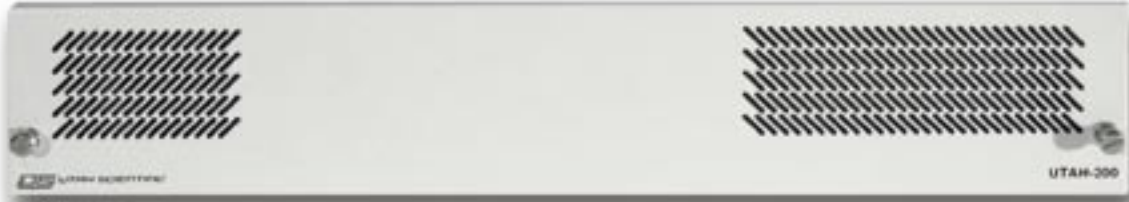


UTAH-200

COMPACT ROUTING SWITCHER



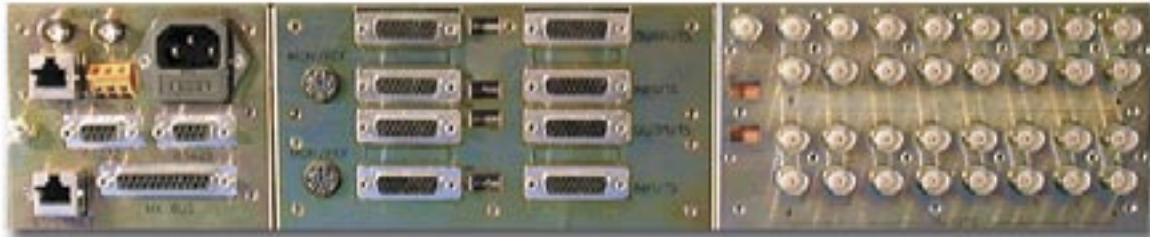
The UTAH-200 is a powerful compact routing switcher designed to meet the needs of users who require flexible control, multiformat routing and expansion capability in a small package. The UTAH-200 can be controlled by an external SC-4 or SC-3 controller or through its own internal control system.

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.



Control
I/O Panel

Audio I/O Panel
16 x 16 (Stereo)

Video I/O Panel
16 x 16

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.

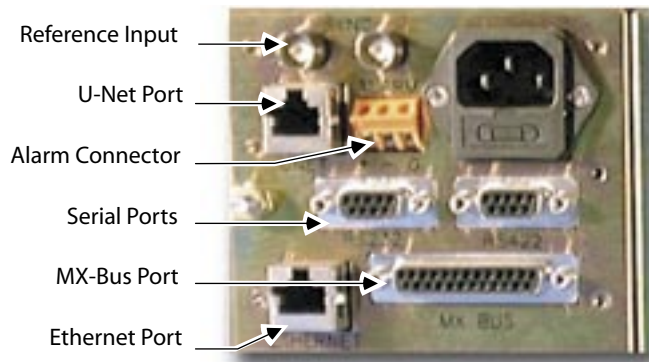
When multiple UTAH-200 frames are used in a system, such as separate audio and video frames, one frame serves as the master and the additional frames are slaved to this frame by connecting the Utah Scientific MX-Bus to each frame in a daisy-chain connection.

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) |