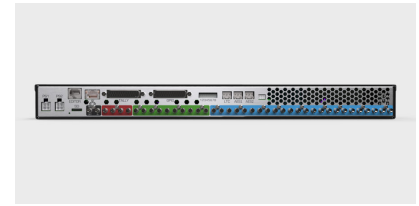# CARBONITE ULTRA 24-INPUT PRODUCTION SWITCHER

More powerful, more compact and more affordable than ever. Carbonite Ultra uses the latest technology to distill the best of the Carbonite series into a single, next generation platform.

Cena:
Kategorie: Video, Broadcast, Miksery wizyjne

GALLERY IMAGES

OPIS

Industry Standard

Built on the foundation of Carbonite, the world's most popular mid-sized switcher platform. Carbonite Ultra is backed by a team with 40+ years of production switcher development and one of the highest-rated customer support teams in the industry.

More than a switcher

Frame syncs, format conversions, extensive production monitoring, powerful chroma keying, audio mixing/processing and more… all in a single 1RU frame. You will be ready for anything a production can throw at you.

Format Independent

Video the way you need it. Carbonite Ultra supports all common video standards including SD, HD, 3G 1080P, as well as 12G UHD for multi-ME configurations. Also, Carbonite Ultra can add an optional license for a full set of I/O processing resources to ensure a visually-consistent and engaging production.

Secured Investment

Continually benefit from a software-defined hardware platform that is built to last you a lifetime. Carbonite Ultra customers will receive new features via free-of-charge software updates and exciting new software-licensed functions that go beyond just a production switcher.

Ultra-Compact

Better but not necessarily bigger. All of Carbonite Ultra's robust features and substantial I/O have been built into a single 1RU chassis. This production switcher will fit anywhere you need it to.

Starting at $10,900*

Sleeker, feature-rich and ready for shows in any format. The best part? Carbonite Ultra is offered at the lowest price Ross has ever offered for a mid-size production switcher. Serious production horsepower and technology is now more affordable than ever. *USA pricing, international prices will vary.

Features

3 Full MEs & 4 MiniMEs

Carbonite Ultra's 1RU chassis packs up to 3 full MEs & 4 built- in floating MiniMEs, equivalent to a 7ME switcher with 20 key channels!

Device Integration

Through Dashboard and built-in control protocols, Carbonite Ultra integrates seamlessly with both Ross Video and 3rd party products. Now with the ability to display device and custom panels on the Carbonite Ultra's Dashboard GUI, device integration is tighter than ever.

Macros & Memories

An intelligent memory system and timeline macros can reduce the most complex events down to a single button push.

Media Playback

For still & animated media, there are 4 fully-independent MediaStores. Say goodbye to ganging channels, because each MediaStore is now fully-capable of handling key + fill media.

Monitoring Solution

For source and production monitoring, Carbonite Ultra provides up to 4 16-window MultiViewers, for viewing of up to 64 internal and external sources. That's double the monitoring power of the original Carbonite series.

Chroma Key

UltraChrome is a chroma key that rivals the quality of an external chroma keyer. Unique features like soft-edge masks and auto-image analysis make it easy to setup quickly and get the best results from your green screen. Complemented with built-in frame delay, it is a perfect fit in virtual set productions.

Applications

This product can be used as part of the following
Smart Production Solutions:

- Sports & Live Venue
- Government
- News
- CorporateVirtual Studio
- House of Worship
- Mobile

- Education

12G / UHD Production Switcher

Carbonite Ultra offers a 12G/UHD feature set that is unlike anything you've ever seen in a mid-size class production switcher:

- 2160p 60 / 59.94 / 50
- 18 x 12G inputs or 16 x 12G & 2 Quad-Link 2SI inputs
- 10 x 12G outputs
- 1 or 2 UHD MEs*
- 2 UHD MiniMEs
- 2 UHD channels of DVE
- 2 UHD channels of MediaStore with Key+Fill
- 2 UHD chroma keyers
- Up to 2 MultiViewers (1080P) – 2nd MultiViewer via software license

Standard UHD Video Processing:

- 2 Frame Sync/Format Converters – assignable to any input or output
- 2 Proc Amp/Colour Correctors – assignable to any input or output

PLUS I/O UHD Video Processing:

- 7 Frame Sync / Format converter – assignable to any input
- 1 input Format Converter assignable to any input
- 4 Format Converters – assignable to any output
- 8 Proc Amps / Colour Correctors – assignable to any input or output

Carbonite Ultra offers the complete, flexible set of operational resources you need to create a compelling production in UHD.

UHD ME1 requires standard ADD-ME2 license, UHD ME2 requires standard ADD-ME3 license.
**Available via software license*

Familiar Control

Carbonite Ultra makes you productive immediately with a range of control choices suited to

operators of any caliber:

Control Panels

PHYSICAL FEATURES	CARBONITE BLACK 1 / 1s	CARBONITE BLACK 2 / 2s	CARBONITE BLACK 3s / 3x
Direct Access Crosspoint Buttons	16 / 24	16 / 24	24 / 32
Number of ME Rows	1	2	3
ME Effects Memory Keypad	CB1 – Global Only CB1s – Yes	CB2 – Global Only CB2s – Yes	Yes
Theme-Able Panel Glow RGB Buttons	+	+	+
8 Character Input and Key Source Color Mnemonics	+	+	+
Custom Control Macro Buttons with Split Row Mnemonics/td>	64 / 96	64 / 96	96 / 256

Features & Interfaces

FEATURES	
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

FEATURES

Total Keyers in MiniME Mode/td>	1 ME = 13 2 ME = 18 3 ME = 23
Total Keyers in 2.5 ME Mode	13
UltraChrome Keyers (Floating)	2
Number of Media-Stores™ (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 Media Store Render Via Ethernet	+
LiveEDL™ (Generates an Edit Decision List For Use In Post Production)	+

INTERFACES

DashBoard LiveAssist	+
ViewControl – Visual Production Control	+

INTERFACES

Robotic Camera Control	+

Frame (Processing Engine)

KEY FEATURES	CARBONITE BLACK / BLACK PLUS
Multi-Definition Inputs	36
Multi-Definition Outputs	22 / 25***
Number of MEs	2 or 3
Number of MiniMEs	4
Number of Multiviewers™ with Tally and Source Names	2 x 16 window / 5 x 16 window
Internal Format Converters / Frame Synchronizer	6* / 36
Number of Floating DVE's	8 or 4* / 8
Input Proc Amps	No / Yes
Input Color Correctors	No / Yes
Output Color Correctors / Proc Amps / Format Conversion	12 (Plus Frame Only)
Selectable SDI / HDMI / Analog inputs	No / No

KEY FEATURES	CARBONITE BLACK / BLACK PLUS
HQ Format Converters (I to P & Computer Resolutions)	No / No
Number of GPI/O	34
Number of Tallies	34
Removable Storage Media	USB
Time Code Input	Yes (LTC)
Ethernet Ports	2
Reference Input	Black or Tri-Level
Internal Reference Generator	+
Independently Configurable Reference Outputs	2
Editor Port	1 (RS-422)

* User selectable 6 FCFS or 8 DVE's. (0 FCFS and 4 DVE's in 3G mode).
** In 3G mode, the 24 input system has 12 format converters / frame synchronizer, and the 18 input system has 9.
*** Three additional outputs are MultiViewer only.
The Carbonite 1 and Carbonite 1S panels are able to address two ME's – the operator can swap between ME 1 and ME 2 control.

Signal Processing Standards

SIGNAL PROCESSING STANDARDS	CARBONITE BLACK / BLACK PLUS / BLACK PLUS 12G
Standard Definition	480i/59.94, 576i/50
High Definition	720p & 1080i 50/59.94

SIGNAL PROCESSING STANDARDS	CARBONITE BLACK / BLACK PLUS / BLACK PLUS 12G
1080PSF	1080p 23.98/25
1080P	1080p 29.97 (1.5Gb) & 50/59.94 (3Gb)
UHD*	3840 x 2140, 50 or 59.94

* Operational features in 12G/UHD Operation Mode listed below.

12G/UHD Operation Mode

INPUTS & OUTPUTS	CARBONITE BLACK / BLACK PLUS	CARBONITE BLACK PLUS 12G
UHD Inputs	9 UHD inputs via quad-link 2SI 3G 1080p Level A.	9 UHD inputs via 12G single-link or quad-link 2SI 3G 1080P Level A.
UHD Outputs	5 UHD outputs via quad-link 2SI 3G 1080p Level A. 2 outputs (copies) of the System MultiViewer in 1080p Level A.	5 UHD outputs via 12G single-link or quad-link 2SI 3G 1080P Level A. 2 outputs (copies) of the System MultiViewer in 1080p Level A.

SIGNAL PROCESSING	CARBONITE BLACK	CARBONITE BLACK PLUS / BLACK PLUS 12G
Input Processing	N/A	9 processing inputs with frame syncs, format converters, colour correctors and proc amps
Output Processing	N/A	3 processing outputs with format conversion, colour correctors and proc amps

MONITORING	CARBONITE BLACK	CARBONITE BLACK PLUS / BLACK PLUS 12G
MultiViewers	1 System MultiViewer (1080p) with up to 16 windows.	1 System MultiViewer (1080p) with up to 16 windows. 3 additional I/O MultiViewers supporting 3 inputs & 1 output each. Each I/O MultiViewer has a dedicated 1080P Level A output.

OPERATIONAL FEATURES	CARBONITE BLACK / BLACK PLUS / BLACK PLUS 12G
Mix/Effect Buses (ME)	1 Full ME, with 4 keyers and a dedicated 5th transition keyer
MiniMEs	2 MiniMEs, each with 2 Keyers and Full Preview

Format Independent Hardware

Support for Common Video Standards
Carbonite Ultra offers native support for SD, HD, 3G 1080P, and 12G UHD formats.

HDR Compatible
Carbonite Ultra supports the range of HDR formats including HLG, PQ and S-LOG3 – plus support for bi-directional SDR to HDR-HLG conversion.

Signal Processing
Carbonite Ultra ships with 8 FSFC+ as standard, which can be assigned to any input or output. Each FSFC+ offers Frame Syncs for inputs – along with Color Correction, Proc Amps and Format Conversion for inputs and outputs. For productions in need of serious signal processing power, Carbonite Ultra can be configured with FSFC+ on every input and output. Carbonite Ultra makes it easy to put together a visually-consistent production.

Standalone Reference Generator
Lock Carbonite Ultra into the available house reference (Black Burst / Tri-Level) or use

Carbonite Ultra's built-in reference generator (Black Burst only) to sync your equipment. The ability to output reference directly from the Carbonite Ultra frame is great for small flight packs and mobile production vehicles.

The USB Media Player Update

Carbonite Ultra V3.0

Available for download October 2019, Carbonite Ultra's next V3.0 software version adds an internal single-channel USB media player to the switcher, along with a host of other powerful features:

USB Media Player
A Ross-only feature, Carbonite Ultra V3.0 adds a dedicated single-channel clip player for playout of compressed MPEG-4 AVC media directly from a connected USB-media drive. Users can load media clips of any length; the only limitation is your USB drive storage. The internal clip player is assignable as a source on any bus in the switcher and playout is easily controlled from a dedicated DashBoard interface, Custom Control or AMP command.

High Dynamic Range (HDR) & Wide Color Gamut (WCG) Conversion
When operating in UHD formats, Carbonite Ultra V3.0 provides bi-directional conversion between SDR and a variety of HDR formats such as HLG, PQ and S-LOG3; as well as bi-directional WCG conversion (Rec.709 <>Rec.2020). With the combination of UHD and HDR/WCG support, Carbonite Ultra is the premier choice maximum-quality visuals to your audience.

Direct UltriTouch Integration
Direct integration with the **Ultritouch** system control and monitoring panel is better than ever with Carbonite Ultra V3.0. When an Ultritouch is pointed at a Carbonite Ultra, a purpose-built menu layout is served up by the switcher which includes: Status, Bus Assignment, Custom Control Shotbox and more. Users still have the ability to create their own custom-programmed Ultritouch interfaces to streamline control of their show, but these native menu layouts make it much easier to plug-in and get started with Ultritouch and Carbonite Ultra.

Free-Floating ME/MiniME Architecture
With V3.0, MEs are no longer restricted to a fixed position the stream. Carbonite Ultra's free-floating MiniMEs have always been immensely useful for additional dissolves and key layers,

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and now that MEs follow the same flexible architecture you can put the 7ME performance of Carbonite Ultra to work in the way that best suits your productions.

Improved AMP Control
Carbonite Ultra V3.0 expands the number of AMP controls available directly from the switcher panel including:

- Clip list *View* and R*ecall*
- *Cue* and *Play* clips directly from clip list
- *Record, Jog, Shuttle, Fast Forward, Rewind & Loop Playback* commands

This newly expanded set of AMP controls makes Carbonite Ultra an even better complement to our Tria Express, Tria+, and Tria+ UHD production servers.

Carbonite Ultra V4.0

RAVE
First introduced on Ross Video's Graphite platform, RAVE is now available as an optional software license on Carbonite Ultra. With full support for the Audio Breakout Module (ABM), Carbonite Ultra will be able to process and mix embedded, analog and AES audio. Users can tweak equalization, compression and limiting controls to keep their production sounding and looking awesome!

RAVE Audio Engine (optional)

- 384 input channels (embedded SDI)
- Main 48 channel stereo mixer
- 12 x 48 channel stereo AUX mixers

RAVE Audio SRC (with RAVE option)

- Audio Sample Rate Conversion available on all Inputs***

RAVE Audio Breakout External Breakout Unit (optional)

- 8 Analog / Microphone Inputs
- 5 Analog Outputs
- 1 AES Input
- 1 AES Output

www.**mbspro.com.pl**

*** *RAVE Audio – Input Sample Rate Conversion reduces HD FSFC+ to 24 inputs and 2 outputs*

DVE with 3D Borders
Now standard on all DVEs, 3D borders add extra flair to on-air visuals. Users can manipulate DVE borders on x-, y- and z-axis to create new looks for their content, adjust the color and perspective of the borders, and use 3D lighting to add depth and dimension as well as fully adjustable shadows. Border looks can be saved using the Carbonite Ultra's powerful memory system and be recalled instantly.

Carbonite Ultra Frame

FEATURES	SD / HD / 3G	12G
SDI Inputs	24 Inputs	18 Single-Link Inputs or 16 Single-Link Inputs & 2 Quad-Link 2SI Inputs
SDI Outputs	14 Outputs	
Monitoring	Up to 2 System MultiViewers and 2 I/O MultiViewers. Ships with 1 System MultiViewer & 1 I/O MultiViewer as standard, additional System and I/O MultiViewers via software license.	Up to 1 System MultiViewer and 1 I/O MultiViewer. Ships with 1 System MultiViewer as standard, additional I/O MultiViewer via software license.
Mix Effect Buses (MEs)	Up to 3 MEs. Each with 4 full function keyers + transition keyer for MediaWipes and DVE transitions.	Up to 2 MEs. Each ME comes with 4 full function keyers + transition keyer for MediaWipes and DVE transitions.
MiniME Effect Buses	4 MiniMEs, each with 2 full function keyers, independent mixer and preview bus. All 4 MiniMEs are included as standard with every system.	2 MiniMEs, each with 2 full function keyers, independent mixer and preview bus. All 4 MiniMEs are included as standard with every system.

FEATURES	SD / HD / 3G	12G
Chroma Keyers	4 floating UltraChrome chroma keyers can be utilized by any keyer in the system	2 floating UltraChrome chroma keyer can be utilized by any keyer in the system
DVEs	8 (2D) floating DVEs can be utilized by any keyer in the system	2 (2D) floating DVEs can be utilized by any keyer in the system
DVE Borders	2D & 3D Borders on all DVEs	
Stills & Animations	4 Channels of MediaStore with a total storage capacity of 8 GB. Each channel can render stills and animations with alpha. Supports animations with audio or audio-only playback. Files can be directly rendered to the MediaStores via Ethernet.	2 Channels of MediaStore with a total storage capacity of 8 GB. Each channel can render stills and animations with alpha. Supports animations with audio or audio-only playback. Files can be directly rendered to the MediaStores via Ethernet.
Supported Media File Types	Stills & Animations: .JPG & .JPEG (no Alpha), TGA & PNG (with Alpha & 48K WAV audio files)	
Graphics Software	Included XPression LiveCG software creates still graphics from a network-connected PC workstation and renders directly into MediaStores via IP.	
Pattern Generators	2 per ME	
Effects & Transitions	Support for standard transitions along with Animated MediaWipes with audio and overlay effects on main MEs. Dissolve transitions are available to MiniMEs.	
Memories	100 Memories per ME and MiniME per Show File. Multiple show files can be stored on the USB drive. Effects memory functionality allows for animated memory recalls, while MemoryAI ensure memory recalls will not adversely affect what is currently on-air.	
Custom Control Macros	256 (8 banks of 32 custom controls each)	

FEATURES	SD / HD / 3G	12G
Input / Output Processing	**Standard I/O Video Processing:** 8 Frame Sync / Format Converters – assignable to any input or output 8 Proc Amp / Colour Correctors – assignable to any input or output **PLUS I/O Video Processing:** Optional FSFC+ on every input and output via software license.	2 Frame Sync / Format Converters – assignable to any input or output 2 Proc Amp / Colour Correctors – assignable to any input or output • 7 UHD Frame Sync / Format Converters – assignable to any input • 1 HD to UHD up converter – assignable to any input • 4 Format Converters – assignable to any output • 8 Proc Amps / Colour Correctors – assignable to any input or output
Device Control	Includes device control for Video Servers, XPression Graphics, Robotics, PBus, GPO, Trackless Virtual Sets and PTZ Cameras.	
IP, Serial And Parallel Tally	24 Contact Closure Tallies	
GPI/O	24 GPI/O connections	
AES Digital Audio	2 AES digital audio outputs	
Time Code Input	For use with MultiViewer System Clock and Live EDL Feature	
Ethernet Ports	1 Ethernet port	
Reference Input	Black Burst or Tri-Level Sync	
Reference Ouput	Black Burst output is configurable for H/V offset from input reference	

FEATURES	SD / HD / 3G	12G
Editor / Serial Tally Port	1 (RS-422)	
Edit Decision Lists	LiveEDL can capture EDL data in a file that you load into your non-linear editing (NLE suites)	
System Physical	1RU Rack Frame, with support for redundant power supplies	

Signal Processing Standards

FORMAT	LINE / FRAME RATES
Standard Definition	480i/59.94 – 4:3 and 16:9 | 576i/50 – 4:3 and 16:9
High Definition	720p & 1080i 50/59.94 | 1080pSF, 23.98/25/29.97 | 1080pSF 24/30
3G 1080P	1080p 50/59.94/60/23.98 | 1080p 24/25/29.97/30
12G UHD	2160p 50/59.94/60 | 2160p 23.98/24/25/29.97/30 (available to systems with a 2ME or 3ME software license)

RAVE Audio Mixer

RAVE Audio Mixer	*Licensable Software Option*
Input Sources	Up to 384 channels
RAVE Audio Breakout Module	Up to 3 daisy chained
Fader Volume	-∞db to + 20db
Pre-Fade Audio Meter	+
Pre-Fade Peak Indicator	+

RAVE Audio Mixer	Licensable Software Option
Post-Fade Audio Meter	+
Post-Fade Peak Indicator	+
Per-Channel EQ Indicator	+
Per-Channel Clip Indicator	+
Mute	+
Solo	+
Solo Clear	+
Pre-Fade Listen (PFL)	+
PFL Clear	+
Audio Mixers	13 – assignable pre- or post- fader
Configurable Audio Outputs	SDI-embedded audio output channels
Selectable embedded SDI-channel pairs	8 channel pairs per SDI-input Assignable to any fader
Sample Rate Converters	Input BNCs 1-24
Balance Control on Stereo Inputs	+
Pan Control on Mono Inputs	+
Mono Mode	Duplication of Mono channel (L or R) to create L-L / R-R channel pair
Audio Follow Video (Assignable)	+
Audio EQ	4-band EQ control on each fader (high shelf, dual midrange, low- shelf)

RAVE Audio Mixer	*Licensable Software Option*
Compression/Limiting	Channel-by-channel Compression/Limiting with variable Attack & Release parameters (Assignable pre- or post-EQ)

1RU Audio Breakout Module

1RU Audio Breakout Module	
Analog / Microphone Inputs	8
Analog Outputs	5
AES Digital Audio Inputs	1
AES Digital Audio Outputs	1
Adjustable Pre-Amps Gain on Analog Inputs	0-60dB
Phantom Power on Analog Inputs	48V
Digital Pads on Analog Inputs	-20dB
Digital LCD Front Panel w/ Multi-Function Control Panel Interface	+
Number of GPI/O	24
Number of Tallies	16

Interfaces

CONTROL INTERFACES

Carbonite Black Control Panels	+
DashBoard LiveAssist	+
ViewControl Touchscreen Interface	+
Ultritouch	+

Carbonite Black Control Panels

KEY FEATURES	SOLO CB9	CB1	CB1S	CB2	CB2S	CB3S	CB3X
Direct Access Crosspoint Buttons	9	16	24	16	24	24	32
Number Of ME Rows	1	1	1	2	2	3	3
ME Effects Memory Keypad	No – Global only	No – Global only	1 per ME + Global	No – Global only	1 per ME + Global	1 per ME + Global	1 per ME + Global
Theme-Able Panel Glow RGB Buttons	X	+	+	+	+	+	+
8 Character Input and Key Source Color Mnemonics	X	+	+	+	+	+	+

KEY FEATURES	SOLO CB9	CB1	CB1S	CB2	CB2S	CB3S	CB3X
Custom Control Macro Buttons with Split Row Mnemonics	X	128	192	128	192	192	256