

NV5100MC

Multi-channel, HD/SD master control switching and branding system

The NV5100MC master control switching system is ideal for national and regional broadcasters, which require effective manual intervention during live playout. This master control system is available with a comprehensive range of control panels, and features rich integration with NVISION and third party routers. The switcher provides integral channel branding, and effective multi-channel audio control with Dolby E decoding. For the most advanced channel branding, the system can be fully integrated with the Intuition XG graphics co-processor.



KEY FEATURES AND BENEFITS

Multi-channel, master control switching

- › HD/SD master control switching and channel branding system
- › Ideal for national and regional broadcasters demanding “Live” and “Automation Assist” manual control
- › Choice of four types of control panels, offering fully featured or simplified operation
- › Processor modules housed in 8RU frame, providing routing for up to 64 inputs and master control for eight playout channels (depending on configuration)
- › Resilient design with redundant power supplies, fans and control cards
- › Uses widely adopted M-2100 based automation protocol supported by world’s leading automation vendors

Rich router integration

- › Integral 64 input router can be used without additional routing, or it can be supported with signals from a facility router (NVISION or third party)
- › Control panels provide full control of the integral router and the facility router

Advanced audio features

- › Advanced 16 channel audio processing (embedded and AES)
- › A/B audio mixing plus two voice-over mixers
- › Built-in Dolby E decoding
- › Ideal for 5.1 and multi-lingual broadcasting

Expandable channel branding

- › Two layers of logo insertion, three down stream keyers with fill/key inputs for external graphics devices
- › Single/dual channel DVE
- › Full preview of graphics and DVE transitions
- › Intuition XG graphics co-processor and Vertigo graphics automation extend the graphics capabilities substantially, allowing the most complex, dynamic branding graphics to be played out with cost-effective workflows (see page 460)

Integrated GUI display with direct knob access to advanced switcher features

Independent preset and full preview

Direct access to audio monitoring and audio program levels

Up to 24 source select buttons



Complete range of master control panels

Full size, enhanced control panel

- 28.25"W x 21"D
- Four rows of 24 pushbuttons for program, preset, preview, and Aux bus control
- Color LCD touch screen provides access to keyer setups, squeeze presets, logo store, and audio setups
- Dedicated rotary controls for audio level adjustments
- 3-axis joystick for adjustment of squeezeback parameters and logo position
- Transition controls provide instant selection of transition types and rates
- 16 user-configurable pushbuttons for channel selection, GPI control and other functions
- Dedicated control cluster for audio monitoring and metering functions



Compact, enhanced control panel

- 19.75"W x 21"D
- Four rows of 16 pushbuttons for program, preset, preview, and aux bus control
- Color LCD touch screen provides access to keyer setups, squeeze presets, logo store, and audio setups
- Dedicated rotary controls for audio level adjustments
- 3-axis joystick for adjustment of squeezeback parameters and logo position
- Transition controls provide instant selection of transition types and rates
- 16 user-configurable pushbuttons for channel selection, GPI control and other functions



Simple control panel

- 19"W x 5.25"H x 3"D (3RU)
- Two rows of 16 pushbuttons for program and preset bus control
- Eight user configurable pushbuttons for multi-level menu functions
- Dedicated rotary controls for audio level adjustments



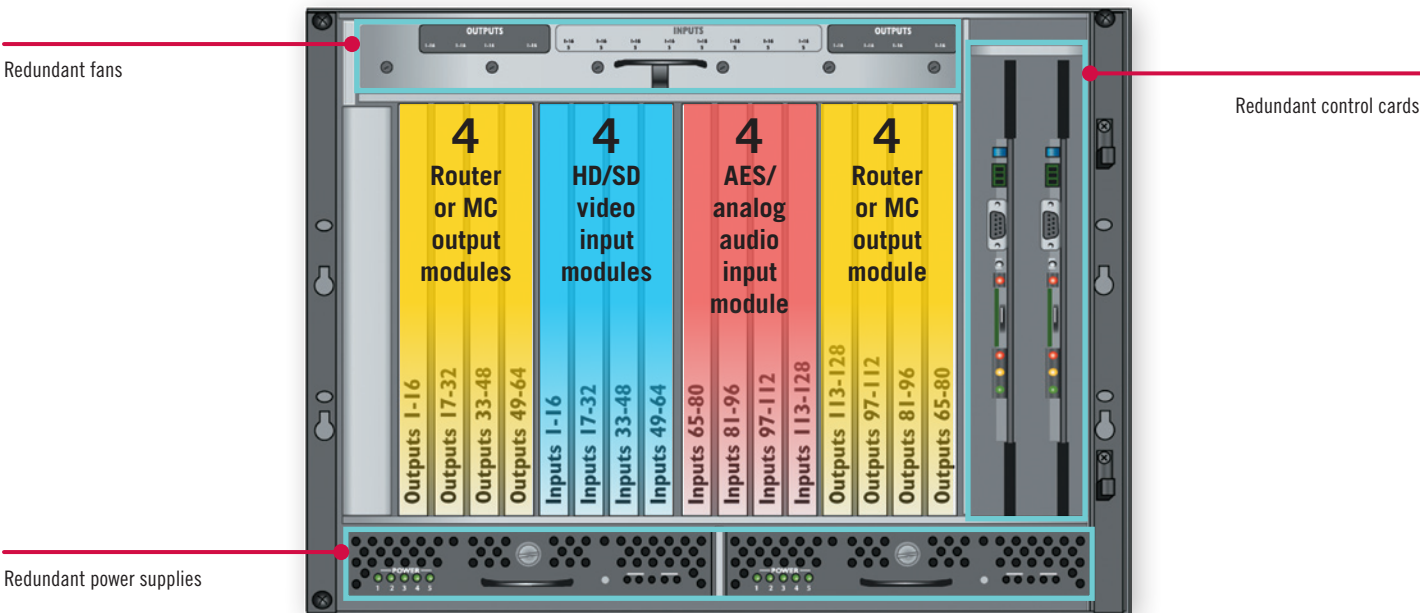
Soft control panel

- Software-based GUI which emulates the functionality of the compact enhanced control panel
- Control by mouse or touch screen interface
- Designed for a PC and requires display capable of supporting 1280 x 1024 resolution

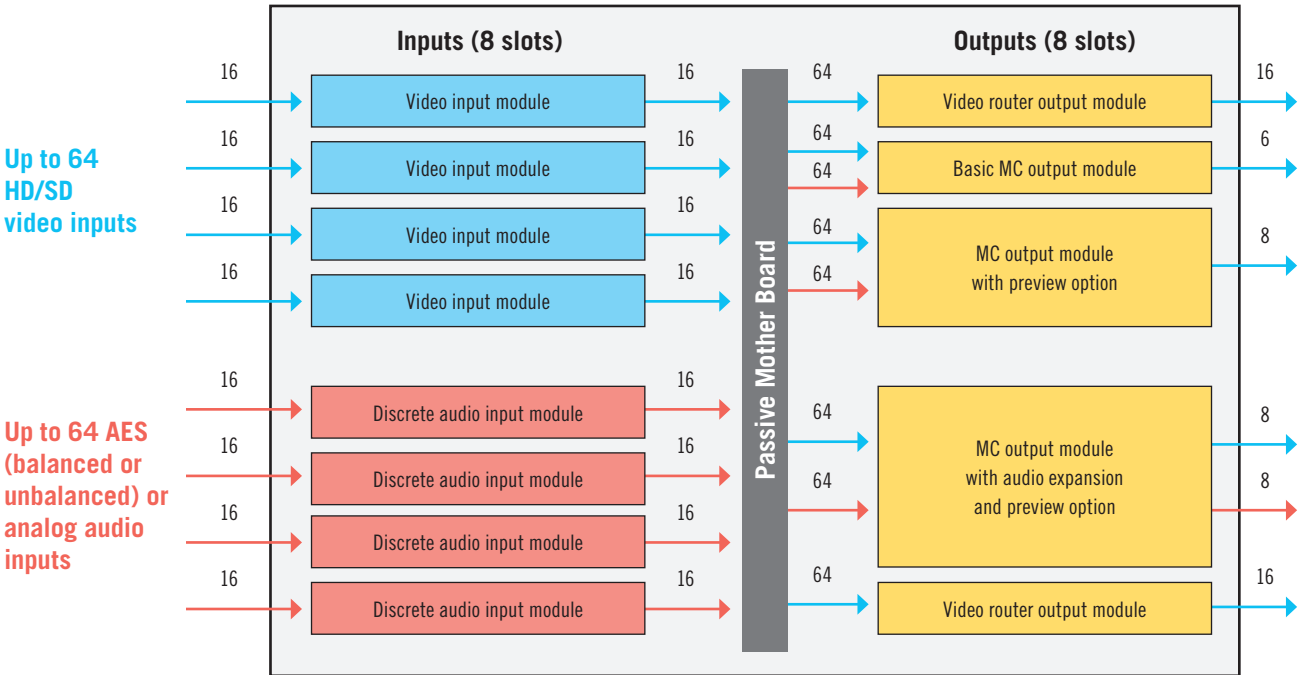


NV5100MC: cost-effective, versatile architecture

The NV5100MC's design allows master control, branding and routing functions to be combined in a single frame.



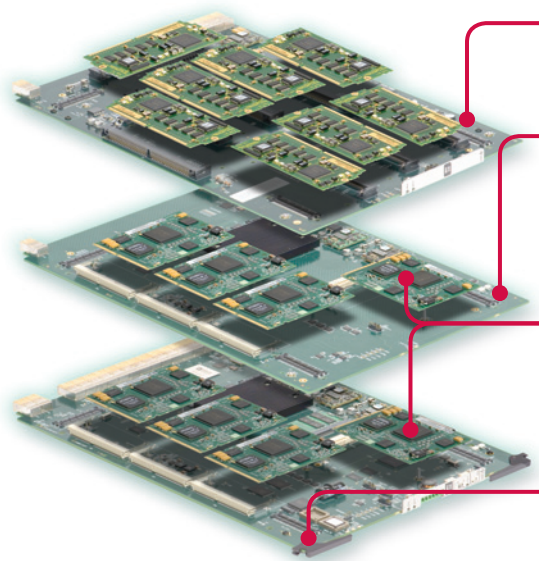
Front view of NV5100MC processor frame



Up to 64 video inputs (with embedded or discrete AES audio) can be input to the NV5100MC processor frame, which can provide master control switching for up to eight independent channels, depending on the module configuration.

NV5100MC processing modules

The NV5100MC's frame can be fitted with router modules (16 input/output), and four types of master control module: a core master control processing module, a full preview module, DVE sub-modules (for core and preview modules), and an audio expansion module for AES outputs and Dolby E decoding.



Audio expansion module

- > Discrete AES Outputs
- > Dolby E decode modules (up to eight installed on audio board)

Preview module

- > PVW Bus
- > A/B Mixer
- > 3 Keyers with external inputs
- > 2 Logo Keyers

DVE sub-modules

- > Single or Dual DVE Squeezeback options for Core Module
- > On-screen DVE preset
- > Single or Dual DVE Squeezeback options for Preview Module

Core processing modules

- > PST/PGM/Aux Buses
- > A/B Mixer
- > 3 Keyers with External inputs
- > 2 Logo Keyers

Flexible 5.1 audio processing

The NV5100MC features highly flexible 16 channel audio processing. For instance, it can be used for dual language, 5.1 audio with stereo voice-overs. It can also provide eight language stereo channels, or a combination of 5.1, stereo, and mono processing.

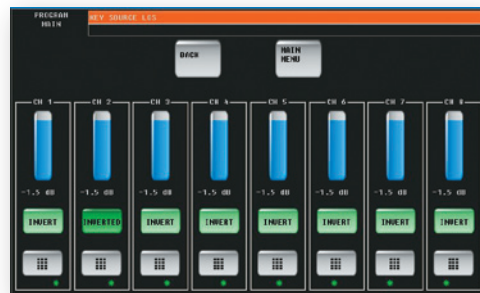
The standard audio processing features include:

- > 16 channel audio processing (embedded and AES)
- > A/B mixer
- > Two voice-over mixers
- > Independent audio channel level adjustment
- > Channel swapping

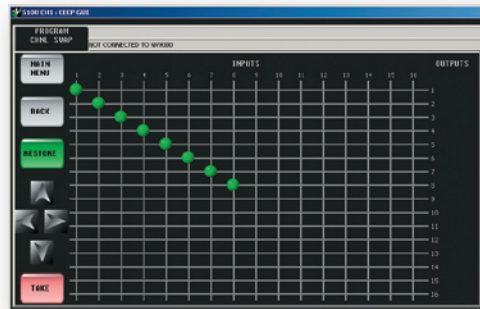
The Audio Expansion option provides (per Audio Expansion module):

- > Dolby E decoding (up to 8 decoders)
- > 8 AES outputs.

Using the Audio Expansion module, sources with Dolby-E encoded audio can be brought directly into the master control switching system. These sources are internally decoded, allowing them to be treated conventionally - enabling transitions and voice-overs. The system can be configured to accept any mix of Dolby-E encoded and conventional sources. All audio delays are managed to match the delay of the video path, thereby ensuring correct lip sync. Metadata from the encoded Dolby-E stream is provided as a serial data output.



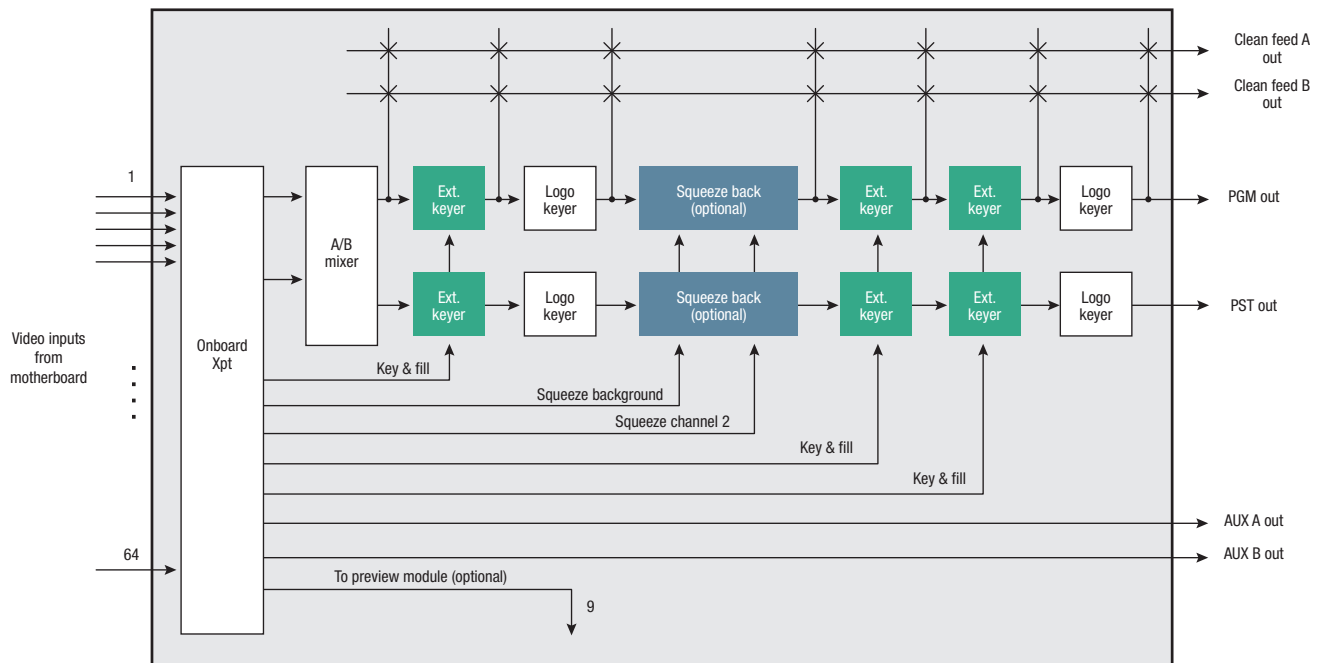
Audio levels can be readily adjusted from the panel GUI



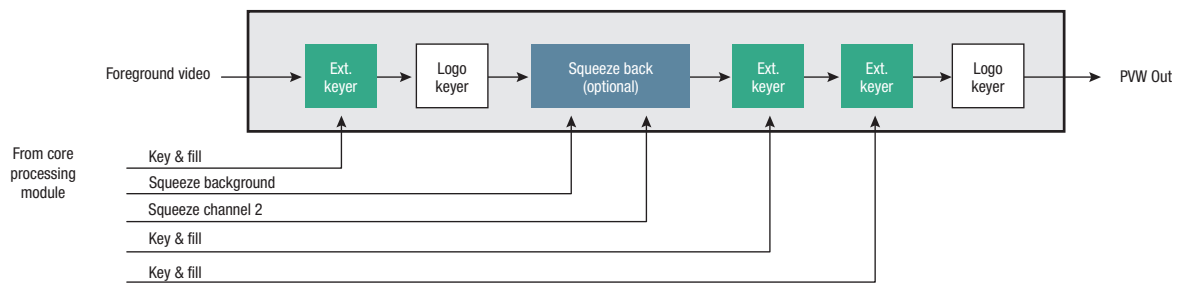
Simple channel swapping with the NV5100MC

NV5100MC: flexible video processing with full preview

The NV5100MC's flexible architecture reduces the entry cost while offering easy upgrades as requirements change.



Core processing module processing



Preview module processing

ORDERING INFORMATION

Master control processing modules

NV5100MC-CORE	Core processing module
NV5100MC-CORE/P	Factory assembled core/preview module set
NV5100MC-CORE/A	Factory assembled core/audio expansion module set
NV5100MC-CORE/PA	Factory assembled core/preview/audio expansion module set

Input modules

NV5100MC-3GIG-IN	16 Input 3GIG Module
NV5100MC-SD-IN	16 Input SD Module
NV5000-SA-IN	16 input AES synchronous module
NV5000-A-IN	16 input AES asynchronous module
NV5000-AA-IN	16 input analog audio module

Options

NV5100MC-CORE-OPT1	Single picture squeezeback option for core processor
NV5100MC-CORE-OPT2	Two picture squeezeback option for core processor
NV5100MC-PVW-OPT1	Single picture squeezeback option for preview processor
NV5100MC-PVW-OPT2	Two picture squeezeback option for preview processor
NV5100MC-AXM-OPT1	Set of 2 Dolby-E decoders for audio expansion module
NV5100MC-AXM-OPT2	Set of 4 Dolby-E decoders for audio expansion module
NV5100MC-AXM-OPT3	Set of 6 Dolby-E decoders for audio expansion module
NV5100MC-AXM-OPT4	Set of 8 Dolby-E decoders for audio expansion module
NV5100MC-PVW	Preview module (add-on to existing core module)
NV5100MC-AXM	Audio expansion module (add-on to existing core module)
NV5100MC-MACH-CTL	Machine Control option
PS6100	Redundant PSU

Rear panels

IO5100MC-CORE	Rear I/O for core processing module
IO5100MC-CORE-BNC	Rear I/O for core processing module with BNCs (2 slots)
IO5100MC-PVW	Rear I/O for preview module
IO5100MC-AXM	Rear I/O for audio expansion module
IO5100MC-3GIG-IN	16 Input 3GIG rear module
IO5100MC-SD-IN	16 Input SD rear module
IO5000-AES-IN-BNC	Rear input connector module for AES-BNC
IO5000-AES-IN-TP	Rear input connector module for AES-twisted pair
NV5100MC-BOP	1RU DIN to BNC breakout panel

Processing frame

NV5100MC-FRM	Multi channel master control switcher frame and power supply
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Control surfaces

NV5100MC-FECP	Full size enhanced control panel
NV5100MC-CECP	Compact enhanced control panel
NV5100MC-CECP-M1	Compact enhanced control panel (no PVW)
NV5100MC-GUI	Enhanced graphical user interface software (requires customer furnished PC)

Other options

EC9610	Master control SNMP license (requires NV9000 system with EC9600 option)
NV5128-MC-SMA	Master control software maintenance agreement

Graphics co-processor

INTUITION-XG-Dual-e	Intuition XG advanced graphics co-processor for NV5100MC (see page 450)
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