-p for C of S-video
Minimum/maximum levels	0.3V to 2.0V p-p
Impedance	75 ohms
Return loss	-45dB @ 5 MHz
DC offset	±5mV maximum with input at 0 offset
Switching type	Triple-Action (RGB delay)

SYNC

Input type	RGBHV, RGBS, RGSB, RsGsBs
Output type	RGBHV, RGBS, RGSB, RsGsBs
Standards	TTL (RGB), NTSC 3.58, NTSC 4.43, PAL, SECAM
Input level	0.5V to 5.0V p-p
Output level	TTL 5.0V p-p
Input impedance	75 ohms
Output impedance	75 ohms
Max input voltage	5.0V p-p
Max. propagation delay	30 ns
Max. rise/fall time	4 ns
Polarity	Positive or negative (follows input)

AUDIO

Gain	Unbalanced output: -6dB; balanced output 0dB
Frequency response	20 Hz to 20 kHz, ±1dB at 15 watts into 4 ohms
THD + Noise	<0.5% @ 1 kHz at 15 watts into 4 ohms
S/N	>90dB at 20 Hz to 20 kHz at rated maximum output
Crosstalk	<-80dB @ 1 kHz, fully loaded
Stereo channel separation	>80dB @ 1 kHz
CMRR	>90dB @ 20 Hz to 200 Hz, >60dB @ 20 Hz to 20kHz

AUDIO INPUT

Number/signal type	4 stereo or mono, balanced/unbalanced 1 stereo or mono, unbalanced
Connectors	(4) 3.5 mm captive screw connector, 5 pole (1) 3.5 mm mini audio jack (tip, ring, sleeve)
Impedance	>18 kohms unbalanced/balanced, DC coupled
Nominal level.....	-20dBV (100mV), -10dBV (316mV), 0dBu (0.775V), or +4dBu (1.23V); (configurable)

NOTE: 0dBu = 0.775 volts (RMS). 0dBV = 1 volt
+4dBu and 0dBu are professional audio line level standards.
-10dBV and -20dBV are semiprofessional, computer audio, and consumer audio standards.
Maximum level

.....	+21dBu, (balanced or unbalanced) at 1%THD+N
Input gain adjustment	-42dB to +24dB, adjustable per input
Input level sensitivity	-20dBV (100mV) for maximum output (20 watts)

AUDIO OUTPUT — LINE LEVEL

Number/signal type	2 stereo or mono, balanced/unbalanced (1 fixed and 1 variable)
Connectors	(2) 3.5mm captive screw connectors, 5 pole
Impedance	50 ohms unbalanced, 100 ohms balanced
Gain error	±0.1dB channel to channel
Maximum level (Hi-Z)	>+21dBu, balanced at stated %THD+N
Maximum level (600 ohm)	>+15dBm, balanced at stated %THD+N

NOTE: 0dBu = 0.775 volts (RMS).
NOTE: Unbalanced wired outputs will result in 6dB of attenuation. Balanced outputs will have unity gain/attenuation.

AUDIO OUTPUT — POWER AMPLIFIER

Number/signal type	1 stereo or mono (default = stereo, jumper selectable)
Connector	(1) 4 position screw terminal
Drive/full power out	At less than 0.5% THD from 20 Hz to 20 kHz: 40 watts; 20 watts (RMS) per channel, 4 or 8 ohm load
Protection	Input limiting, thermal, short circuit
Indication	Clip LED indicates the maximum input level Peak LED indicates the onset of maximum power output.

NOTE: 0dBu = 0.775V, 0dBV=1V.

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System 5 IP (continued)...

CONTROL/REMOTE

Serial control port	RS-232, rear panel 9-pin female D connector or front panel 2.5 mm stereo mini jack
Ethernet control port	1 RJ-45 female
Ethernet data rate	10/100Base-T, half/full duplex with autotdetect
Ethernet protocol	ARP, ICMP (ping), TCP/IP, Telnet, HTTP, SMTP
Extron remote key pad control	(1) 3.5 mm 5-pole captive screw connectors (shared with control module and IR Link port)
IR remote control	IR 402 (optional) Front panel: 30° maximum, 40 degrees off axis Rear panel: 38 kHz, hardwired, modulated
Program control	Extron's control program for Windows® Extron's Simple Instruction Set™ - SIS™ Microsoft Internet Explorer, Netscape Navigator, Telnet

CONTROL — ROOM RELAY

Number/type	6 momentary or latching (configurable via control software)
Connectors	(3) 3.5 mm captive screw connectors, 3 pole
Contact rating	24V, 1A

CONTROL — PROJECTOR

Projector control port; RS-232	(1) 3.5 mm captive screw connector, 3-pole
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CONTROL — PERIPHERAL EQUIPMENT

IR/serial control ports	(4) 3.5mm captive screw connectors, 2-pole Programmable: RS-232 (±5V), or TTL level (0 to 5V) infrared up to 1 MHz
IR learning frequencies	30 kHz to 62 kHz
IR learning distance	4" (10 cm) to 14" (36 cm) from the front panel

GENERAL

Power	100VAC to 240VAC, 50/60 Hz, 50 watts, internal, autoswitchable
Rack mount	Yes, with included brackets
Enclosure type	Metal
Enclosure dimensions	1.75" H x 17.5" W x 9.4" D (1U high, full rack width) 4.4 cm H x 44.4 cm W x 23.9 cm D (Depth excludes connectors, knob, and buttons. Width excludes rack ears.)
Product weight	6.0 lbs (2.7 kg)
Shipping weight	11 lbs (5.0 kg)
DIM weight	
USA/Canada	10 lbs (4.5 kg)
International	11 lbs (5.0 kg)
Listings/Compliances	UL, CUL, CE, FCC Class A or B, VCCI, AS/NZS, ICES
Warranty	3 years parts and labor

APPLICATION

