

# MC-4000

## MASTER CONTROL PROCESSOR



The MC-4000 Digital Master Control Processor is an integrated system for handling the most demanding on-air operations in live, automated, or automation-assisted operating environments. The MC-4000 offers built-in capabilities to handle all of the most commonly required on-air operations, including still and animated logo presentations, audio and video clip playback, and reliable, foolproof EAS message presentation.

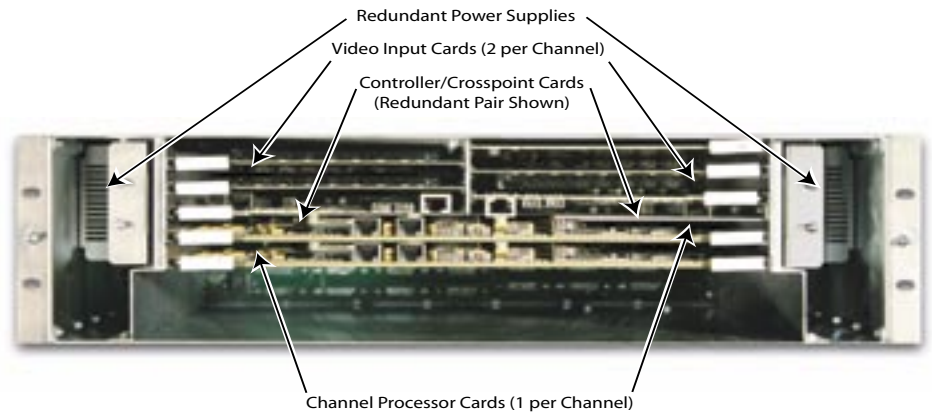
The 3RU MC-4000 Processor frame can hold two independent signal processing channels, each of which can be switched "on the fly" between SD and HD signal formats. All popular signal formats in both 50Hz and 60 Hz environments are supported.

### MC-4000 FEATURES

- DUAL-CHANNEL PROCESSOR IN A COMPACT 3RU PACKAGE
- SWITCHABLE SD/HD OPERATION FOR EACH CHANNEL
- UP TO FOUR KEYERS, SWITCHABLE BETWEEN INTERNAL, EXTERNAL, AND LOGO SOURCES
- DISCRETE, EMBEDDED, OR MIXED AUDIO PROCESSING
- BUILT-IN DUAL SQUEEZEBACK EFFECTS UNIT
- INTERNAL AUDIO AND VIDEO CLIP STORE FOR FREQUENTLY-ACCESSED MATERIAL
- INTERNAL EAS CAPABILITY WITH AUDIO AND TEXT CRAWL MESSAGE GENERATION
- WIDE RANGE OF CONTROL OPTIONS FOR MANUAL OR AUTOMATED OPERATION

The MC-4000 provides a full range of mixing and keying functionality with four built-in keys. Each of the keys can be fed by the external inputs, by a signal selected on a router bus or by the optional internal logo generator package.

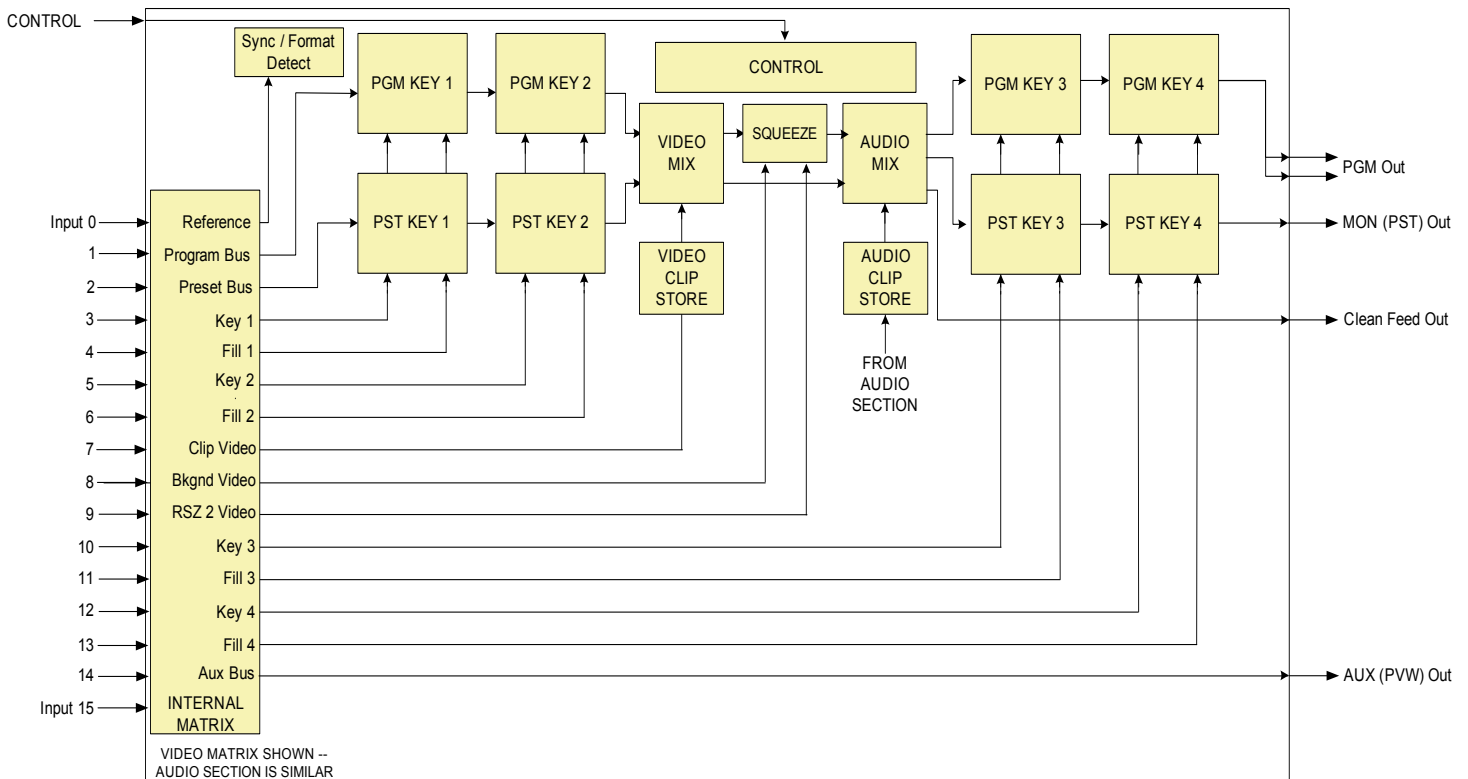
The MC-4000 processor provides full audio mixing facilities, using embedded audio or separate audio inputs. External audio inputs are also provided for voice-over mixing. An internal audio clip store provides on-line storage for promo tags and other frequently used audio clips, reducing the need for external audio playback devices.



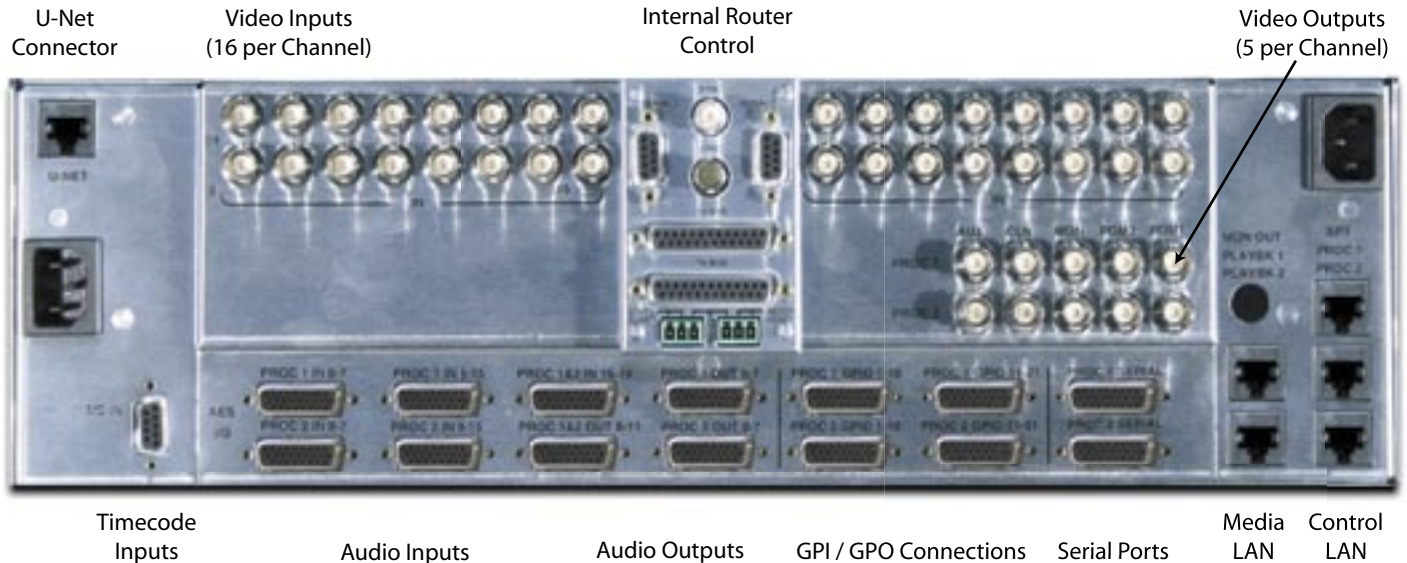
**SYSTEM DESCRIPTION**

The MC-4000 processor features a three-bus architecture (PROGRAM, PRESET, and PREVIEW) with inputs selected by an external routing switcher or fed directly to the unit's internal router. There are four external key inputs (key and fill signals) and four external audio inputs for voice-over mixing.

A built-in video squeeze-back effects option provides dual-window DVE effects for inserting promo announcements or other material into the program stream. The MC-4000's internal video clip store provides storage and playback for animated logo sequences, "snipes", squeeze backgrounds, and other uses, again reducing the need for external devices by integrating the functions into the master control processor.



## MC-4000 Product Information Sheet



Audio features such as master gain control, mix level control, channel swapping and mixing are all available in each MC-4000 processing channel. These functions work identically whether the audio inputs are provided as embedded signals or as a separate signal layer, or a combination of the two.

Each MC-4000 channel offers a "Clean Feed" output that is fed with a signal that represents the mixed video program, after the insertion of Keys 1, and 2 and the mix, but before the insertion of keys 3 or 4.

### SYSTEM CONTROL

Each MC-4000 channel offers four RS-232/422 serial ports, one of which can be defined as an automation port using the Utah Scientific TAS protocol, which is supported by most major automation system providers. The system offers machine control in either contact closure or serial communications to further assist the operator in manual operations.

To simplify multi-channel operation, the MC-4000 communicates with the MCP-2020 control panel, available in several models including a "virtual" GUI-based panel, over an Ethernet LAN. Using this LAN, up to eight individual signal channels can be controlled from a single panel or a number of panels with single-button access to any channel from any panel.

### EAS MESSAGE HANDLING

The MC-4000 offers a sophisticated system for handling EAS events by putting the EAS message handling under the control of a single button. The operator is notified of an incoming message from the EAS receiver by a flashing EAS button on the control panel. When he pushes the EAS button, the channel is set up to play the audio message as a voice-over through the MC-4000's audio mixer, and the message text is displayed on the Program Output by the MC-4000's internal crawl generator. At the end of the message, the operator pushes the EAS button a second time to return the channel to its previous state. Further flexibility is gained by the MC-4000's ability to record and play back audio clips. Using this feature, the system can be used to buffer the incoming EAS message so that the operator can play it back at the appropriate point in the channel's programming. The EAS event can also be set for automatic execution when the channel is operating unattended.

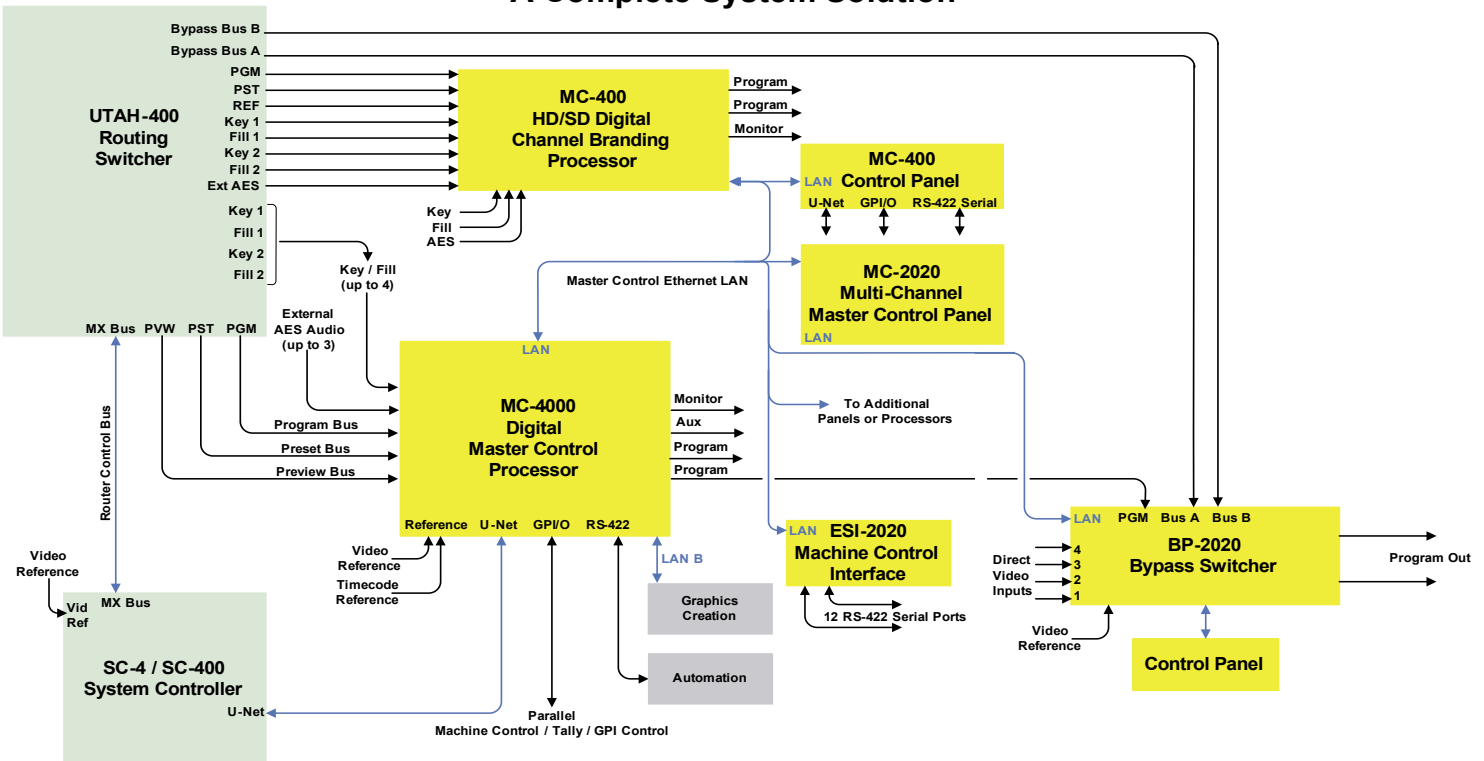
### COMPLETE SYSTEM SOLUTION

The MC-4000 is part of the industry's most comprehensive family of products for master control applications. The Utah Scientific Master Control product line includes Bypass Switchers, Machine Control Interface Units, Panels, and Master Control Signal Processors for various specific requirements.

## MC-4000 Technical Specifications

Mechanical Dimensions:		19"W x 22" D x 5.25"H (3RU EIA rack mount)
Connectors:	Video: Digital Audio: Serial I/O Ports: Relay Outputs: Serial Control Ports:	BNC DB-25F Subminiature 25-pin D connector with female pins. " " " " " "
Environmental :	Temperature: Relative Humidity:	10-40°C 0-90% (non-condensing)
AC Power 110/240VAC	Chassis consumption is 100 VA max. (2 channels operating) Dual redundant power supplies are standard equipment	

### Utah Scientific Master Control Switchers A Complete System Solution



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