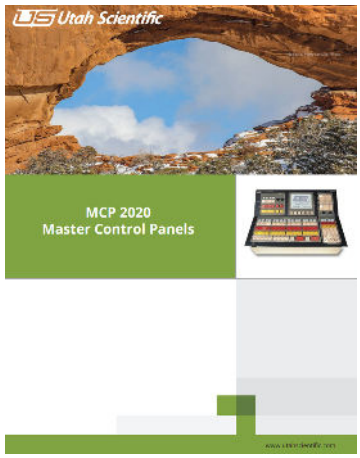
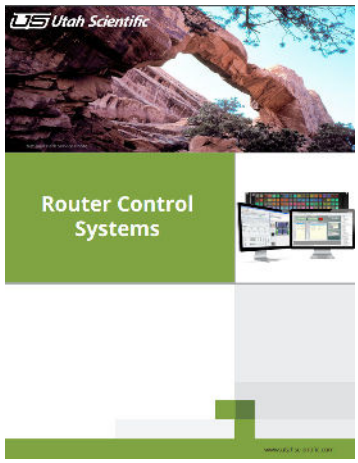
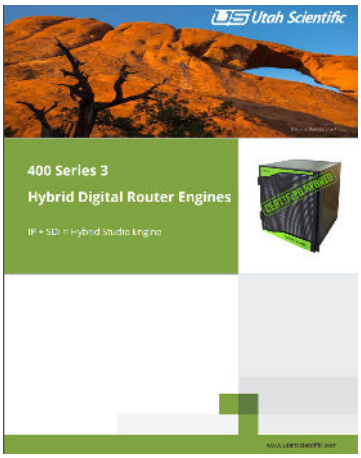
National Park Service Photo

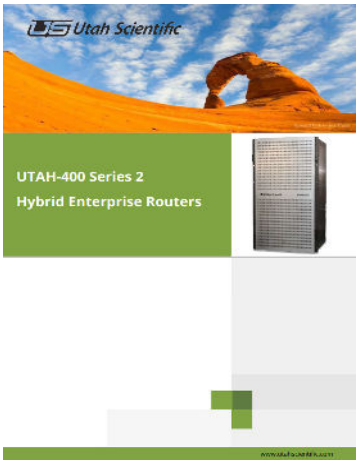
Router Control Systems

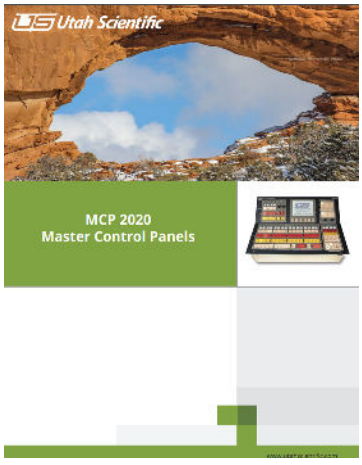
Router Control Systems











Visit www.utahscientific.com for our other products

Router Control Systems

The Utah Scientific Control Systems are powerful control processors designed to provide state-of-the-art functionality in configuring, managing, and operating Utah Scientific Routing Switchers, Master Control systems and third party equipment. User interface for the controllers is provided by a suite of software utilities that are specifically designed to allow the user to easily take full advantage of the sophisticated capabilities of these controllers.

The series has all the enhanced features for the modern broadcast facility. Designed on the Linux platform with virtually instant boot time, our controllers provide exceptional reliability and are backed by our industry leading 10 year warranty.

A broad range of interfaces to third party routers, automation systems, multiviewers, production switchers and tally control systems provides seamless integration of your facility operations.

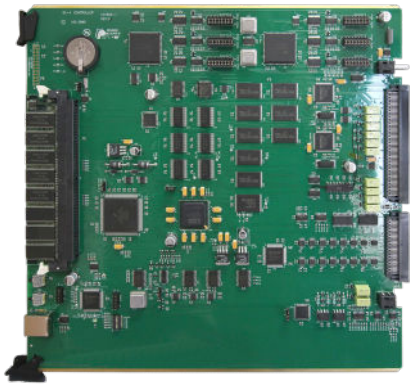
Router Control Systems

SC Controller Series

The SC Controller series has both the control and power to reliably manage Utah Scientific's routers and master control switchers with every enhanced feature for the modern broadcast facility.

All of Utah Scientific's controllers include the GUI software suite for configuration, monitoring, comprehensive SNMP support, tie-line management, system salvos, support for countless panels and multiple routing switchers. Together it all provides an entire package for the ultimate in system control. With the optional redundant control card providing mirrored redundancy, you can have a complete back up and protected operation for mission critical functionality.

With our large selection of control operations using the UCP Series hardware and Softpanel-2 GUI panels we can handle any routing switcher application needs.



SC-4E Control Card

SC-400E Control Card

Utah Scientific offers three versions in the SC controller series that are tailered to fit any budget or need.

The 2RU SC-4E enterprise controller is the most flexible and comprehensive controller in the series with multiple ethernet, serial, U-Net and sync reference inputs. This functionality is why the SC controller series is a primary choice for TV station and truck systems.

The 2RU SC-400E provides a more economical controller for customers with simplified routing and connection needs.

The 1RU SC-40E is our most cost effective controller. The SC-40E is designed to fit nicely with our economic UDS and UHD routing series while still providing all of the functionality and features our SC-400 mid range controller has.

The SC-4E and SC-400E controllers include standard redundant power supplies and the SC-40E provides room for an optional redundant power supply. DC powered versions are available on most models for customers who require 48DC Facility operation.

Features

- **Exceptional Reliability**
- **Linux Platform with Instant boot time**
- **Standard GUI software Suite**
- **Retains settings upon power restoration**
- **Uninterrupted system operation during panel configuration**
- **Standard SNMP monitoring support**
- **Standard Tie-line management**
- **Standard system salvos**
- **Supports hundreds of control panels**
- **Supports multiple virtual router layers**
- **Broad range of integration for 3rd party devices**
- **Redundant controller card with mirrored redundancy***
- **Standard redundant power supply on SC-4E and SC-400 E**

* Optional feature

Router Control Systems

MX-Lator and UCI-400 Translator Series

The MX-Lator and UCI-400 Translator Series are designed to provide a simple, reliable and cost effective way to integrate third party devices into the SC controller series. When bringing an external device under the Utah Scientific controller as the controlled or controlling device it is sometimes necessary to provide a translation of the control commands between the control architecture and the remote control port provided by the external device. This job is handled by control translation units.

A broad range of interfaces that work with popular 3rd party routers, production switchers and other 3rd party devices provide seamless integration of your facility operations. In addition to this we offer custom developed interface protocals as well.

MX-lator Translator Card

With the optional redundant MX-Lator translator card, mirrored redundancy provides a complete back up and protected operation for mission critical situations. The MX-Lator includes a standard redundant power supply.

Utah Scientific offers two versions in the Translator series to accomodate any need. The 2RU MX-Lator enterprise translator is the most flexible and comprehensive translator in the series with multiple serial ports for 3rd party connections, single ethernet and sync reference input making it a primary choice for TV and truck systems.

The MX-Lator frame also offers the support for dual SC-400E controller boards where both control and translation are needed.

The 1RU UCI-400 provides a cost efffective translator with simplified interface operations and limited connection needs.

Features

- Exceptional reliability
- Linux platform with instant boot time
- Retains settings upon power restoration
- Broad range of integration to 3rd party devices
- Redundant controller card with mirrored redundancy option
- Standard redundant power supply on MX-Lator model
- Custom Developed interface protocols available upon request

System Control Overview

Controllers

Control Elements

Control Panels

Ucon Config, rMan Monitoring & GUI's

3rd party Control

Device Elements

Routers
(Current & Legacy)

Multiviewers

Master Control

Translators

3rd party hardware

Router Control Systems

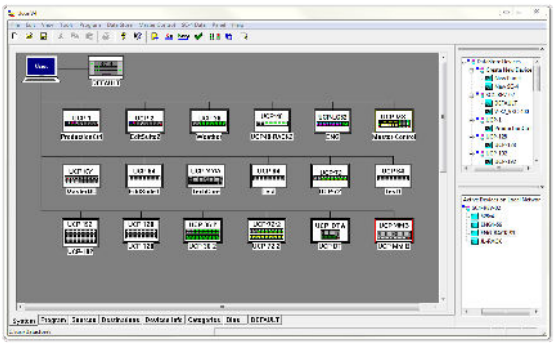
Ucon GUI Configuration Software

Setup for all of the Utah Scientific SC Controller Series and control panels is accomplished using the intuitive Ucon graphically-based software that is provided standard with all systems. Ucon provides all the tools to define the system configuration and to make changes very simple for your operation.

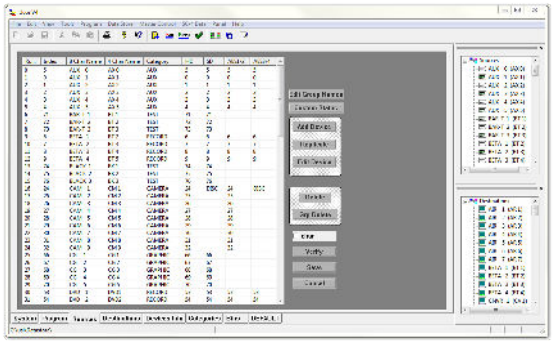
Using familiar functions such as drag and drop, copy, paste, and replicate, Ucon provides an easy learning curve similar to other software programs throughout the world.

Ucon also provides useful tools that assist in the configuration such as auto-discovery of connected devices, unlimited duplication of devices, and auto-replicate. Multiple databases with different setups can be stored and recalled when needed, a helpful feature for mobile, sports, or production venues.

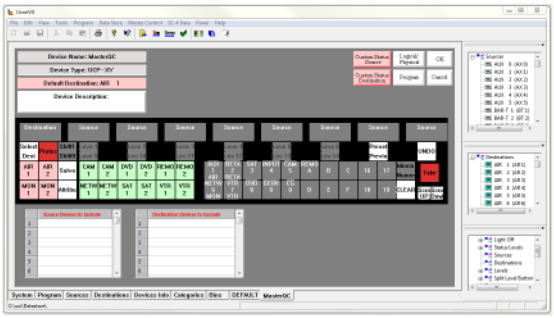
Editing can be done anytime without disrupting normal operations. A single push of a button reprograms the panels and controllers or only program a single panel. Programming is quick and only takes a matter of seconds for each panel, allowing all other panels in the system to remain operational. Program status is provided on the panels and in the software.



Ucon System Overview



Ucon Source Entry List



Ucon Panel Program Screen

Features

- **Easy to use GUI for configuration**
- **Familiar functions, drag and drop, copy and paste**
- **Single button push for system program**
- **Multiple stored configurations for future recall**
- **Global source and destination list**
- **Offline configuration**
- **Never needs power cycle**
- **128 system salvos**
- **Advanced tie-line configuration with pools**
- **Simple virtual level mapping of single router**
- **Free software upgrades**
- **No service contracts for assistance**
- **Remote assistance for training**
- **Auto-discovery of connected devices**
- **Add devices ahead of installation**
- **Unlimited duplication of devices**
- **Auto replicate devices**
- **Limit sources and destinations per panel**
- **Product view of each device**
- **Custom status names**
- **Program screen showing status**
- **Ucon can be shutdown without affecting system**

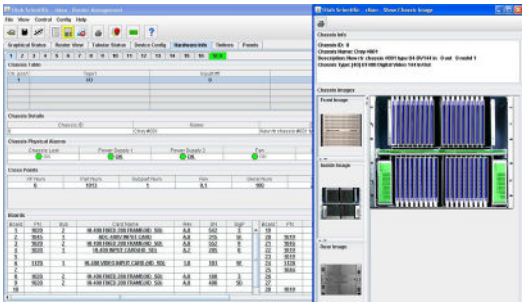
Router Control Systems

rMan GUI Monitoring Software

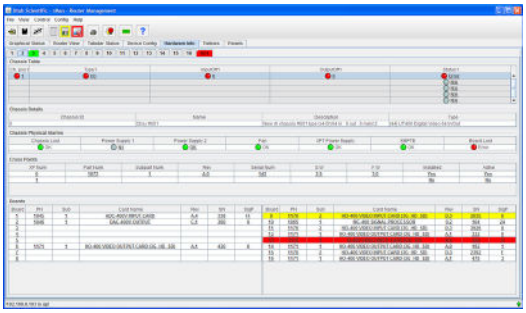
Included with each Utah Scientific controller is our rMan graphically-based software management tool for routers, controllers and panels, offering effective status and maintenance of the system. Designed to give the engineers and operators real-time status of the system, with a full range of features to keep up to date on possible conflicts or quick action in the event of a failure.

Providing status of the system includes a comprehensive suite of alarms for power supplies, fans, temperature, and cards. Convenient graphical views of the controllers, routers and panels make system management extremely simple.

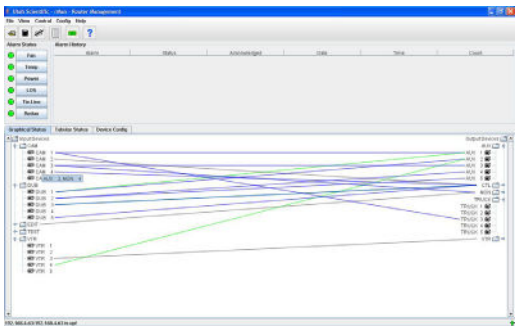
Along with hardware management, rMan also provides the capability to view router connections, loss of signal, status output protect and locks with set and clear, status and threshold alarming of tie-lines, event log for approximately a week of operation and capability to locate hardware panels, all the resource management required for today's facilities.



rMan System Overview



rMan Source Entry List



rMan Panel Program Screen

Features

- **Easy to use GUI for system management**
- **Physical view of controllers, routers, and panels**
- **Real-time status of router I/O connections**
- **Comprehensive suite of alarms**
  - **-Power Supplies**
  - **- Fans**
  - **-Temperature**
  - **-Voltages**
  - **-Controller Cards**
  - **-Input and output cards**
  - **-Crosspoint cards**
  - **- Loss of Signal**
  - **-Tie-lines threshhold**
- **Tie-line status connections and usage**
- **View, set and clear output protect and locks**
- **Simple web panel for full matrix switching**
- **Color code for normal and alarm conditions**
- **System event log with 1 week storage**
- **System hardware alarm log**
- **Status of software and firmware versions**
- **Status of revisions, part and serial numbers**
- **Free software upgrades**
- **No service contracts for assistance**
- **Remote assistance for training**

Specifications

SC-4E Control System

Reference Input
(6) Video BNC looping Analog PAL, NTSC, or tri-level (3) Separate reference signals
Used to switch on vertical interval

Ethernet
(2) RJ-45 10/100 Ethernet CAT5 cable
(2) Separate network ports
Operates all Utah software and UCP Series panels
Utah RCP-3 Ethernet protocol

U-Net
(8) RJ-45 10/100 CAT5 cable
(8) Separate panel ports, 32 panels per port
Cable length 1000 feet per port
Operates all UCP Series panels

Control
(6) RS-232/422 DB-9F Subminiature
Remote control of third party devices
Utah Scientific RCP-1 serial protocol

Party Line
(4) BNC - Operates all legacy CSP Series panels

MX
(2) MX-Bus looping DB-25F Subminiature
Cable length 300 feet
Connects controller to all UTAH Series routing switchers

Alarm
(1) DB-9F Subminiature
SMPTE 269M

GPI/O
Non-Functional

Timecode
(1) Phoenix
Syncs front panel time display
Timecode values for logging messages

Power
(2) 90-240 VAC, 50/60 Hz

SC-400E Control System

Reference Input
(2) Video BNC looping Analog PAL, NTSC, or tri-level
Used to switch on vertical interval

Ethernet
(1) RJ-45 10/100 Ethernet CAT5 cable
Operates all Utah software and UCP Series panels
Utah RCP-3 Ethernet protocol

U-Net
(1) RJ-45 10/100 CAT5 cable
32 panels
Cable length 1000 feet
Operates all UCP Series panels

Serial
(2) RS-232/422 DB-9F Subminiature serial
Remote control of third party devices
Utah Scientific RCP-1 serial protocol

MX
(2) MX-Bus looping DB-25F Subminiature
Cable length 300 feet
Connects controller to all UTAH Series routing switchers

Alarm
(1) DB-9F Subminiature
SMPTE 269M

GPI/O CHGO/Reset
Non-Functional

Timecode

(1) Phoenix
Timecode values for logging messages
Power
(2) 90-240 VAC, 50/60 Hz

Specifications

SC-40E Control System

Reference Input
(2) Video BNC looping Analog PAL, NTSC, or tri-level Used to switch on vertical interval

Ethernet
(1) RJ-45 10/100 Ethernet CAT5 cable
Operates all Utah software and UCP Series panels Utah RCP-3 Ethernet protocol

U-Net
(1) RJ-45 10/100 CAT5 cable
32 panels
Cable length 1000 feet
Operates all UCP Series panels

Serial
(2) RS-232/422 DB-9F Subminiature
Remote control of third party devices
Utah Scientific RCP-1 serial protocol

MX
(2) MX-Bus looping DB-25F Subminiature
Cable length 300 feet
Connects controller to all UTAH Series routing switchers

Alarm
(1) DB-9F Subminiature
SMPTE 269M

GPI/O CHGO/Reset
Non-Functional

Power
90-240VAC 50/60Hz external +12V DC
(2) Captive nut fastener

MX-Lator Translator System

Reference Input
(2) Video BNC looping Analog PAL, NTSC, or tri-level Used to switch on vertical interval

Ethernet
(1) RJ-45 10/100 Ethernet CAT5 cable
Utah RCP-3 Ethernet protocol

Serial
(6) RS-232/422 RJ-45
Control of third party devices
Utah Scientific RCP-1 serial protocol

SC
(2) DB-9F Subminiature
Control of Utah legacy AVS-2 and DDS-2 routers

AVS-1
(2) DB-15M Subminiature
Control of Utah legacy AVS-1 routers

MX
(2) MX-Bus looping DB-25F Subminiature
Cable length 300 feet
Connects controller to all UTAH Series routing switchers

Alarm
(1) DB-9F Subminiature
SMPTE 269M

Timecode
(1) Phoenix
Timecode values for logging messages

Power
(2) 90-240 VAC, 50/60 Hz

Specifications

UCI-400 Translator System

Ethernet
(1) RJ-45 10/100 Ethernet CAT5 cable
Remote control of third party devices
Utah RCP-3 Ethernet protocol

Comm
(4) RS-232/422 DB-9F Subminiature
Limited remote control of third party devices

Serial
(1) RS-232/422 DB-9F Subminiature
Limited remote control of third party devices

Diagnostic
(1) RJ-45
Factory diagnostic port

GPI/O
(8) Terminal block
Not used for this product

U-Net
(2) RJ-45
Not used for this product

Station Dipswitch
(1) 8 position
Not used for this product

Can-Exp
(1) RJ-45
Not used for this product

Power
(1) 90-240 VAC, 50/60 Hz

Series general Specifications

Power

SC-4E frame:	35 watts max
SC-400E/MX-Lator frame:	35 watts max
SC-40E frame:	20 watts max
UCI-400 frame:	25 watts max

Physical
Width: 19" (48.26cm)

Depth
SC-4E frame - 13" (33cm)
SC-400E/MX-Lator frame - 2RU, 3.5" (8.89cm)
SC-40E frame - 1RU, 3.5" (4.45cm)
UCI-400 frame - 1RU, 3.5" (4.45cm)

Height
SC-4E frame - 2RU, 3.5" (8.89cm)
SC-400E/MX-Lator frame - 2RU, 3.5" (8.89cm)
SC-40E frame - 1RU, 3.5" (4.45cm)
UCI-400 frame - 1RU, 3.5" (4.45cm)

Weight
SC-4E frame - 17lb (7.7kg)
SC-400E/MX-Lator frame - 18lb (8.16kg)
SC-40E - 12lb (5.2kg)
UCI-400 frame - 5.2lb (2.4kg)

Environmental
Operating temperature 50-104 degrees F, (10-40° C) Relative humidity range: 0-90%, non-condensing

Utah Scientific

Specifications are subject to change without notice

10-year limited hardware warranty

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10 Year Warranty