

FSN Series Multi-format Production Switchers

The Fusion of Production Switching and Barco Image Processing Expertise



The FSN series is a new high-resolution, 3G ready production switcher that combines advanced video switching functionality with the power and flexibility of Barco image processing. By seamlessly integrating video and computer graphics formats, the FSN series provides 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 and 1080p @ 23.98,24,25HZ) — and 3G ready.
- 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.
- Up to four channels of optional internal 2D DVEs, allowing the creation of PIPs with borders, shadows and keyframe effects.
- Six standard native aux outputs, plus additional native outputs via optional Native Aux Output Cards (NAC).
- An optional fully integrated dual output 16-channel Multiviewer Card (MVR) (upcoming release).
- Up to four Universal Outputs via the optional Universal Output Card (UOC) (upcoming release).
- 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

Visibly yours

FSN-150

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.

USB
Enables users to backup and restore system, and update system code.

Memory Section
Enables users to store and recall complete or partial switcher setups using 1000 memory registers. This advanced memory system includes high-end features such as enables/disables.

Aux Section
Assigns sources to native or (optional) scaled Aux bus outputs. Buttons are provided for 16 Aux outputs. Additional Aux outputs are switched on the GUI.

M/E Transition Section
Provides controls for creating cuts, mixes, wipes, keys, and triggering DVE moves. The LCD display indicates key sources, the transition rate and the active memory register.

LCD Displays
Programmable hi-resolution LCD displays show all source names. All displays are angled for easy viewing.

Instant Transitions
This section provides instant CUT or MIX functions for both keyers, regardless of T-Bar position.

M/E Banks
Each M/E includes Background (BG), Preset (PST), and Key buses. Buttons can be assigned to inputs, color backgrounds, stills and test patterns. A dedicated BLACK button is provided.

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.

Graphical User Interface (GUI)

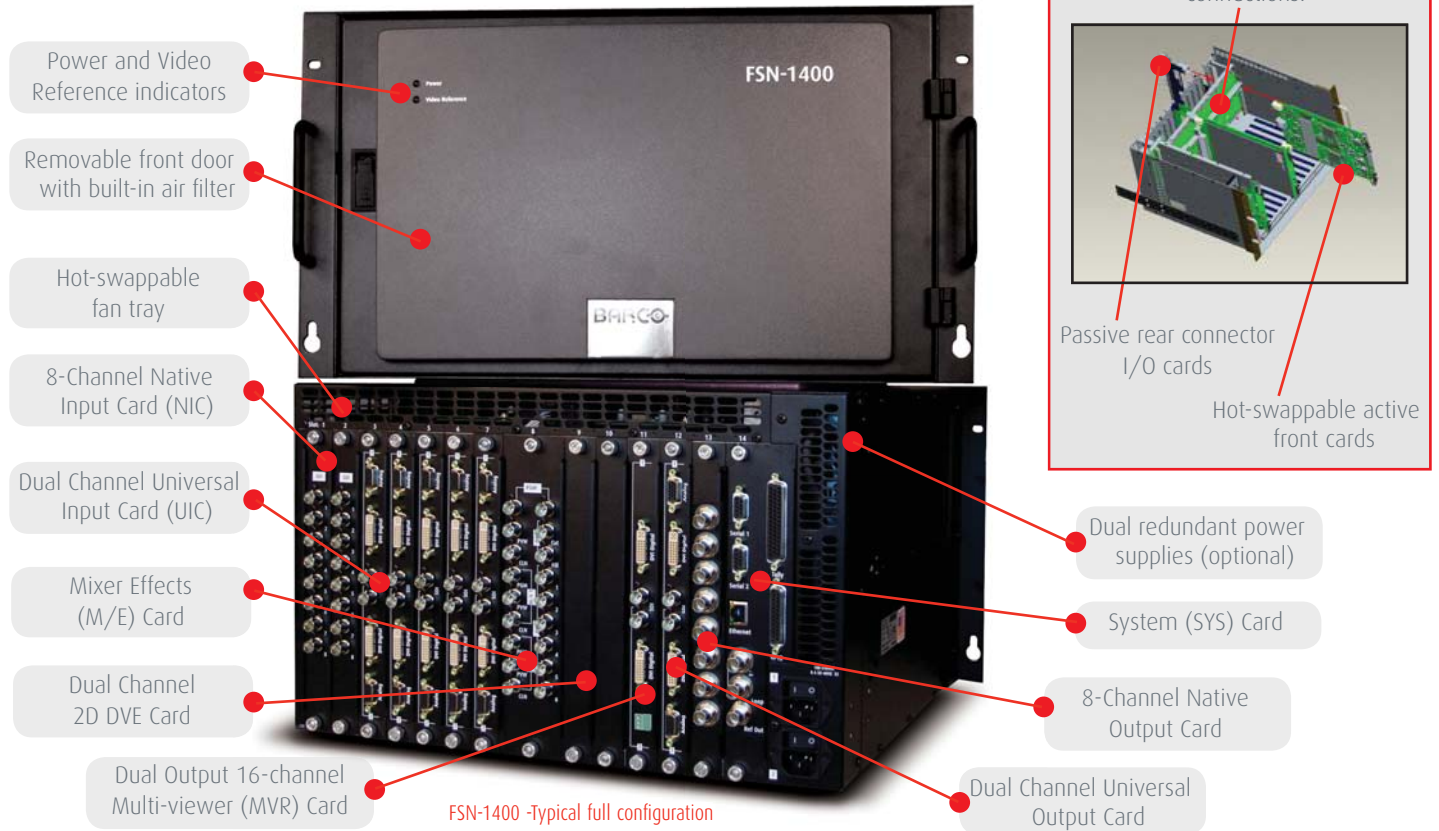
An essential part of the FSN's ease-of-use is the graphical menu system. The menus provide an intuitive, user-friendly environment that allows operators to efficiently set up the unit and perform quick modifications.

The entire display includes a high-resolution color touch screen that also includes four rotary knobs that allow users to easily modify switcher parameters.



FSN-1400 Video Processor

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 both the FSN-150 and the FSN-250.



FSN-1400 -Typical full configuration

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.
- One dual-channel **Universal Input Card (UIC)** provides the power of two Barco Athena scalers. 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:

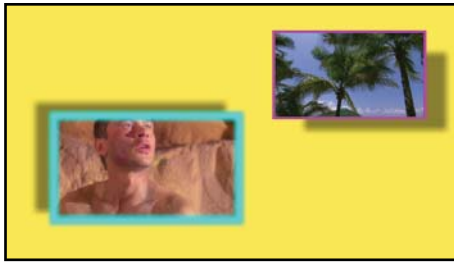
- Install up to three additional **Native Input Card (NIC)**, each providing 8 native inputs.
- Install up to four additional dual-channel **Universal Input Cards (UIC)**, each card providing the power of two Barco Athena scalers.
- Install up to two dual-channel **2D Digital Video Effects Cards (DVE)**, enabling you to create up to four high-resolution PIPs (picture-in-picture effects) using Athena Scalers.
- Install up to three eight-channel **Native Aux Output Cards (NAC)**, enabling you to switch additional outputs.
- Install one 16-channel **Multi-viewer card (MVR)** allowing you to monitor up to 16 sources or outputs on one or two monitors. All connections to the card are internal to the FSN-1400, simplifying setup and minimizing costs (Upcoming release).
- Install up to two dual-channel **Universal Output Cards (UOC)** each card providing the power of two Barco Athena scalers, with selectable output resolutions up to UXGA, 1920x1080 and 2048x1080p (Upcoming release).

		FSN-1400 Slots													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
FSN-1400 cards	NIC	•	•	•	•										
	UIC			•	•	•	•								
	M/E							•							
	DVE									•	•				
	MVR											•			
	UOC												•	•	
	NAC												•	•	•
	SYS														•

• Provided with the Base system

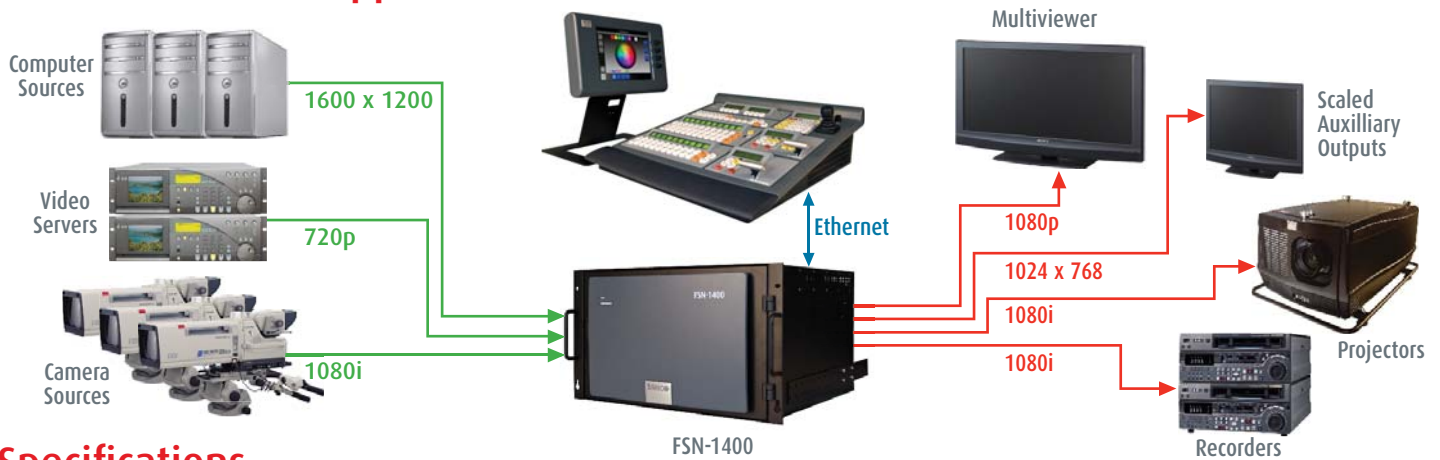
Note: You can install only one Universal Output Card with a Multi-viewer Card.

2D - DVE Features



- Image sizing, positioning cropping and keyframe editing
- Independent DVE channel assignment to key cut and fill signals
- Borders with programmable color, width
- Border Types - Hard, Soft, Halo, Half Halo
- Drop Shadows in any direction with programmable size, position, luminance, and opacity
- Full-frame freeze, strobe and color effects
- DVE channels can be linked for multi-DVE channel adjustments.
- Unique "shot box" enables users to instantly access up to 128 single-keyframe looks
- PIP parameters can dynamically morph between keyframes

FSN Multi-Format Application



Specifications

	TYPE	FORMAT
INPUTS	8 standard SD/HD SDI inputs and up to 30 additional inputs with optional cards	SMPTE 424M, 292M, 259M-C
	2 standard universal inputs (SD/HD, DVI, Analog) and up to 8 additional universal inputs with optional cards	SMPTE 424M, 292M, 259M-C DDWG 1.0 RGBHV/RGBS/RGSB, YPbPr video, S-video, Composite
	Dedicated Native Cut and Fill SD/HD SDI inputs	SMPTE 424M, 292M, 259M-C
OUTPUTS	1.5ME: 7 SD/HD SDI native outputs for Program/Presets/Clean 2.5ME: 10 SD/HD SDI native outputs for Program/Presets/Clean	SMPTE 424M, 292M, 259M-C
	6 standard native SD/HD SDI Aux outputs. Additional native outputs with optional cards	SMPTE 424M, 292M, 259M-C
	Up to 4 optional universal outputs (SD/HD, DVI, Analog)	SMPTE 424M, 292M, 259M-C DDWG 1.0 RGBHV/RGBS/RGSB, YPbPr video, S-video, Composite
	Multi-viewer: Up to 16 windows on one or two SD/HD, DVI, Analog outputs	SMPTE 424M, 292M, 259M-C DDWG 1.0 RGBHV/RGBS/RGSB, YPbPr video, S-video, Composite
CONTROL	Analog Ref Input/Loop/Output on a BNC connector	Bi-level and Blackburst at SD Tr-level at HD
	GPIO: 4 inputs and 8 outputs on DB25	
	Tally Outputs: 24 contacts on DB50 up to 30VDC at 1 Amp	
	Ethernet communication between FSN-150 and FSN-1400	10/100Base-T

Resolutions

VGA (640x480) through UXGA (1600x1200), HDTV (720p, 1080i, 1080p), 2048x1080, Plasma Display Resolutions

Mechanical

FSN-1400	6RU: 19" W x 10.5" H x 20.75" D (max) (48.26cm W x 26.67cm H x 52.7cm D (max))	58 lbs (26.5 Kg)
FSN-150	22" W x 7" H x 24" D (55.88cm W x 17.78cm H x 60.96cm D)	26 lbs (12 Kg)
Display	11.6" W x 9.7" H x 2.67" D max with knobs (29.46cm W x 24.64cm H x 6.78cm D with knobs)	5 lbs (2.5 Kg)
Stand	14" W x 13" H x 10" D (35.56cm W x 33.02cm H x 25.4cm D)	8 lbs (3.75 Kg)

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