

# FSN Series Multi-format Production Switchers

The Fusion of Production Switching and Barco Image Processing Expertise



The FSN series is a new high-resolution production switcher that combines advanced video switching functionality with the power and flexibility of Barco image processing — in a streamlined multi-format package that's modular, easy to operate, and easy on your budget.

Imagine the power —

- Native HD or SD operation, cross-conversion, frame synchronization and selectable native output formats (480i, 576i, 720p, 1080i).
- Unprecedented input and output flexibility, using the power of Barco's Athena scalars. The system's architecture enables you to install up to five dual-channel universal input cards, and up to two dual-channel universal output cards. By seamlessly integrating analog, digital, and computer resolutions into your workflow, the FSN series places serious input and output power — at your fingertips.
- Internal storage of 100 still frames (with up to three frame buffers on line simultaneously), up to four channels of optional internal 2D DVEs, and integration with the Encore Presentation System.
- A minimum two lines of delay for native genlocked inputs.

The FSN series delivers — with a highly configurable multi-format system that enables users to adapt to today's continuously demanding live production environment — at an extremely economical price point. As the industry's next generation switcher, the FSN series represents the perfect fusion of production switching, Athena scaling, and the roadworthiness you've come to expect from Barco.

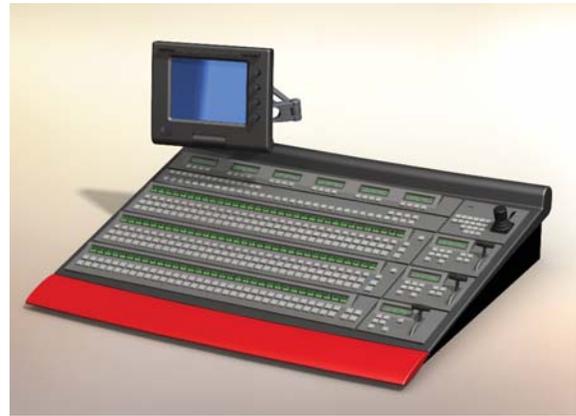
**BARCO**

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## FSN Series Control Panels



**FSN-150** — a 1.5 M/E panel providing 20 assignable crosspoints (10 buttons plus SHIFT)



**FSN-250** — a 2.5 M/E panel providing 32 assignable crosspoints

Each FSN series panel is divided into eight sections:

### Display Section

A high-resolution color LCD touchscreen facilitates input and output setup, transition control, key control, and access to adjustment parameters.

### Custom Control Section

Buttons can be programmed to perform functions such as GPO triggers, macros, freeze, menu access and more. The FSN-150 includes eight custom buttons; the FSN-250 includes 24 custom buttons.

### Aux Section

Assigns sources to native or (optional) scaled Aux bus outputs. Buttons are provided for a maximum 16 Aux outputs.

### Memory Section

Enables users to store and recall complete or partial switcher setups.

### M/E Banks

Each M/E includes Background (BG), Preset (PST), and Key buses, plus programmable hi-resolution LCD displays allowing users to program source names. All displays are angled for easy viewing.

### M/E Transition Section

Provides controls for creating cuts, mixes, wipes and keys, and includes a “hot-cut” section for both keys. The LCD display indicates key sources, the transition rate and the active memory register.

### PGM/PST Bank

The PGM/PST bank includes PGM and PST buses plus a phantom key bus. Programmable hi-resolution LCD displays are also included. All buses operate in “flip-flop” mode.

### PGM/PST Transition Section

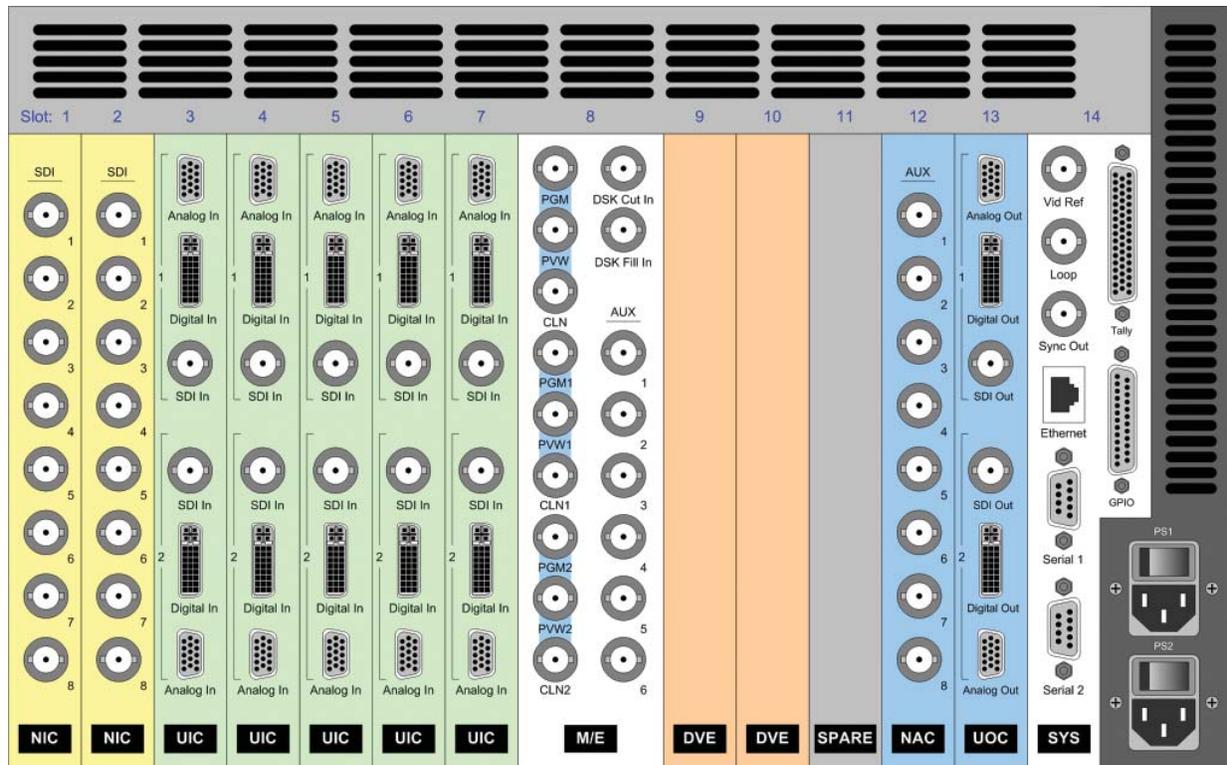
Provides controls for creating cuts, mixes, wipes, a downstream key (DSK) and a fade to black (FTB). The LCD display indicates the DSK source, transition rates for DSK and FTB, and the active memory register.

## FSN Series Chassis

The power and flexibility of the FSN series is housed inside the FSN-1400 — a modular, field-configurable chassis that provides the video processing functions for either the FSN-150 or FSN-250 control panel.

Major features include:

- 14 card slots, 12 slots user-configurable
- Hot-swappable, active front cards and passive rear connector cards
- Mid-plane construction, enabling users to interchange front cards without moving rear cable connections
- Dual redundant, hot-swappable power supplies (optional)
- Removable front door with Power and Video Reference indicators
- 10.5" H (6RU) x 16.0" D x 19.0" W (26.67cm x 40.64cm x 48.26cm)



## Fusion Power

**Standard Cards** — Within the FSN-1400 chassis, four standard cards provide the system's raw horsepower:

- One **Native Input Card** (NIC) provides eight native HD-SDI or SD-SDI inputs, plus frame synchronization and auto-timing (+/- 0.5 lines).
- One dual-channel **Universal Input Card** (UIC) provides the power of two Barco Athena scalars. The card offers frame synchronization, auto-timing and seamless integration of analog, digital (DVI, SD-SDI, HD-SDI), and computer resolutions up to UXGA or 1920x1080.
- One **Mix Effects Card** (M/E) provides PGM, PVW and CLEAN outputs for each M/E. The card also provides native Aux outputs 1 through 6, plus dedicated DSK cut/fill inputs.
- One **System Card** (SYS) provides video reference connections, Ethernet and dual serial communications ports, a tally connector (24 tallies) and a GPIO connector (four input and eight output ports).

**Optional Cards** — You can create a precise multi-format configuration for every event, using the flexibility of the system's powerful options:

- Install one additional **Native Input Card** (NIC), for a maximum of 16 native inputs on line.
- Install up to four additional dual-channel **Universal Input Cards** (UIC), each providing the power of two Barco Athena scalars.
- Install up to two dual-channel **Universal Output Cards** (UOC) as Aux Bus outputs. Each card provides the power of two Barco Athena scalars, with selectable output resolutions up to UXGA or 1920x1080.
- Install up to two dual-channel **2D Digital Video Effects Cards** (DVE), enabling you to create up to four high-resolution PIPs (picture-in-picture effects) using Athena Scalars.
- Install one eight-channel **Native Aux Output Card** (NAC) in place of a UOC, enabling you to switch 16 Aux outputs in a fully loaded system (14 native plus two scaled Aux outputs).

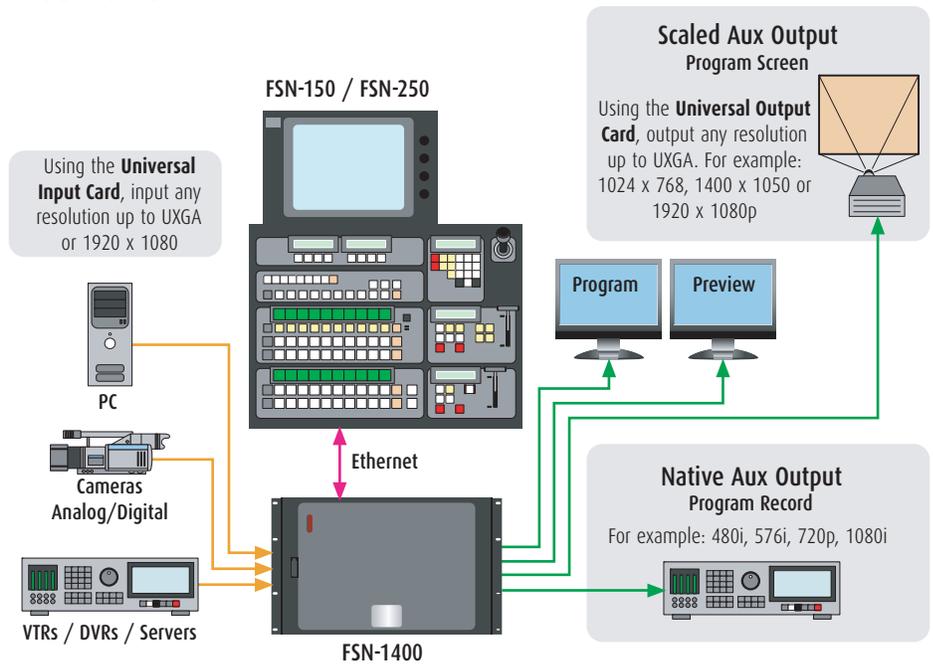
# FSN Series Multi-format Applications

## Application 1— Basic

This configuration is an ideal basic setup consisting of multiple inputs (scaled and native), plus scaled and native Aux outputs.

In the diagram:

- Multiple scaled and native sources connect to the FSN-1400, including cameras, PCs, VTRs, DVRs and servers.
- The FSN-1400 connects to the control panel (FSN-150 or FSN-250) via Ethernet.
- Program and Preview outputs enable the technical director to view the output of the switcher, and preview the “look” that’s coming next.
- A scaled Aux output connects to the projector, while a native Aux output connects to a VTR — providing the ability to record the entire event.



## Application 2 — Encore Cross Feed

This configuration is a highly flexible system in which an Aux output from the FSN-1400 is connected to the input of a MatrixPRO router that feeds the Encore Presentation System. Conversely, a MatrixPRO output feeds the input of the FSN-1400.

Because of the cross routing, each system has access to all sources, yet both can be switched independently. The Encore system can access cameras connected to the FSN series, while the FSN series switcher can access the Encore’s PCs and VTRs.

In the diagram:

- Multiple cameras connect to the FSN-1400. A native Aux output connects to a VTR (for recording Program), while a second Aux output connects to the MatrixPRO.
- In the Encore Presentation System, multiple PCs and VTRs connect to the MatrixPRO router. The router’s outputs connect to the Encore Video Processors and also to the FSN-1400.

