

CARBONITE

Carbonite Production Switchers Mid-sized Production Power

C10



C1a



C1m



C2



C2m



NEW! C2s



C2x



NEW! C3s



NEW! C3x



ROSS
Production Technology Experts



Pure Production Power





Carbonite [karbo-nait]

1 One of the earliest and most successful coal-mining explosives. **2** In Star Wars, a cryonic alloy used to keep tibanna gas fresh and to provide stasis for successful intergalactic transport. **3** Pure production power.

Ever dream of big switcher production power in a mid-size package you can afford? So did we here at Ross, and turned that dream into reality with Carbonite, a ground breaking new production switcher series.

Carbonite uses the absolute latest technology to pack unprecedented production power into a super compact frame. The Ross Multi-Definition Production Engine that lies at the heart of Carbonite offers the same pristine processing used on other Ross switchers – precisely tuned for this new platform. The superb performance of our award winning Vision series is now available to you in this incredible mid-size package, at an unbeatable price.

Solid. Powerful. Affordable. Carbonite – It's for you.



New!

Unbelievable, **free** new features from Ross for Carbonite. The Production Switcher Powerhouse, **nothing else comes close...**

2.5ME

CARBONITE 2.5 ME

Thanks to the huge internal processing capabilities of the Carbonite platform, you can now operate Carbonite as a 1 or 2 ME systems with MiniMEs & MultiScreen – OR – run your 2 ME system in 2.5 ME mode.

When in 2.5 mode, Carbonite has a full Program / Preset bus with dissolves and MediaWipe transitions and two Downstream Keyers (DSKs) in addition to the standard features of the main MEs.

For producers seeking to upgrade current 2.5 ME SD systems to full HD, Carbonite becomes the product of choice. When any Carbonite frame is matched with our new 3S or 3X panels, it becomes not only a very familiar operating workflow but also adds a level of production power and system connectivity that was simply not available until now.

There is no other product available today that can offer all of the operational choices and flexibility of the Carbonite platform at its price point.

Like MiniMEs & MultiScreen, Carbonite 2.5 is a FREE software update in Version 9.0 onwards and thanks to our intuitive panel row swap functions, both of these new modes can run on any one of the 9 available Carbonite panels, or indeed from the elegant DashBoard software control system on any PC or MAC.

Couple any Carbonite with the stunning XPression graphics system and our BlackStorm playout servers and you have an efficient and cost effective production system capable of producing the highest quality content for any application – quickly and effectively.

3G

4K

UHDTV @ 50/60Hz

CARBONITE 3G

Now Carbonite is 3G! – 1080P 50 or 60 (59.94). For those producers wanting to adopt the very latest full HD progressive standard – Carbonite is now a perfect tool for the job. This new mode also ensures your production system investment is protected for years to come. Current Carbonite owners can simply download the latest software and switch to 3G operation, no new hardware required – and its FREE. It's yet another first from the production technology experts at Ross.

In 3G mode the number of DVEs are reduced to 4 from 8 and the maximum number of MultiViewer windows becomes 10, not 16. 3G signals contain twice the data of standard HD and as a result some resource reduction occurs. However, all other resources remain the same – MiniMEs, MultiScreen or 2.5ME modes all are accessible and NO other switcher of this size and price point can offer 3G processing.

Advanced UHD (4K) Production with MiniMEs & 3G

The Carbonite powerhouse can also take you to the very latest production format – UHDTV. In 3G mode Carbonite's MiniMEs can be used for basic UHD production. Simply turn on MultiScreen mode and all four MiniME controls are locked together, allowing mixes, cuts and keys to be applied to UHD quad link inputs. MiniMEs have no true preview output, however you can easily and simply perform all of the basic switching functions and keying to provide a perfectly produced UHD output. You can input up to 6 x UHD quad link sources and have a UHD Program output, plus if the quad link format is pixel/line interleave you can easily monitor sources via standard 1080 displays and Carbonite's MultiViewers. This quad link format also allows simultaneous UHD and 1080P outputs.

Not only truly remarkable processing power, but also FREE – just turn on 3G and MultiScreen modes!

DashBoard LiveAssist

CARBONITE



MEET THE CARBONITE FAMILY



Carbonite ViewControl



Carbonite 2X



Ca



Carbonite 3X



Carbonite 3S



Carbonite 2S



Carbonite 10

CARBONITE

Carbonite 1M



Carbonite 2M



Carbonite 2



Carbonite 1-A



Carbonite Extreme™



Carbonite Plus™
Carbonite MultiMedia™
Frames



APPLICATIONS

Carbonite is used daily in a wide variety of production applications. Our engineers have incorporated feedback from our diverse group of users, resulting in a capable, powerful and feature rich production switcher. Whatever your creation, you can be assured that Carbonite will give you all the horsepower you need to produce beautiful, crisp, clean television.

Broadcast**Worship****Live Events****Legislative Control Systems****Corporate****Education**

RICH FEATURE SET

A great looking production requires a complete set of tools. Carbonite's unmatched power and easy-to-use feature set will get the job done.

Powerful MEs

Carbonite packs major effects and keying power into 2 ME's. Each ME has 4 powerful keyers with luma, linear, Chroma and DVE key types as well as an additional 5th hidden keyer for animated Media Wipe and DVE transitions. Each ME can access the 2 advanced UltraChrome™ chroma keyers. Two advanced pattern generators per ME are available for wipes, pattern masks and color washes. Each ME also provides a clean feed output.

LiveAssist™ & MediaManager™

A powerful Ross DashBoard LiveAssist control interface combines with Carbonite's MediaManager browser to provide intuitive control over switcher settings, Media Store graphics and animations. With simple access from PC and MAC, DashBoard and MediaManager are the perfect Carbonite companions.

ViewControl

With ViewControl, it is now possible to create an entire production from a simple and very intuitive interface. Complex transition elements are shown as thumbnails surrounding the live source windows. Running the show is now as simple as touching the screen.

4 Channel Media-Store™

Four independent media player channels are available switcher-wide. Stills, logos and animated graphics can be played out from the on-board 8GB memory and can be loaded via USB storage devices. The Media-Store™ can also be managed directly over Ethernet via Carbonite's browser-based graphics tools.

4 or 8 Channels of DVE

4 or 8 high quality 2D DVE channels are available system-wide. When set to 4 channels the DVE's 'float' within the system architecture allowing all to be assigned to a single ME or distributed across both ME's as the production demands. These DVE's are also available for ME DVE transitions and have dedicated selection in the ME transition area.

MediaWipes™ with Audio Playback

MediaWipes™ add powerful animated transition capabilities with audio playback from the Carbonite Media-Stores™. Create compelling, animated graphic transitions and control them simply from a dedicated ME transition area selector.

Dual MultiViewers with Clock

Two configurable MultiViewers (up to 32 windows) are included in Carbonite's standard feature set. These clean, low latency MultiViewers have access to all external and internal sources. Source naming and tally assignment automatically follow window routing selections. The MultiViewer clock can be locked to house time via Time code.

Multi-Format Production

Carbonite's video processing engine can be set for Standard or High Definition production. In addition, the standard system includes 6 internal frame synchronizers and format converters which allow mixed SD and HD formats to be seamlessly incorporated into your production. The Carbonite Plus and MultiMedia versions have dedicated converter/synchronizers on every input.

Proc Amps and Color Correction

All inputs on the Carbonite+ and MultiMedia frames have video processing and color correction controls for input matching or to add creative flare.

MultiMedia Inputs

The Carbonite MultiMedia version has special input groups that accept analog and HDMI inputs as well as SDI. These inputs employ advanced format conversion designs that provide very high quality conversion for progressive and computer display formats with low latency.

UltraChrome™ Advanced Chroma Keying in Every ME

Our UltraChrome™ chroma keyer uses new Ross technology to perform detailed keying in the most demanding conditions.

Effects Memory with MemoryAI™

Carbonite's powerful and truly unique intelligent resource management system allows stored keys and backgrounds to be recalled to preview without disturbing what is currently on-air. This system enables multiple 'scenes' to be stored and recalled in a manner that would normally require a much larger multi-ME switcher.

Custom Control Macros

The combination of macro event management with timelines. Fast, Powerful & editable macros that can do almost anything. Record events, recalls, pauses, holds and control devices, directly from the panel or the DashBoard GUI.

LiveEDL™

Another unique Ross feature; during your live production Carbonite can generate an industry standard Edit Decision List (EDL). Production decisions can then be seamlessly transferred to a Non Linear Editor to recreate the event timeline. With Carbonite, getting an as-run edit into post is as simple as a few mouse clicks.

RossTalk Protocol & Device Control

Direct control of external devices is simple with Carbonite. Control Servers, Robotic Cameras, select Audio Mixers and, of course, our award winning XPression 2D / 3D graphics system.

CARBONITE

CARBONITE MiniME™

MiniMEs are a new class of operational 'devices' within the production switcher architecture. These are very powerful effects modules that include an independent Mixer and 2 Keyers, 1 standard Keyer and 1 specifically for DVE boxes. MiniME modules do not reside in a fixed position in the signal flow – they are not Upstream, Midstream or Downstream – they 'float' and can be used anywhere in the signal path. They reside in a resource 'pool' to be used anywhere in the system for additional dissolves and key layers, which are immediately released as soon as the transition or effect is complete. There are 4 MiniMEs in the system, but as they are automatically attached when required they can be assigned to multiple locations – and all four can be used simultaneously.

MiniMEs are completely independent of Carbonite MEs. All of Carbonite's standard ME resources are available without compromise.



1 PRE CHROMA KEYING

Composite chroma key sources over a background with Carbonite's awesome UltraChrome keyer and simply select that input during production. Perfect for weather and virtual sets, no need to tie up an ME.



2 PRE-KEYING

With a MiniME you can Pre-Key on a direct input source. Simply assign a key graphic to the input source and whenever that source is selected it will be pre-built with the assigned key – no ME involved. Perhaps you want to add an OTS DVE and a graphic to a camera input, same deal – whenever and wherever that source is selected it will be a prebuilt layered image. MiniMEs can be attached to any number of inputs and up to 4 pre-keyed sources can be used simultaneously.



3 DOWNSTREAM KEYING

A MiniME can also be be a downstream keyer/mixer, just assign program or any other input and key source. With 4 MiniMEs there can be 4 entirely differently branded program outputs in addition to standard ME outputs – no clean feeds involved. Of course MiniMEs are also perfect for independent On-Set display management.

4 MIDSTREAM KEY LAYERING

Add more key layers between MEs, i.e. Build a 4 box layout on ME1, feed it into a MiniME and then add a lower third to it. The composited output can now be called up on the second ME or used as a second program output.



Carbonite MiniMEs

MiniMEs are FREE! Simply download Version 8.0 and they will be immediately available for use in any Carbonite system - regardless of age or configuration. All part of the fantastic customer service from Ross.

CARBONITE

CARBONITE MultiScreen™

COMPELLING MULTI-SCREEN PRODUCTION

Say goodbye to complex and expensive multi-screen image processors. Carbonite MultiScreen delivers compelling multi-screen production with ease - and, remarkably, it is a standard feature in Carbonite Production Switchers.



FEATURES

MANAGE UP TO 4 SEPARATE SCREENS SIMULTANEOUSLY

- Create visually stunning content for up to 4 projectors on a single screen with edge blending
- Scale outputs across multiple displays perfectly with bezel compensation
- Integrated visual control of screens in 1x2, 2x1, 1x3, 3x1, 1x4, 4x1 and 2x2 configurations
- Produce MultiScreen and program outputs simultaneously
- Simple setup and straightforward operation
- DashBoard GUI Controls via PC or MAC

BROADCAST QUALITY

- Broadcast level visual effects in a multi-screen environment
- Serious production power across all outputs
- Lip sync friendly with low latency – 1 frame of delay max
- Dramatic cross screen transitions
- Scale a single background across all screens
- Full resolution multi-screen backgrounds from graphics systems and Media-Stores

COST EFFECTIVE

- MultiScreen is FREE with all Carbonite Production Switchers
- Built in control for Video Servers, Audio Mixers, Robotic Cameras and Graphics Systems
- Optional LiveCG Character Generator
- Integrated Media-Stores for built-in background slides, animations and keys

MiniMEs - THE CARBONITE MULTISCREEN SECRET

The MiniME is an incredibly powerful addition to this production powerhouse. A MiniME is a small Mix Effects processor that has access to all of Carbonite's internal and external sources – independent of the main ME's. MiniME's have background processing for edge softening and access to scaling via Carbonite DVE's. In addition each MiniME has two keys and independent mixing.

CARBONITE MiniME's

- Four MiniME's in every Carbonite
- Linked control for MultiScreen production
- Independent control for on-set and secondary outputs
- Selectable edge softening for Edge Blended displays
- Simple operation via Carbonite Custom Controls

Pure Production Power.



GEARLITE SDI TO HDMI CONVERSION

Our GearLite SDI to HDMI converter is the simple solution for MultiScreen connections. This high quality yet inexpensive module allows the direct connection to your display's HDMI or DVI-D inputs from Carbonite's serial digital outputs via a single BNC cable.

CARBONITE SIDESHOT - CUSTOM CONTROL SHOT BOX

Manage your Stage and On-Set MultiScreen production with the SideShot Custom Control macro shot box. Carbonite custom controls can be programmed to manage all of the elements of your production and assigned to SideShot keys - complete with highly visible control mnemonics.

With SideShot your MultiScreen event can be operated independently from your Carbonite panel.

■ **GearLite™ and SideShot™ - The perfect MultiScreen™ companions.**

CARBONITE STUDIO SYSTEMS



Carbonite Studio Systems

A Carbonite 1 or 2 ME switcher combined with a superb Ross Video Blackstorm Server, and our stunning XPression 3D Character Generator and Motion Graphics System.

Whatever your production needs, there is a Studio System package that will meet them.

CARBONITE VIEWCONTROL

Carbonite Studio Systems integrate production switching with powerful XPression 3D graphics and BlackStorm video server playout via our RossTalk and AMP Ethernet protocols. Add the remarkable patent pending ViewControl touch screen application via DashBoard and every production element is visually displayed for instant touch selection.

ViewControl is much more than just touching sources and bringing them to air, this is a sophisticated and highly integrated system that can easily perform seriously complex productions.

Whatever your production tasks a Carbonite Studio System with ViewControl will accomplish them perfectly every time. No other production solution can provide seamless and efficient control. *The whole is truly greater than the sum of the parts.*



- 1 Configurable tabbed 'bins' with thumbnails for instant touch selection of custom production elements
- 2 Next Transition Selection
- 3 Transition & Roll Clip Controls
- 4 Direct Key Cut & Auto Control Area with Source Mnemonics
- 5 Touch Selectable low latency MultiViewer windows (1 frame delay)
- 6 Switcher Bus Destination Selection
- 7 ViewControl Configuration Settings

CARBONITE

Carbonite Studio Packages
Pick a package. Pick a package. Imagine being able to produce an entire show, controlling switcher effects, complex graphics and server clips, all from your Carbonite control panel. With a Studio System you can do exactly that!

CARBONITE 10 CONTROL PANEL

MULTI-PURPOSE BUTTONS

- Quickly select patterns, DVE effects, memories, media, or menu functions

KEY TYPE SELECTIONS

- Choose between self-keying, linear keying, chroma keying, and DVE picture-in-picture keying

TOP BUS DELEGATION

- Reassign the top bus to keyer, aux bus, or macro recall control

PANEL GLOW

- User-adjustable for various lighting environments

DIRECT ACCESS TO MEMORIES

- MemoryAI™ Recalls make for impressive productions

INSTANT ME SWAP

- Switches between ME 1 and ME 2



10-WIDE SELECTOR BUS

- Access to every internal and external source in the switcher

HIGHLY VISIBLE MENU

- Intuitive auto-follow menu



DURABLE METAL JOYSTICK

- Position wipes, patterns and washes as well as control Pan and Tilt for robotic cameras.

TRUE NEXT TRANSITION AREA

- Rapid selection of keys with full preview

LEGENDARY ROSS FADER

- Robust and Guaranteed for Life

DEDICATED TRANSITION BUTTONS

- Rapid live keyer control

ADVANCED TRANSITION TYPE SELECTION

- Choose from dissolve, wipe, DVE, and MediaWipe™ Transitions (MediaWipe selected by pressing Diss & Wipe simultaneously)

Carbonite 10

The compact & rugged Carbonite C10 is the perfect fit for flight packs and tight spaces. Don't let its size fool you - it's power packed.

CARBONITE 1-A CONTROL PANEL

POWERFUL MACRO EDITING

- Easy to create, amazing to use

DIRECT ACCESS TO MEMORIES

- MemoryAI™ Recalls make for impressive productions

MULTI-PURPOSE BUTTONS

- Quickly select patterns, DVE effects, memories, media, or menu functions

KEY TYPE SELECTIONS

- Choose between self-keying, linear keying, chroma keying, and DVE picture-in-picture keying

TOP BUS DELEGATION

- Reassign the top bus to keyer, aux bus, or macro recall control

SOURCE MNEMONICS

- Name sources, select text size, choose color and even invert

MACRO NAMES

- Give macros names for worry-free recall during live productions

PANEL GLOW

- User-adjustable for various lighting environments

16-WIDE SELECTOR BUS

- Access to every internal and external source in the switcher



HIGHLY VISIBLE MENU

- Intuitive auto-follow menu

INSTANT ME SWAP

- Switches between ME 1 and ME 2

HIGH END 3-AXIS JOYSTICK

- Position wipes, patterns, washes, camera control and DVE effects

TRUE NEXT TRANSITION AREA

- Rapid selection of all keyers with full preview

LEGENDARY ROSS FADER

- Robust and Guaranteed for Life

SOURCE MNEMONICS

- Show current source names for every keyer

DEDICATED CUT AND AUTO TRANS BUTTONS

- Rapid live keyer control

ROLL CLIP

- Automatically roll a clip cued on Preview bus with next transition

ADVANCED TRANSITION TYPE SELECTION

- Choose from dissolve, wipe, DVE, and MediaWipe™ Transitions

Carbonite 1-A

A powerful switcher needs an intuitive panel. The Carbonite 1-A panel is exactly that - easy-to-use and uncompromising.

CARBONITE 1M CONTROL PANEL

MULTI-PURPOSE BUTTONS

- Quickly select patterns, DVE effects, memories, media, or menu functions

KEY TYPE SELECTIONS

- Choose between self-keying, linear keying, chroma keying, and DVE picture-in-picture keying

TOP BUS DELEGATION

- Reassign the top bus to keyer, aux bus, or macro recall control

SOURCE MNEMONICS

- Name sources, select text size, choose color and even invert

MACRO NAMES

- Give macros names for worry-free recall during live productions

POWERFUL MACRO EDITING

- Easy to create, amazing to use

DIRECT ACCESS TO MEMORIES

- MemoryAI™ Recalls make for impressive productions



PANEL GLOW

- User-adjustable for various lighting environments

24-WIDE SELECTOR BUS

- Access to every internal and external source in the switcher

1m

HIGHLY VISIBLE MENU

- Intuitive auto-follow menu

INSTANT ME SWAP

- Switches between ME 1 and ME 2

HIGH END 3-AXIS JOYSTICK

- Position wipes, patterns, washes, camera control and DVE effects

TRUE NEXT TRANSITION AREA

- Rapid selection of all keys with full preview

LEGENDARY ROSS FADER

- Robust and Guaranteed for Life

SOURCE MNEMONICS

- Show current source names for every keyer

DEDICATED CUT AND AUTO TRANS BUTTONS

- Rapid live keyer control

ROLL CLIP

- Automatically roll a clip cued on Preview bus with next transition

ADVANCED TRANSITION TYPE SELECTION

- Choose from dissolve, wipe, DVE, and MediaWipe™ Transitions

Carbonite 1M

Functional Elegance. Perfectly placed controls fall directly under the operators fingertips - *flawless production control.*

CARBONITE 2 CONTROL PANEL

MULTI-PURPOSE BUTTONS

- Quickly select patterns, DVE effects, memories, media, or menu functions

POWERFUL MACRO EDITING

- Easy to create, amazing to use

KEY TYPE SELECTIONS

- Choose between self-keying, linear keying, chroma keying, and DVE picture in picture keying

TOP BUS DELEGATION

- Reassign the top bus to keyer, aux bus, or macro recall control

SOURCE MNEMONICS

- Name sources, select text size, choose color and even invert

MACRO NAMES

- Give macros names for worry-free recall during live productions

PANEL GLOW

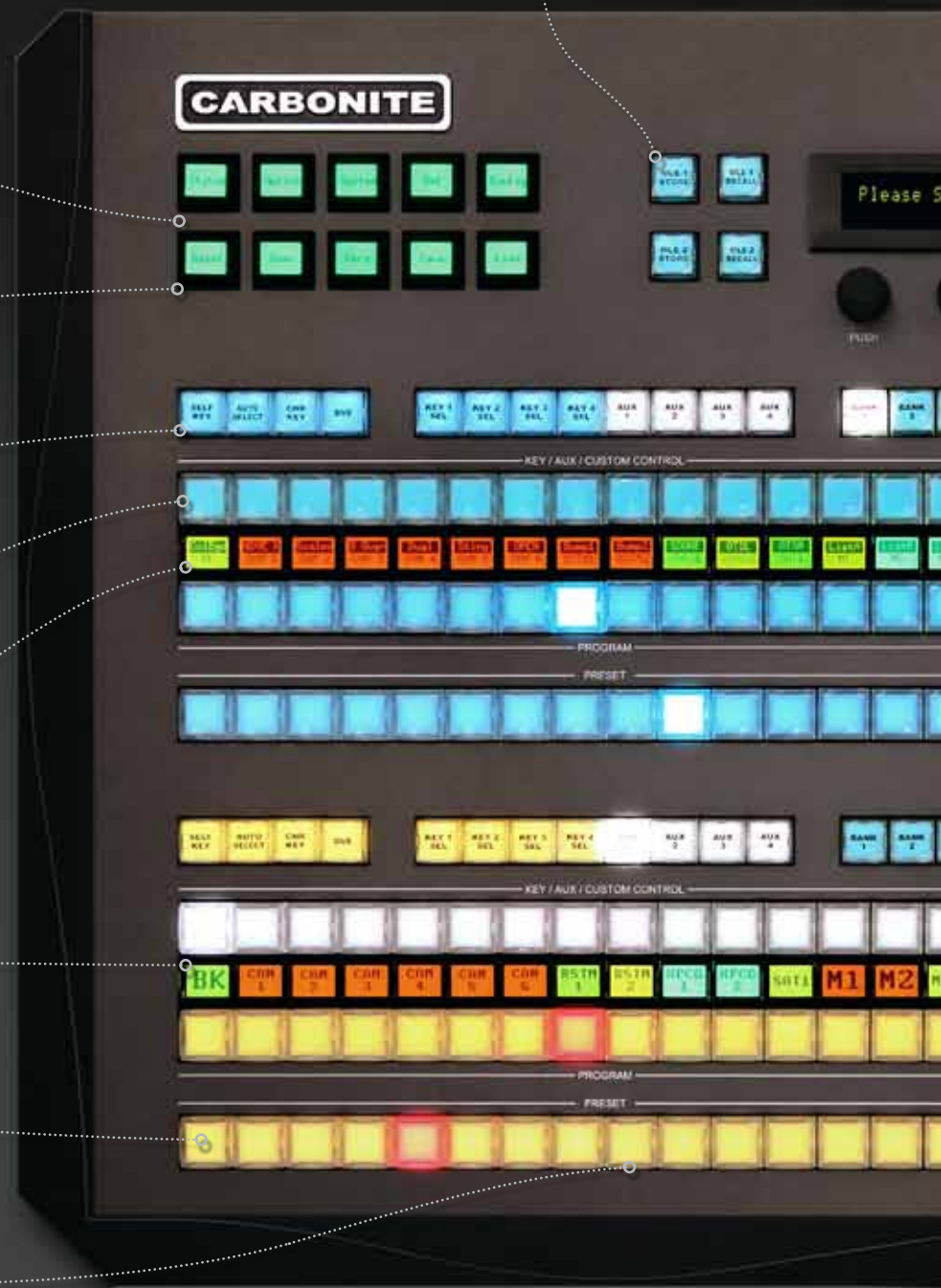
- User-adjustable for various lighting environments

16-WIDE SELECTOR BUS

- Access to every internal and external source in the switcher

DIRECT ACCESS TO MEMORIES

- MemoryAI™ Recalls make for impressive productions



HIGHLY VISIBLE MENU

- Intuitive auto-follow menu

HIGH END 3-AXIS JOYSTICK

- Position wipes, patterns, washes, camera control and DVE effects

LEGENDARY ROSS FADER

- Robust and Guaranteed for Life

TRUE NEXT TRANSITION AREA

- Rapid selection of all keys with full preview

SOURCE MNEMONICS

- Show current source names for every keyer

DEDICATED CUT AND AUTO TRANS BUTTONS

- Rapid live keyer control

ADVANCED TRANSITION TYPE SELECTION

- Choose from dissolve, wipe, DVE, and MediaWipe™ Transitions

ROLL CLIP

- Automatically roll a clip cued on Preview bus with next transition

Carbonite 2

A perfect blend of size and function, the Carbonite 2 provides complete control - elegantly. It will look really good at the center of your production system.

CARBONITE 2M CONTROL PANEL

DIRECT ACCESS TO MEMORIES

- MemoryAI™ Recalls make for impressive productions

POWERFUL MACRO EDITING

- Easy to create, amazing to use

MULTI-PURPOSE BUTTONS

- Quickly select patterns, DVE effects, memories, media, or menu functions

KEY TYPE SELECTIONS

- Choose between self-keying, linear keying, chroma keying, and DVE picture in picture keying

TOP BUS DELEGATION

- Reassign the top bus to keyer, aux bus, or macro recall control

SOURCE MNEMONICS

- Name sources, select text size, choose color and even invert

MACRO NAMES

- Give macros names for worry-free recall during live productions

PANEL GLOW

- User-adjustable for various lighting environments

24-WIDE SELECTOR BUS

- Access to every internal and external source in the switcher



HIGHLY VISIBLE MENU

- Intuitive auto-follow menu



HIGH END 3-AXIS JOYSTICK

- Position wipes, patterns, washes, camera control and DVE effects

LEGENDARY ROSS FADER

- Robust and Guaranteed for Life

TRUE NEXT TRANSITION AREA

- Rapid selection of all keyers with full preview

SOURCE MNEMONICS

- Show current source names for every keyer

DEDICATED CUT AND AUTO TRANS BUTTONS

- Rapid live keyer control

ADVANCED TRANSITION TYPE SELECTION

- Choose from dissolve, wipe, DVE, and MediaWipe™ Transitions

ROLL CLIP

- Automatically roll a clip cued on Preview bus with next transition

Carbonite 2M

Beautiful ergonomics - smooth and precise operation multi-ME performance in a compact design.

New!

CARBONITE 2S

Carbonite 2S

Introducing the Carbonite C2S, a new 24 button 2 ME panel for Carbonite incorporating individual ME Effects Memory keypads. The C2S has all of the features of the very popular C2M panel and adds ME effects memory controls in addition to the standard global controls.

This new panel brings the number of Carbonite panel choices to 9, continuing the expansion of this rapidly evolving product line.

DashBoard LiveAssist Touchscreen Interface



MULTI-PURPOSE BUTTONS

- Quickly select patterns, DVE effects, memories, media, or menu functions

SELECTION CONTROL

- Configurable AUX, ME, MiniME & MultiScreen control selection

POWERFUL MACRO EDITING

- Easy to create, amazing to use

KEY TYPE SELECTIONS

- Choose between self-keying, linear keying, chroma keying, and DVE picture in picture keying

TOP BUS DELEGATION

- Reassign the top bus to keyer, AUX bus, or macro recall control

SOURCE MNEMONICS

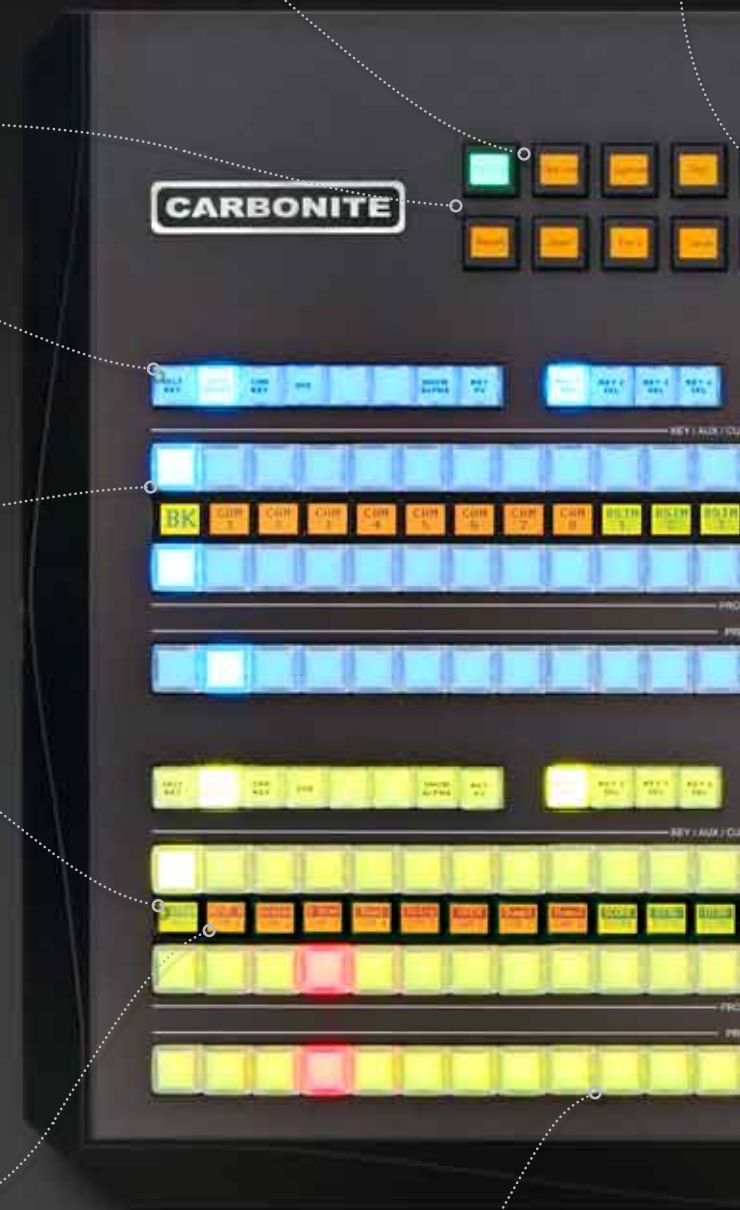
- Name sources, select text size, choose color and even invert

MACRO NAMES

- Give macros names for worry-free recall during live productions

PANEL GLOW

- User-adjustable for various lighting environments



DIRECT ACCESS TO MEMORIES

- MemoryAI™ Recalls make for impressive productions

HIGHLY VISIBLE MENU

- Intuitive auto-follow menu

ME EFFECTS MEMORY CONTROL

- Instant access to individual ME effects memories.

HIGH END 3-AXIS JOYSTICK

- Position wipes, patterns, washes, camera control and DVE effects

LEGENDARY ROSS FADER

- Robust and Guaranteed for Life

TRUE NEXT TRANSITION AREA

- Rapid selection of all keys with full preview

SOURCE MNEMONICS

- Show current source names for every keyer

DEDICATED CUT AND AUTO TRANS BUTTONS

- Rapid live keyer control

24-WIDE SELECTOR BUS

- Access to every internal and external source in the switcher

ROLL CLIP

- Automatically roll a clip cued on Preview bus with next transition

ADVANCED TRANSITION TYPE SELECTION

- Choose from dissolve, wipe, DVE, and MediaWipe™ Transitions



CARBONITE 2X CONTROL PANEL

DIRECT ACCESS TO MEMORIES

- MemoryAI™ Recalls make for impressive productions

POWERFUL MACRO EDITING

- Easy to, amazing to use

MULTI-PURPOSE BUTTONS

- Quickly select patterns, DVE effects, memories, media, or menu functions

KEY TYPE SELECTIONS

- Choose between self-keying, linear keying, chroma keying, and DVE picture in picture keying

TOP BUS DELEGATION

- Reassign the top bus to keyer, aux bus, or macro recall control

SOURCE MNEMONICS

- Name sources, select text size, choose color and even invert

MACRO NAMES

- Give macros names for worry-free recall during live productions

PANEL GLOW

- User-adjustable for various lighting environments

32-WIDE SELECTOR BUS

- Access to every internal and external source in the switcher



HIGHLY VISIBLE MENU

- Intuitive auto-follow menu

ME EFFECTS MEMORY CONTROL

- Instant access to individual ME effects memories.

HIGH END 3-AXIS JOYSTICK

- Position wipes, patterns, washes, camera control and DVE effects

LEGENDARY ROSS FADER

- Robust and Guaranteed for Life

TRUE NEXT TRANSITION AREA

- Rapid selection of all keys with full preview

SOURCE MNEMONICS

- Show current source names for every keyer

DEDICATED CUT AND AUTO TRANS BUTTONS

- Rapid live keyer control

ADVANCED TRANSITION TYPE SELECTION

- Choose from dissolve, wipe, DVE, and MediaWipe™ Transitions

ROLL CLIP

- Automatically roll a clip cued on Preview bus with next transition

Carbonite 2X

With a single button push for every input or internal source its perfect for flawless fast paced productions. The Carbonite 2X is the ultimate Carbonite panel.

2X

New!

CARBONITE 3S

Carbonite 3S – 3ME panel

The beautiful new 3S is a 24 button panel that adds a third ME row for instant control of MiniMEs, MultiScreen or a half ME. This ergonomically designed panel also has a raised menu control area for easy reach and viewing. The new 3S has all the same features as the award winning 2S, including individual ME Effects Memory Control keypads.



DashBoard ViewControl
Touchscreen Interface



Carbonite 3S Panel

MULTI-PURPOSE BUTTONS

- Quickly select patterns, DVE effects, memories, media, or menu functions

POWERFUL MACRO EDITING

- Easy to create, amazing to use

KEY TYPE SELECTIONS

- Choose between self-keying, linear keying, chroma keying, and DVE picture in picture keying

TOP BUS DELEGATION

- Reassign the top bus to keyer, AUX bus, or macro recall control

SOURCE MNEMONICS

- Name sources, select text size, choose color and even invert

MACRO NAMES

- Give macros names for worry-free recall during live productions

PANEL GLOW

- User-adjustable for various lighting environments

DIRECT ACCESS TO MEMORIES

- MemoryAI™ Recalls make for impressive productions

24-WIDE SELECTOR BUS (32-WIDE on 3X)

- Access to every internal and external source in the switcher

HIGHLY VISIBLE MENU

- Intuitive auto-follow menu

ME EFFECTS MEMORY CONTROL

- Instant access to individual ME effects memories.

HIGH END 3-AXIS JOYSTICK

- Position wipes, patterns, washes, camera control and DVE effects

LEGENDARY ROSS FADER

- Robust and Guaranteed for Life

TRUE NEXT TRANSITION AREA

- Rapid selection of all keyers with full preview

SOURCE MNEMONICS

- Show current source names for every keyer

ADVANCED TRANSITION TYPE SELECTION

- Choose from dissolve, wipe, DVE, and MediaWipe™ Transitions

DEDICATED CUT AND AUTO TRANS BUTTONS

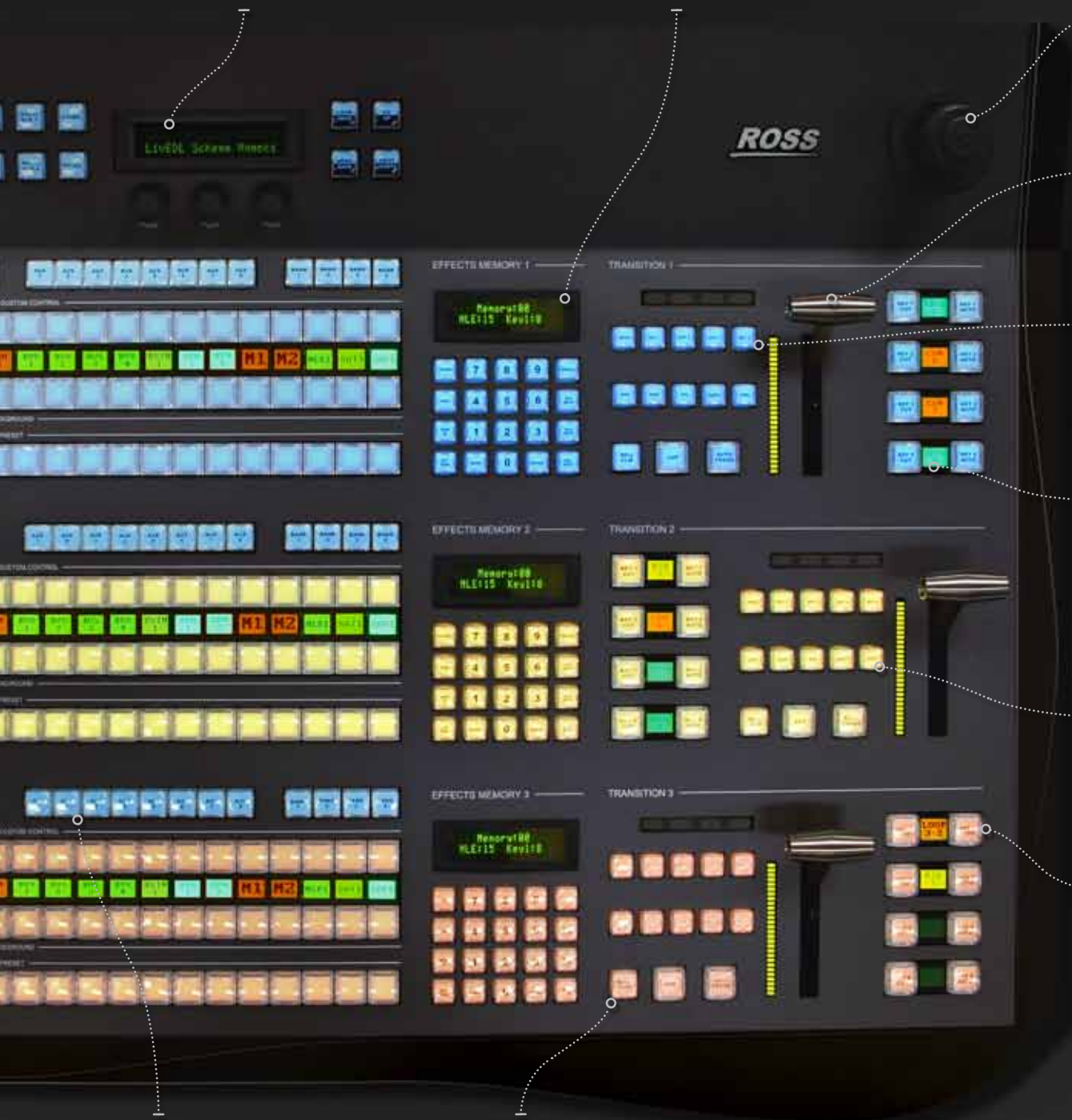
- Rapid live keyer control

SELECTION CONTROL

- Configurable AUX, ME, MiniME & MultiScreen control selection

ROLL CLIP

- Automatically roll a clip cued on Preview bus with next transition



New!

CARBONITE 3X

CARBONITE 3X – 3ME PANEL

Like the 3S this awesome panel is elegant and great to operate, it has all the features of the 3S but has 32 source select buttons just like the 2X. The 3X also has dedicated ME row selection buttons for instant control of any ME or MiniME on any row as well as 8 Custom Control bank select buttons, allowing a whopping 256 Custom Control Macros to reside on the panel for direct selection at any time.

With the addition of the 3S and 3X, Carbonite customers can now choose from a range of 9 super cool control surfaces. There is a Carbonite panel to suit every application, from small flight packs to large control room installations – Carbonite is the clear choice.

No other production switcher family can offer the choice or flexibility that Carbonite brings.



Carbonite 3X Panel
(32 crosspoints)

3X

MULTI-PURPOSE BUTTONS

- Quickly select patterns, DVE effects, memories, media, or menu functions

DIRECT ACCESS TO MEMORIES

- MemoryAI™ Recalls make for impressive productions

POWERFUL MACRO EDITING

- Easy to create, amazing to use

KEY TYPE SELECTIONS

- Choose between self-keying, linear keying, chroma keying, and DVE picture in picture keying

TOP BUS DELEGATION

- Reassign the top bus to keyer, AUX bus, or macro recall control

SOURCE MNEMONICS

- Name sources, select text size, choose color and even invert

MACRO NAMES

- Give macros names for worry-free recall during live productions

PANEL GLOW

- User-adjustable for various lighting environments

24-WIDE SELECTOR BUS (32-WIDE on 3X)

- Access to every internal and external source in the switcher



HIGHLY VISIBLE MENU

- Intuitive auto-follow menu

ME EFFECTS MEMORY CONTROL

- Instant access to individual ME effects memories.

HIGH END 3-AXIS JOYSTICK

- Position wipes, patterns, washes, camera control and DVE effects

LEGENDARY ROSS FADER

- Robust and Guaranteed for Life

TRUE NEXT TRANSITION AREA

- Rapid selection of all keys with full preview

SOURCE MNEMONICS

- Show current source names for every keyer

ADVANCED TRANSITION TYPE SELECTION

- Choose from dissolve, wipe, DVE, and MediaWipe™ Transitions

DEDICATED CUT AND AUTO TRANS BUTTONS

- Rapid live keyer control

SELECTION CONTROL

- Configurable AUX, ME, MiniME & MultiScreen control selection

ROLL CLIP

- Automatically roll a clip cued on Preview bus with next transition



CARBONITE EXTREME

Carbonite eXtreme breaks away from the traditional production switcher architecture. Production switchers are typically designed around the task of delivering a single Program output from multiple input sources, however many production systems today are required to deliver outputs to multiple screens, on-set displays and signal distribution systems. This is particularly true for live production of worship & stage events as well as within larger facilities and multi-site complexes.

eXtreme is a truly revolutionary production tool. It has all of the horsepower of Carbonite wrapped inside a highly configurable signal routing & management system. This combination is ideal for mobile production vehicles as it simplifies installation and operation immensely, while also offering tremendous flexibility and significant system cost savings.

The eXtreme chassis can be configured with an I/O of up to 144 x 144 in increments of 8. With eXtreme it is now simple to manage complex productions across multiple output destinations!

eXtreme is available with any Carbonite control panel and destination based signal routing control is simply managed with our NK router panels. Of course eXtreme can also be configured as a Studio System with XPression graphics systems, BlackStorm playout servers and DashBoard control.

With Carbonite eXtreme you have a complete 'state of the art' production system with full signal management. Nothing like this has ever been seen before, it is another Ross first and a real game changer!



Power Packed 10RU Frame

Router Controller Module

Input Modules (8 inputs per card)

Redundant Power Supply (Optional)

USB Connector for Storage Devices with extension to rear for internal or external connection

Carbonite Switcher / Routing Matrix Module

Slot for second Carbonite switcher / routing matrix module - used for redundant operation, an additional 2 / 2.5 ME production switcher, or, use as two more 16 window MultiViewers.

Output Modules (8 outputs per card)

Rack Mount Break Out for Tally, GPI/O, TimeCode and Serial port



Carbonite Extreme

Powerhouse Switcher and Router combined, The Carbonite eXtreme is a true revolution in production system design. This unique package provides unprecedented system flexibility and multi-destination management - *It's a Ross first.*

CARBONITE EXTREME

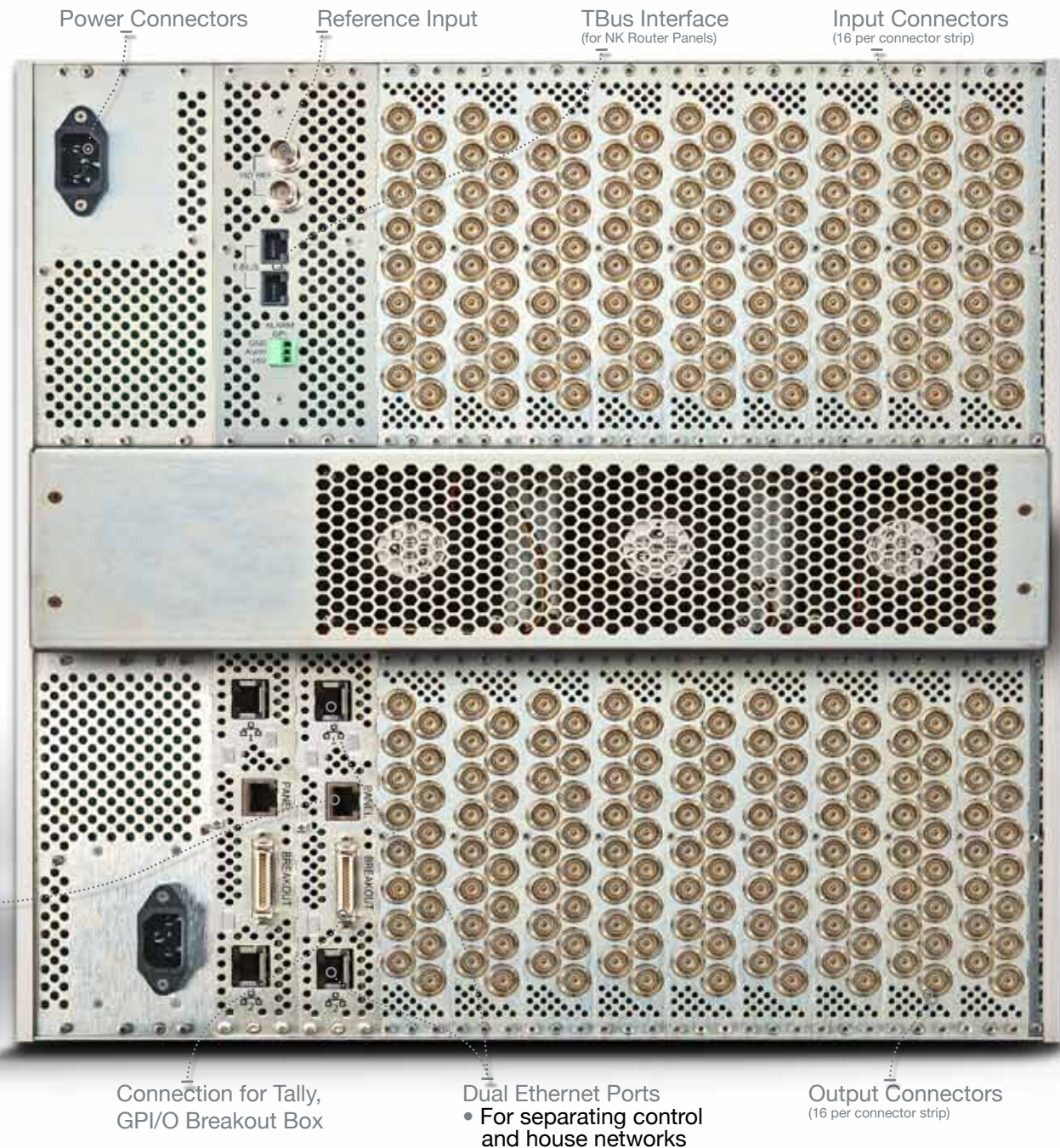
The Multi-Destination Revolution!

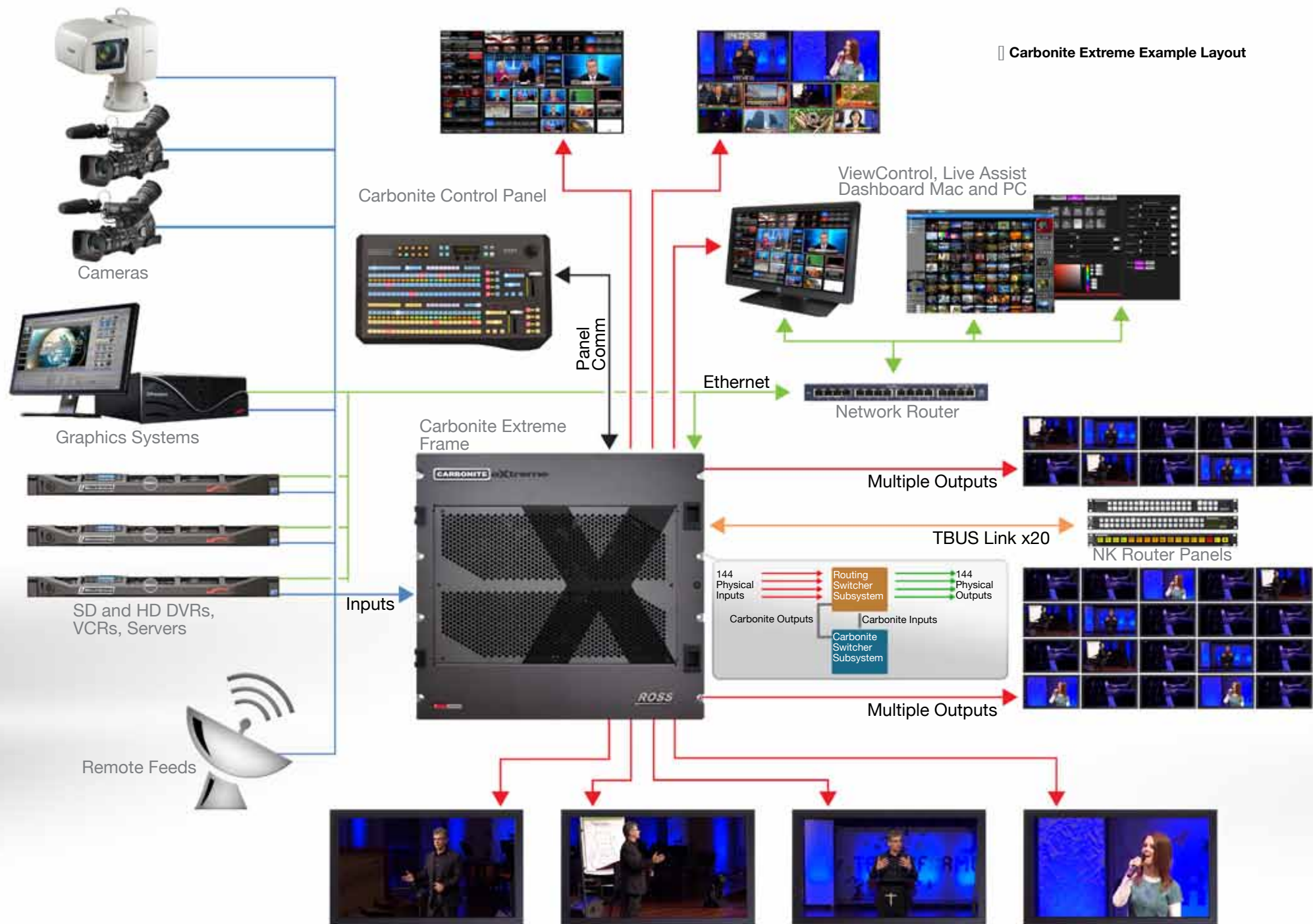
Carbonite eXtreme eliminates the complex wiring and signal management associated with larger production systems. It is essentially designed from two fully integrated sub-systems: A configurable routing sub-system, with up to 144 physical inputs and outputs and a 2 ME Carbonite production switcher sub-system.

The Carbonite control panel has access to any of the physical inputs together with input mnemonics and all physical and internal inputs are selectable on any physical output via DashBoard and NK router control panels. Internally the routing system is 154 in by 168 out, allowing any destination to receive any physical input or switcher output.

Of course signal routing, production switcher, XPression graphics, BlackStorm servers and third party device controls are all integrated via our Dashboard control systems, greatly simplifying installation, setup up and operations.

Add our new DashBoard Panel Builder (V6.0) and you can create your own user interface to run your productions exactly the way you want to. You can even create simple task specific control points for inexperienced operators or volunteer users.





CARBONITE CARBONITE PLUS CARBONITE MULTIMEDIA

CARBONITE

A production powerhouse in just 2RU.

Two full ME's with Multi-Definition support based on our renowned Vision switcher technology.

Carbonite+ and **Carbonite MultiMedia** frames add signal management features to this **Production Powerhouse**.

CARBONITE PLUS

Including the same awesome features of Carbonite, the new Carbonite+ 2RU processing engine includes Frame Synchronization and Format Conversion for every input as well as increasing the number of available DVE's from 4 to 8. Just like Carbonite, the + frame is available with 16 or 24 active inputs, with all inputs now simultaneously capable of accepting unreferenced signals and converting SD (625 or 525) to HD 1080i format with aspect ratio choices.

Additional DVE's allow every ME key to have a DVE assigned, making it possible to display 8 boxes on screen simultaneously or transition between quad box layouts.

CARBONITE MULTIMEDIA

Also a 2RU processing engine with the functionality of the Carbonite+. In addition MultiMedia adds up to 4 shared SDI/HDMI/Analog inputs that incorporate new high quality / low latency format conversion features.

These new MultiMedia connections allow input from computers (PC & MAC) as well as provide support for legacy analog devices such as Standard Definition DVD players, cameras and VCR's. New scan conversion technology allows these inputs to accept Interlaced or Progressive formats with differing pixel resolution and aspect ratio and seamlessly convert them to the native format of your production.

TIME CODE INPUT

- For use with LiveEDL™
- Standard Feature - Exclusive to Ross Video

GPI/O AND TALLY INTERFACE

- 34 Tally connections and 34 GPI/O individually selectable to input or output



OPTIONAL REDUNDANT POWER

- With solidly locking connectors for maximum reliability

CONTROL PANEL CONNECTION

- Standard CAT-5 shielded cable

ETHERNET CONNECTIVITY

- For use with ViewControl, DashBoard LiveAssist, XPression Live CG, LiveEDL, FTP, browser-based GUI, diagnostics and more!

16 OR 24 SD/HD INPUTS

- Supporting all popular digital video formats

BUILT-IN SYNC GENERATOR

- Simplifies system timing

MULTIMEDIA FRAME ONLY

HDMI

- Direct connection of computer input with built-in HQ scaling

ANALOG

- Composite and Component analog inputs

SERIAL INTERFACE

- For editor and RS-422 control

8 ASSIGNABLE AUX, 1 PROGRAM, 1 PREVIEW

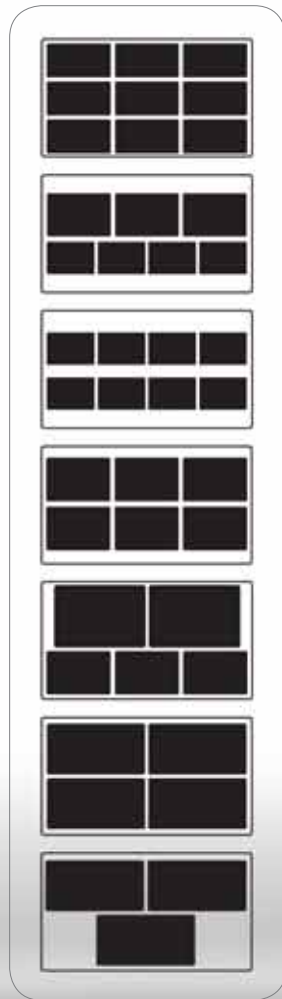
- Dual assignable MultiViewers
- Multiple outputs are essential for multi-screen and live to tape applications



ENHANCED MULTIVIEWERS

Even more powerful. Carbonite MultiViewers have been engineered to provide the best possible monitoring solutions for your production.

Each MultiViewer has user selectable layouts with the individual choice of border, tally and UMD label display for each source. In addition a user configurable clock can be sized and positioned anywhere on the multiviewer screen, locked to house time code or internal reference.



Easily select your preferred MultiViewer layout with the Dashboard Control Panel.



MultiViewer™ LAYOUTS:

- 16 Windows
- 13 Windows (4 Layouts)
- 10 Windows (5 Layouts)
- 9 Windows
- 8 Windows
- 7 Windows (2 Layouts)
- 6 Windows (3 Layouts)
- 5 Windows (2 Layouts)
- 4 Windows (3 Layouts)
- 3 Windows (4 Layouts)
- 2 Windows (2 Layouts)
- 1 Window



INDIVIDUAL WINDOW OPTIONS:

- Source label on / off
- Border on / off
- Aspect ratio marker on / off
- Red On-Air Tally on / off
- Green Preview Tally on / off

Carbonite MultiViewers

When Carbonite is operating in Standard Definition MultiViewers outputs can be selected as native SD or as 1920 x 1080 HD format to maximize display quality.

CARBONITE DASHBOARD and LiveAssist™



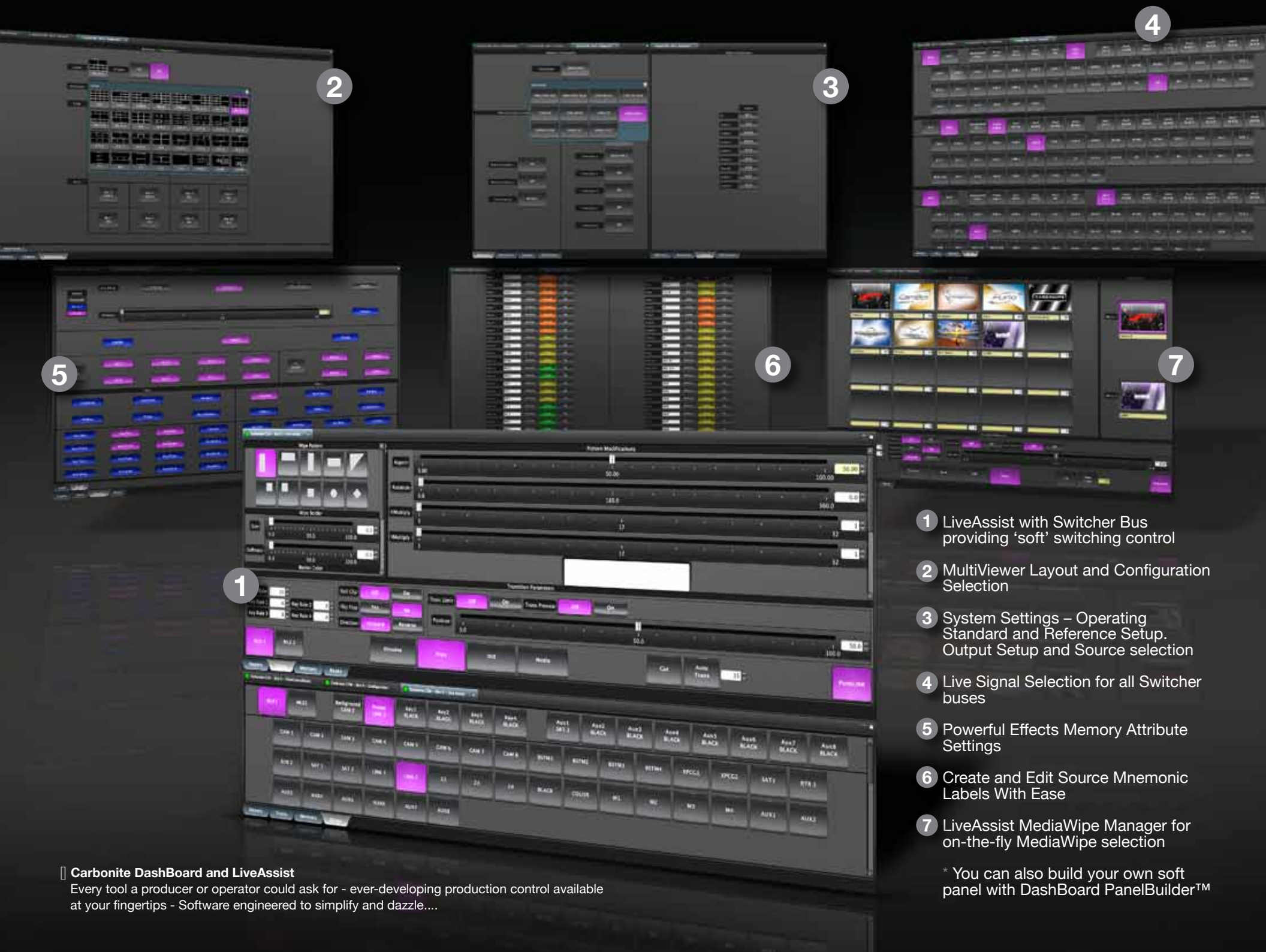
LiveAssist™

Take control over switcher functions. Setup Keyers, MediaWipe transitions and much more via this intuitive DashBoard interface.

MediaManager™

Easily manage stills and animations in Carbonite Media Stores via the feature rich MediaManager GUI. Accessible within Dashboard or via your Web Browser.





1

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- 1 LiveAssist with Switcher Bus providing 'soft' switching control
- 2 MultiViewer Layout and Configuration Selection
- 3 System Settings – Operating Standard and Reference Setup. Output Setup and Source selection
- 4 Live Signal Selection for all Switcher buses
- 5 Powerful Effects Memory Attribute Settings
- 6 Create and Edit Source Mnemonic Labels With Ease
- 7 LiveAssist MediaWipe Manager for on-the-fly MediaWipe selection

Carbonite DashBoard and LiveAssist

Every tool a producer or operator could ask for - ever-developing production control available at your fingertips - Software engineered to simplify and dazzle....

* You can also build your own soft panel with DashBoard PanelBuilder™

CARBONITE OPTIONS

XPRESSION LiveCG™

XPression Live CG is an economical way to enhance your production with eye-catching graphics. Simply load XPression Live CG Software onto your own Windows PC, connect it to Carbonite via an I/P network, and you have a tightly integrated CG / Production Switcher System. Graphics are rendered directly into Carbonite's Media-Store™, keeping video inputs free for cameras and other video sources.

REMOTE AUX PANEL

Auxiliary Control Panels provide external control for Aux output assignment. Up to eight panels can be installed with your Carbonite system.

REDUNDANT POWER SUPPLIES

Redundant PSUs for both the Carbonite Engine and Control Panel can easily be added either at time of purchase or later when required.

GEARLITE SDI TO HDMI CONVERSION

Our GearLite SDI to HDMI converter is the perfect MultiViewer companion. This high quality yet inexpensive module allows the direct connection to your display's HDMI input from Carbonite's serial digital outputs via a single BNC cable.

AUDIO MIXER MIDI INTERFACE

GearLite SMC-9901 Serial to MIDI converter
For Audio Follow control of Yamaha 01V-96 and DM1000 Mixers.



SOFTWARE INPUT UPGRADE

A 16 input Carbonite frame can be upgraded to 24 inputs.



SECOND ME FOR CARBONITE 10, 1 and 1M

A second ME can be added to a Carbonite 1 system making 2 ME's available and controllable from the Carbonite 1 single ME panel via a shift function.

IN-DESK MOUNTING KIT FOR CARBONITE 10

Mounting brackets allow Carbonite panels to be easily and securely flush mounted in control room consoles. Note that all other Carbonite panels do not require brackets for flush in-desk mounting.

ROUTING CONTROL PANELS FOR CARBONITE EXTREME

RCP-NK1

A simple and cost-effective control panel ideally suited as an XY or cut-bus control panel. It includes 40 soft, fully programmable backlit keys arranged in a 32 + 8 configuration for convenient function key layout.

RCP-NKM

This panel provides the ability to create menus, enabling the grouping of sources and destinations based on physical requirements (studios, edit suites, QC racks) or categories (servers, cameras, monitors).

RCP-NKQ

Ideal for use in OB vans or production houses where configurations change regularly, unlimited configurations enable fast and simple customized setups of each panel. This panel offers 17 colored backlit graphic LCD keys with multiple menus.

Carbonite Options and Accessories

Carbonite comes fully featured right out of the box. The following are a few options that can be added to your Carbonite system for a perfect fit into your production workflow.

SPECIFICATIONS and ORDERING INFORMATION

Control Panels

Key Features	Carbonite 10	Carbonite 1-A / 1M	Carbonite 2 / 2M	Carbonite 2S / 2X	Carbonite 3S / 3X
DIRECT ACCESS CROSSPOINT BUTTONS	10	16 / 24	16 / 24	24 / 32	24 / 32
NUMBER OF ME ROWS	1	1	2	2	3
ME EFFECTS MEMORY KEYPAD	No - Global only	No - Global only	No - Global only	1 per ME + Global	1 per ME + Global
THEME-ABLE PANEL GLOW RGB BUTTONS	●	●	●	●	●
8 CHARACTER INPUT AND KEY SOURCE COLOR MNEMONICS	—	●	●	●	●
CUSTOM CONTROL MACRO BUTTONS WITH SPLIT ROW MNEMONICS	—	64 / 96	64 / 96	96 / 256	96 / 256

Operational Features

Key Features	Carbonite 10	Carbonite 1-A / 1M	Carbonite 2 / 2M	Carbonite 2S / 2X	Carbonite 3S / 3X
NUMBER OF KEYS PER ME	5 (4 + 1 Transition Key)				
NUMBER OF KEYS PER MiniME	2 per MiniME				
NUMBER OF KEYS ON HALF ME	2 DSK + Media Wipe				
TOTAL KEYERS IN MiniME MODE	1 ME = 13 2 ME = 18				
TOTAL KEYERS IN 2.5 ME MODE	13				
ULTRACHROME KEYERS (FLOATING)	2				
NUMBER OF MediaStores™ (CAPACITY 8GB)	4				
SUPPORTED MEDIA FILE TYPES	Stills: .BMP. Stills & Animations: JPG JPEG (no Alpha), TGA & PNG (with Alpha) & 48k WAV audio files				
BROWSER-BASED GRAPHICS MANAGEMENT	●				
PATTERN GENERATORS	2 per ME				
EFFECTS MEMORY WITH MemoryAI™	100 per ME				
ANIMATED MediaWipes™	●				
DIRECT MediaStore RENDER VIA ETHERNET	●				
LiveEDL™ (GENERATES AN EDIT DECISION LIST FOR USE IN POST PRODUCTION)	●				

Control Interfaces

DashBoard LiveAssist™	●
ViewControl™ - VISUAL PRODUCTION CONTROL	●
ROBOTIC CAMERA CONTROL	●

Operating Mode

Modes	Number of DVEs	2.5 ME	4 x MiniME	Vid Modes	ViewControl	Max MV Windows
STANDARD MODE*	4	—	—	SD + HD	●	2 x 16
MiniME	8	—	●	SD + HD	●	2 x 16
MiniME 1080P 50/60	4	—	●	3G	—	2 x 10
2.5 ME	8	●	—	SD + HD	●	2 x 16
2.5 ME 1080P 50/60	4	●	—	3G	—	2 x 10

* Standard Mode only applies to Carbonite & Carbonite eXtreme models, when operated in MiniME or 2.5 modes the internal Frame Sync/Format Converters will NOT be available.

Frames

Key Features	Carbonite	Carbonite Plus	Carbonite MultiMedia	Carbonite eXtreme
MULTI-DEFINITION INPUTS	16 or 24	16 or 24	16 or 24	From 24 to 144
MULTI-DEFINITION OUTPUTS	10	10	10	From 16 to 144
NUMBER OF MultiViewers™ WITH TALLY AND SOURCE NAMES	2 (Up to 32 windows)	2 (Up to 32 windows)	2 (Up to 32 windows)	2 (Up to 32 windows)
INTERNAL FORMAT CONVERTERS / FRAME SYNCHRONIZER	6*	All Inputs**	All Inputs**	6*
NUMBER OF FLOATING DVE'S	4 or 8*	8	8	4 or 8*
INPUT PROC AMPS	—	All Inputs	All Inputs	—
INPUT COLOR CORRECTORS	—	All Inputs	All Inputs	—
SELECTABLE SDI / HDMI / ANALOG INPUTS	—	—	2 or 4	—
HQ FORMAT CONVERTERS (I TO P & COMPUTER RESOLUTIONS)	—	—	2 or 4	—
NUMBER OF GPI/O	34	34	34	34
NUMBER OF TALLIES	34	34	34	34
REMOVABLE STORAGE MEDIA - (Accessible via FTP)	USB	USB	USB	USB
TIME CODE INPUT	Yes (LTC)	Yes (LTC)	Yes (LTC)	Yes (LTC)
ETHERNET PORTS	2	2	2	2
REFERENCE INPUT	Black or Tri-Level	Black or Tri-Level	Black or Tri-Level	Black or Tri-Level
INTERNAL REFERENCE GENERATOR	●	●	●	—
INDEPENDENTLY CONFIGURABLE REFERENCE OUTPUTS	2	2	2	None
EDITOR PORT	1 (RS-422)	1 (RS-422)	1 (RS-422)	1 (RS-422)

Signal Processing Standards

FORMAT	LINE / FRAME RATES
STANDARD DEFINITION	480i/59.94, 576i/50
HIGH DEFINITION	720P & 1080i 50/59.94
1080 PSF	23.98, 25 & 29.97
1080P	29.97 (1.5Gb) & 50 / 59.94 (3Gb)
UHD / 4K	4x Quad Link (MultiScreen Mode)

* User selectable 6 FCFS or 8 DVE's. (0 FCFS and 4 DVE's in 3G mode).

** In 3G mode Plus and MM frames with 24 inputs have 12 format converters / frame synchronizers and there are 9 in 16 input system.



Highly powerful and efficiently designed, Carbonite delivers unprecedented performance in a remarkably cost-effective package. Carbonite sets the bar as the new world standard for mid-sized production switchers. **Carbonite delivers Pure Production Power!**



Carbonite Care

Ross Video has a complete range of technical services available to ensure that your Carbonite installation is a success.

Operational Training is available either at Ross headquarters or on-site at your location. Experienced Ross operators will teach your staff to get the most out of your new system, and enhance your productions.

Commisioning is a service to help get your Carbonite properly configured and installed. This service is performed by factory trained Ross technical staff.

Technical Training can be provided at Ross Video or on-site at your location. Technical training will teach your engineering staff the technical details of the system you have purchased. Signal flow, system configuration and routine maintenance procedures are some of the topics covered.

Carbonite comes standard with a 1 year comprehensive warranty. **Extended Warranties** on the Carbonite production switcher are available for an annual fee.

Technical advice is available simply by telephone, fax or email to Ross Video - **free for the life of your system.**

CARBONITE

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