

UTAH-200

COMPACT ROUTING SWITCHER



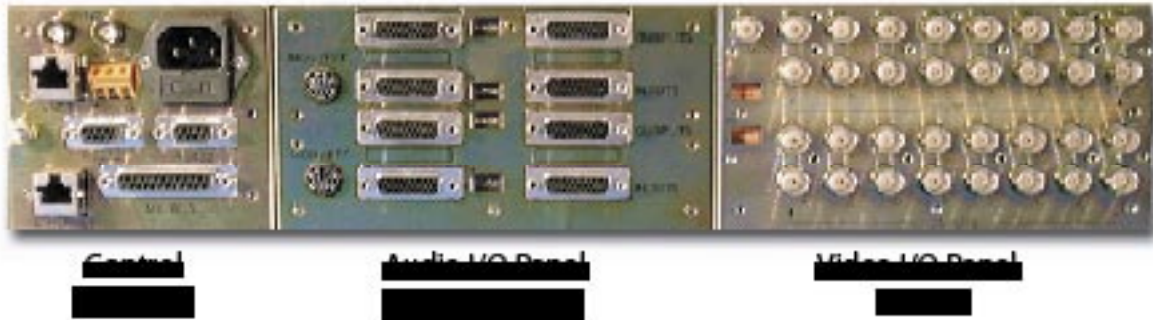
The UTAH-200 is a powerful compact routing switcher designed to meet the needs of users who require flexible control, multiformat routing and expansion capability in a small package. The UTAH-200 can be controlled by an external SC-4 or SC-3 controller or through its own internal control system.

The UTAH-200 was designed to provide a cost effective solution to small router requirements at a reasonable price while maintaining full compatibility with the Utah Scientific line of larger routers and control panels.

The UTAH-200's ability to mix analog and digital signals, as well as audio and video levels in a single frame, offer users the unique flexibility required for digital migration projects as well as other applications, including master control, where smaller matrix sizes are required.

UTAH-200 FEATURES

- **16x16 Building Block** – Easily expandable to 32x32
- **2 Rack-Unit Frame** – Preserves valuable rack space.
- **Audio and Video in the Same Frame** – Can house a 16x16 VAA switcher in 2 rack-units.
- **Digital and Analog in the Same Frame** – 16x16 analog and digital (video or audio) can be contained in the same frame.
- **Redundant Internal Control System Option** – No need for an external control chassis.
- **Can Interface with SC-3 / SC-4 Control Systems** – Allows the UTAH-200 to be used as an additional level in a new or existing router control system.



The UTAH-200 utilizes a 16x16 building block matrix that is expandable to 32x32. The combination of practical matrix size, the ability to deliver all the common signal formats, simplicity of operation and ease of expansion all result in a new breed of routing switcher; a system that allows the user to cost-effectively deploy single or multiple units in applications ranging from routine applications to the most complex routing environments.

The UTAH-200 is housed in a two rack-unit frame capable of holding matrix cards for a 32x32 single format switcher or a 16x16 mixed format configuration. This approach results in a small physical size, while preserving the ability to mix formats such as audio and video or digital and analog.

The UTAH-200 routers are totally self-contained. An optional redundant control system can be installed in any UTAH-200 matrix frame. Redundant power supplies are also housed internally.

Control System Flexibility

The UTAH-200 can be controlled by an external SC-3 or SC-4 Utah Scientific control system, allowing the small matrix to be integrated into a larger switching system.

For stand-alone applications, the UTAH-200 can be fitted with an optional SC-400 system controller board -- or a redundant pair of SC-400 controllers for maximum operational reliability.

With the internal controller(s) installed, the UTAH-200 can be controlled by any of the wide range of Utah Scientific U-Net or ethernet control panels, allowing the user to select exactly the right panels for the control requirements of the application.

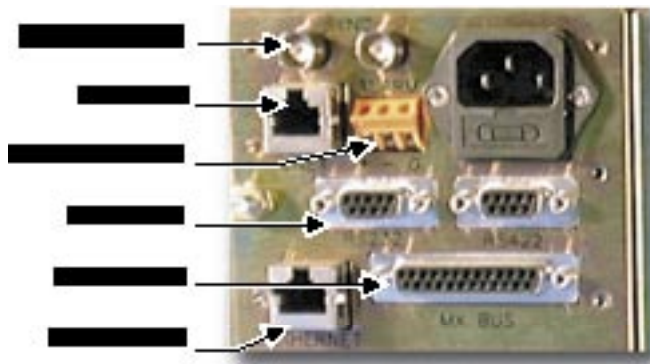
When multiple UTAH-200 frames are used in a system, such as separate audio and video frames, one frame serves as the master and the additional frames are slaved to this frame by connecting the Utah Scientific MX-Bus to each frame in a daisy-chain connection.

The internal SC-400 controller offers one U-Net port for connecting the UCP and SCP series Utah control panels and an ethernet port for connecting to computer(s) running the configuration, management, and control applications that are designed for use with the SC-4 and SC-400 system controllers. The ethernet port can also be used with UCP and SCP series control panels that are configured for ethernet rather than U-Net communications.

The SC-400 controller also offers two serial ports for use with external devices such as automation controllers, Under Monitor Displays, etc.

A looping sync input is provided for connection of a composite video vertical interval reference signal. Both PAL and NTSC signal formats are supported.

A pair of contacts are provided for remote connection of the SC-400's primary alarm which reports major internal faults such as power supply failures, internal temperature alarm, and controller failures.



Control I/O Panel Detail

SC-400 FEATURES

- Compatible with all Utah control panels - Provides a wide range of control options.
- Graphical User Interface (GUI) applications for configuring, managing, and operating the system.
- Dual Standard Sync Input - Supports NTSC and PAL vertical blanking interval switching.
- Tie Line Management Feature – Simplifies multi-format routing.
- Redundant Control Boards in One Frame - Preserves valuable rack space.

UTAH-200 SPECIFICATIONS

Analog Video

Frequency response	DC to 5MHz \pm .05dB, DC to 30 MHz \pm 1dB
Differential gain	.15%
Differential phase	.15 degrees
Gain	Unity \pm .25dB
Output DC	50mv
Crosstalk	5MHz -60dB
Input phase scatter	\pm 2 degrees

Analog Audio

Frequency Response	\pm 0.05 dB 20Hz to 20kHz (-3 dB point = 200kHz)
Max. input level	+24 dBu
impedance	200K Ω , strappable to 600 Ω
THD / IMD	.05% / .05% @24dBu, 20Hz to 20kHz
Hum and noise	-85dBu 20Hz to 15kHz
Crosstalk	-90 dB @20KHz
Gain Uniformity	\pm 0.05 dB
CMR	70 dB @50/60hz
Common Mode voltage	10Vp-p (DC plus peak AC)
DC on output	\pm 65mV

Digital Video

Jitter and all other specs.	Conforms to SMPTE 259M
Data rates	143, 177, 270 and 360 Mb/s
Input return loss	15dB @ 270 MHz
Input equalization	1000ft. of 8281 cable (all data rates)
Signal level	800mV \pm 10mV
Output return loss	15 dB @ 270 MHz
Output Reclocked	Auto

Digital Audio

Input Impedance	110 Ω Balanced
Input level	200 mV to 7V
Common Mode Range	\pm 7V
Output impedance	110 Ω
Output level	4 V p-p
Common mode rejection	DC to 6MHz >30 dB
Rise and fall times	5ns minimum / 30ns maximum

Reference (internal controller only)

Reference video	525 line NTSC or 625 line PAL (Looping input)
Signal level	0.67 to 2.0 v p-p
Switching point	In accordance with SMPTE RP 168

Power

AC power consumption	80W Max.
Voltage	90-240VAC 50/60 Hz universal power supply
Redundancy	Dual redundant power supplies (optional)

Alarms

Primary alarm	ANSI/SMPTE 269M Fault Reporting (contact closure)
Connector type	3 terminal barrier strip

Physical / Environmental

Width	EIA RS-310 - D 92 19" rack mount standard
Height	2 RU (3.5")
Depth	18" Max.
Weight	15 lb. Max.
Operational temperature / humidity	10-40 degrees Celsius / 0-90% (non-condensing)