



MASTER CONTROL & BRANDING

The EMC series offers intelligent solutions to the challenges of Master Control in today's ever-changing transmission environment.



www.evertz.com • 1.877.995.3700



Master Control is the heart of any broadcast facility. Demands for reliability, serviceability, and signal protection are essential. Equally essential is a Master Control that can be expanded to provide for growth as facilities migrate to 3Gb/s with enhanced branding. Many broadcasters look at Master Control as a major long-term investment.

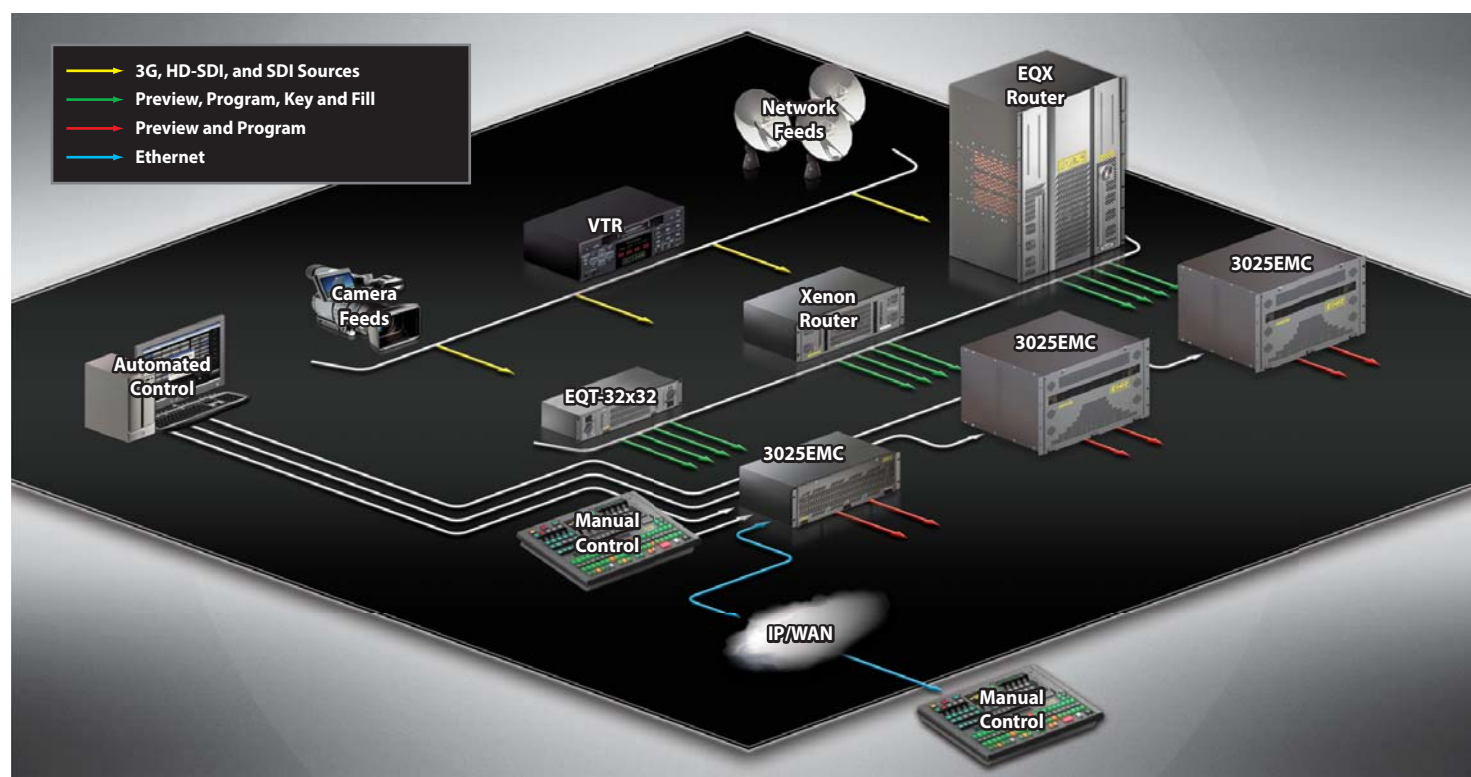
EMC Master Control Switcher

The 3025EMC Master Control Switcher has been designed to meet the growing needs in today's ever-changing Master Control environment. The 3025EMC platform provides a cost-effective solution for facilities converting to HD, SD and 3Gb/s. The hardware platform runs solid, field-proven software to form a foundation that meets the latest playout and branding needs. Other major features the platform includes are: bypass & emergency inputs, hot-swappable hardware, and redundant power supplies. Combined, these features create a reliable system for 24/7 year-round programming.

Evertz® Integrated Solution: The 3025EMC offers a unique approach to SD/HD/3G Master Control with a number of options and a broad selection of configurable control panels. It can be assembled to meet any need and size. A 3025EMC system is comprised of an upstream router feeding a number of processing channels. This architecture allows systems to scale from a single channel up to a complex multi-channel installation with minimal effort. The feature rich 3025EMC can be easily controlled under automation or manual control. The intelligent LCD pushbutton control panels give operators high flexibility in panel layout and user-friendly functionality. The 3025EMC integrates seamlessly with the Evertz® MVP® multi-viewer and router product lines, allowing customers to have a complete "turn-key" Master Control solution.



EMC System Diagram



Branding and DVE

Branding: The 3025EMC has four internal key layers for static or animated “bugs” over the 3Gb/s, HD or SD video signal. The internal media generator also offers the options for the use of audio chimes/snips, dynamic text for lower thirds, and dynamic text crawls. The size of each logo is variable and ranges from 1/25th to full screen. Various media formats (such as Tiff, TGA, Bitmap, and WAV files) can be imported into the Evertz® ***overture***™ media software and transferred to the 3025EMC via Ethernet.

The position of the logo, fade rates, clip association and animation rates can be controlled through the various control panels. Media is stored into flash memory that can be quickly recalled by the various control panel's automation. The internal key layers can optionally be expanded to 16 (+EMG).

With a removable compact flash option, you can have access to up to 8Gb (+PC8G) & (CF8G) of on-line media storage space. The Network Attached Storage (+NAS) option utilizes the Gigabit Ethernet of the 3025EMC to connect a media server device. This option allows the 3025EMC to access virtually unlimited archived media storage. This approach in addition to the ***overture***™ suite simplifies the workflow.

DVE: The 3025EMC offers an optional DVE feature. The 2-channel 2-D DVE option (+DVE-2D) or a 4-channel 2-D DVE option (+DVE-2D-2) provides live and dynamic visual effects such as picture sizing and picture-in-picture with full preview capabilities and positioning, and is fully integrated within the 3025EMC. The DVE is fully assignable within the video processing path of the 3025EMC. The DVE may be controlled manually or from the automation system and is independent of the key and logo (bug) layers.

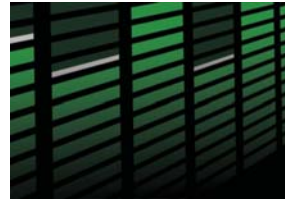


LCD buttons (with up to 255 different colors) offer 10 character displays for complete customization of the EMC-DCP

**Program & preset bus select buttons
use a quiet tactile button and a shared
LCD display source for labeling**



Key Operational Features

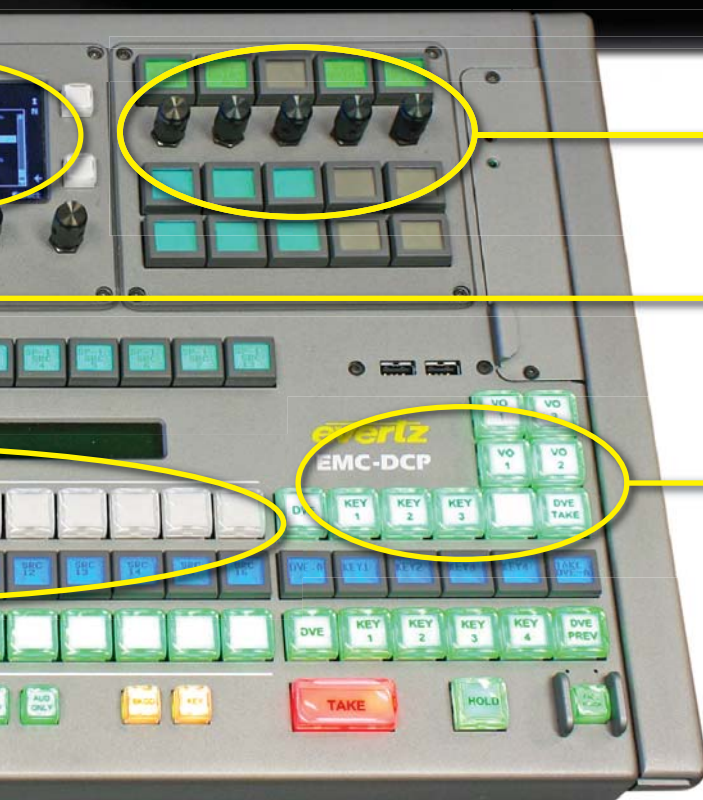


Audio & Voice-Overs: The 3025EMC has powerful and flexible audio capabilities. With a standard 16 channels of embedded audio, it is easy to integrate into any station. Audio level adjustments may be made from the panel at any time and stored on a source-by-source basis. Internal audio shufflers allow routing from any input to any output. Also, phase correction and mono-mixing is provided.

DOLBY E The 3025AP (Advanced Audio Processing) with built-in sample rate converters allow any mix of 44.1kHz and 48kHz sources to be used and silently switched on-air. Optional Dolby-E/AC-3™ Decoders (+DD2) and Dolby-E™ Encoders (+DE2) allow the 3025AP to handle Dolby 5.1 programming.

Both the 3025EMC and 3025AP boards can perform two independent stereo voice-overs, each mappable to any or all output channels. Full "pre-hear" allows level and voice-over ratio to be set prior to going on-air. Voice-overs can be taken to air combined with another transition or independently.

Evertz® award-winning IntelliGain™ (+IG) can be added to the 3025AP to provide Program Loudness control.



EMC-DCP

Rotary control for audio levels, logo position and other fine controls

4.3 inch LCD display is ideal for audio level monitoring and logo previews from the EMC

Buttons are available for the dedicated key, DVE, logo and voice-over levels

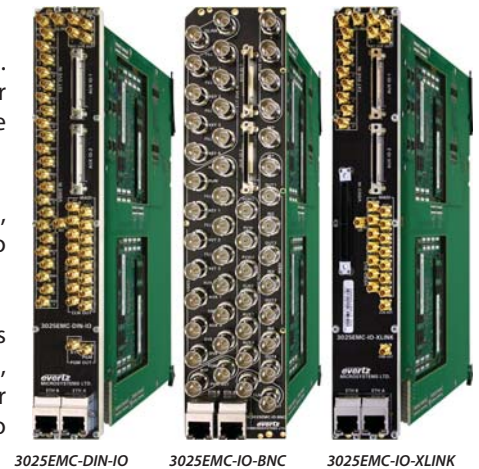
The EMC Platform

The 3025EMC is designed to support 3Gb/s, HD and SD video formats, including: 525i/59.94, 625i/50, 720p/59.94, 720p/50, 1080i/59.94, 1080i/50, 1080p/50, and 1080p/60. Each 3025EMC processes a complete Program and Preset path using a Program and Preset input. A third Emergency input allows users to quickly go to a safe feed in case of emergency.

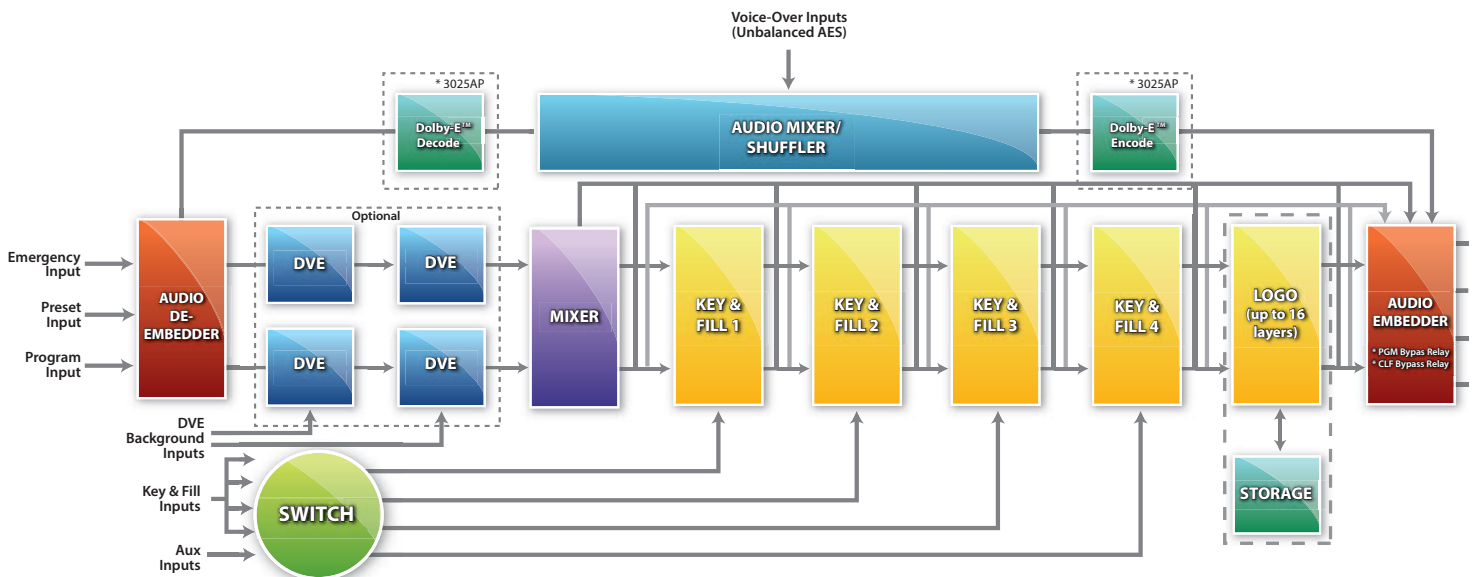
The 3025EMC provides a Program output and a full "look-a-head" Preview of the next transition. It provides two independent Clean outputs, where video and audio are taken from either Program or Preview processing path. The 3025EMC has built-in bypass relays, which provide maximum protection for the Program and Clean feed in cases of failure.

For audio, the 3025EMC provides support for 16 channels of embedded audio on the Program, Preset, and Emergency inputs. Embedded audio is also taken from any of the other inputs to provide more audio mixing options.

The 3025AP, Advanced Audio Processing module, can be fitted with the 3025EMC, and offers IntelliGain™ as an option for Program Loudness control, Dolby E/AC-3 decoding and encoding, Dolby UpMix and Dolby DownMix. The 3025EMC board offers four MAD1 inputs and outputs for discrete audio. Support for discrete AES inputs and AES outputs is provided via an external audio module called the 3025EMC-48x36-AESU.



EMC Block Diagram



EMC Control

Manual Control: The 3025EMC system was designed for ease of use in live and automated environments. The range of control panels has been optimized for size and ease of use in single and multi-channel playout applications. All the control panels use 10 character LCD buttons, providing a dynamic control environment. Every button is user-configurable, enabling panel layouts that are operator friendly. The panel layout provides a menu system, exposing the full capability of the 3025EMC to the operator. The control panels range from a 1RU version to the full size desktop control panel.



Automated Control: Each 3025EMC channel can connect to the leading automation systems through a dedicated serial port located on every channel. This gives low latency and maximum protection against on-air problems. Crosspoint control of upstream routers is handled directly by the 3025EMC so only a single port on the automation system is required for each active channel. The control protocols used by the 3025EMC are supported by the major automation vendors.

Upstream Router Control: Each 3025EMC channel can control any size of router matrix ranging from 12 inputs to 1024 inputs. For "turn-key" environments, the 3025EMC integrates seamlessly with the Evertz® router product lines (from EQT to EQX). For existing routing infrastructures, the 3025EMC has support for the leading router vendors.

Specifications

Video Connections:

Inputs: Program, Preset, Emergency, Keyer-1 Fill, Keyer-1 Key, Keyer-2 Fill, Keyer-2 Key, Keyer-3 Fill, Keyer-3 Key, DVE Background 1, 2 Program Bypass, Clean Bypass, Aux 1, 2 and 3
Standards: SMPTE259M, SMPTE292M, SMPTE424M
Signal Level: 800mV p-p nominal
Impedance: 75 terminating
Return Loss: 15dB typical (5MHz - 1485MHz)
Cable Equalization: Belden 1855A, 300m @ 270MHz, 100m @ 1.5Gb/s, 100m @ 3G
Connectors: DIN 1.0/2.3 or BNC per IEC 61169-8 Annex A
Timing Window: ±1/2 line w.r.t. Reference input

Outputs:

4 Standard (dual): Program, Preview, Clean, Aux
Standards: SMPTE259M, SMPTE292M, SMPTE424M
Signal Level: 800mV p-p ±10%
Impedance: 75 terminating
Return Loss: 15dB typical (5MHz - 1485MHz)
DC Offset: 0 ±0.5V
Connectors: DIN 1.0/2.3 or BNC per IEC 61169-8 Annex A

Switching Reference:

Reference Input: Analog 525/625 or Tri-level
Signal Level: 1V p-p ±3dB
Connector: DIN 1.0/2.3 or BNC per IEC 61169-8 Annex A

Control:

Q-Link: DIN 1.0/2.3 or BNC per IEC 61169-8 Annex A
Serial: 6 serial (configurable RS-232/RS-422)
 DB9 female (on two breakout panels)
Ethernet: Dual 10/100/1000BT, 8-pin RJ45

General Purpose Inputs/Outputs:

Inputs: 16 (standard)
Outputs: 16 (standard)
Type: Opto-isolated, active low
Connector: Terminal block (on breakout panel)

LTC Reader:

Standard: SMPTE 12M-1
Frame Rate: 25 and 30 Fps nominal
Connectors: 3-pin female XLR type connector (on breakout panel)
Level: 0.2V to 4V p-p, balanced or unbalanced



EMX6-FR

EMX3-FR

Physical (EMX6-FR):

Height: 10.5" (266mm)
Width: 19" (483mm)
Depth: 14.5" (368mm)
Module: 15 single slot modules

Physical (EMX3-FR):

Height: 5.25" (133mm)
Width: 19" (483mm)
Depth: 15.75" (400mm)
Module: 5 single slot modules

Electrical (EMX6-FR):

AC Mains Input: Auto ranging, 100-200V AC, 50/60Hz
Max. Operating Current: 9.5A (@115V AC nominal), 4.0A (@220V AC nominal)
Single 3025EMC Channel: Approx. 90W
Connector: IEC 60320 - 1 per power supply

Electrical (EMX3-FR):

AC Mains Input: Auto ranging, 100-200V AC, 50/60Hz
Max. Operating Current: 4.6A (@100V AC nominal), 1.85A (@240V AC nominal)
Single 3025EMC Channel: Approx. 90W
Connector: IEC 60320 - 1 per power supply

Ordering Information

3025EMC-HDSD HD/SD Master Control with Channel Branding Module
3025EMC-3G 3G/HD/SD Master Control with Channel Branding Module

Main Processing Module Options:

+EMG Media Graphics expansion
 +DVE-2D Two channel 2D DVE
 +DVE-2D-2 Four channel 2D DVE
 +TXT Texting option for crawls and CGs
 +TP Air Temperature probe
 +PC8G Upgrade of playout cache to 8GB
 +CF8G Upgrade of compact flash to 8GB
 +E Support for EAS crawl insertion (North America only)
 +NAS Support for network attached storage

Main Processing Module I/O Options:

3025EMC-IO-DIN DIN I/O Rear Module for 3025EMC
 3025EMC-IO-XLINK XLINK I/O Rear Module for 3025EMC
 3025EMC-IO-BNC BNC I/O Rear Module for 3025EMC

Audio Modules:

3025EMC-48x32-AESU External AES input and output board for the 3025EMC
 3025AP Advanced Audio Processing module for 3025EMC
 +UMX Single Stereo to 5.1 UpMix
 +DMX Single 5.1 to Stereo DownMix
 +DD2 Dual Dolby E®/AC-3 decoder
 +DE2 Dual Dolby E® encoders
 +IG IntelliGain

Frames:

EMX6-FR 6RU frame for 3025EMC modules. Up to five 3025EMC modules
 +P5 Redundant power supply
 EMX3-FR 3RU frame for 3025EMC modules.
 +78PQT Redundant power supply

Control Panels:

EMC-DCP Desktop control panel for 3025EMC and QMC-2.
 QMC-CP-1000E QMC Auxiliary Control Panel - Fully programmable panel with 16 integral 10 character LCD buttons and Ethernet.
 1RU rack mount
 QMC-CP-E QMC Control Panel - Standard panel with fully programmable 10-character LCD buttons and Ethernet. 2RU rack mount
 QMC-CP-2048E QMC Buddy Panel - Three rows of 16 integral 10 character LCD buttons which can used in conjunction with other QMC control panels for extended control. 2RU rack mount with Ethernet
 QMC-DCP-SW Software version of QMC-DCP



1-877-995-3700 • sales@evertz.com • www.evertz.com

Evertz (Canada HQ)
 +1 905-335-3700
 sales@evertz.com

Washington DC Sales
 +1 703-330-8600
 dcsales@evertz.com

New York Sales
 +1 201-337-0205
 newyorksales@evertz.com

UK Sales
 +44 (0)118-921-6800
 uksales@evertz.com

US West Coast Sales
 +1 818-558-3910
 uswestsales@evertz.com

South-East Europe Sales
 +385 1-2001-665
 SEuropesales@evertz.com

Dubai Sales
 +971 4-422-9113
 middleeastsales@evertz.com

Asia Pacific Sales
 +852 2850-7989
 asiapacificsales@evertz.com