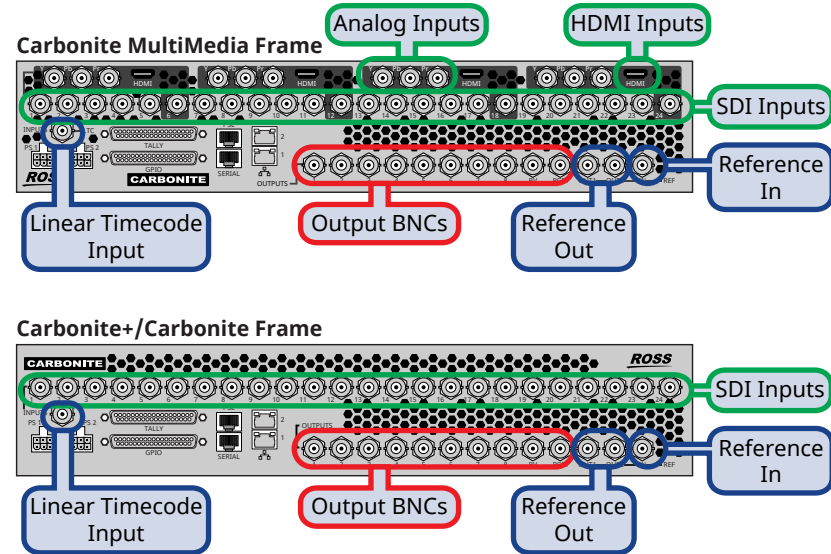


## Video Inputs/Outputs/Reference

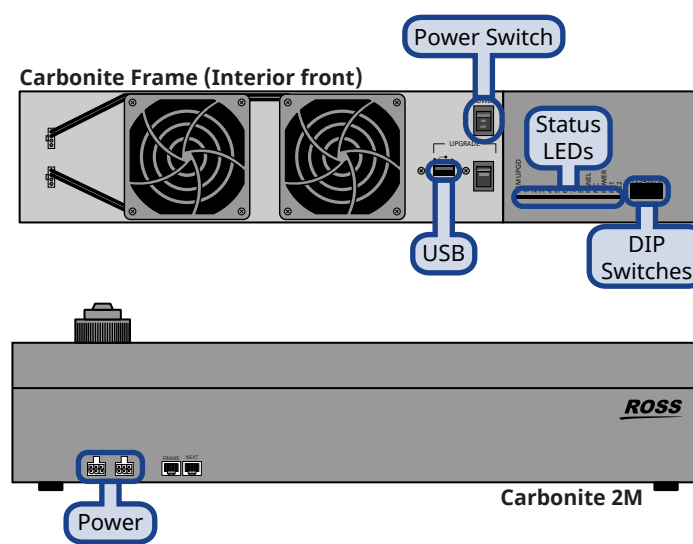


**Note:** If you purchased the 16 input variant of Carbonite (116 or 216), only the first 16 Input BNCs on the back of the frame can be used.

**Note:** Only one of Analog Input 1, HDMI 1, and SDI Input BNC 6 can be used at the same time. The same applies to Input BNCs 12, 18, and 24.

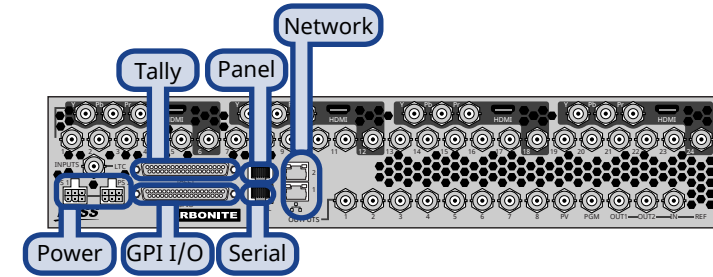
**Note:** MultiViewers can be assigned to any assignable output, or to PV.

## Power Switch, USB Port, and Diagnostics



**Note:** The Carbonite 10 control panel has a power switch to power it on, or off. The other Carbonite control panels power on automatically when the power supply is plugged in.

## Frame Ports and Pinouts



### Serial (female RJ-45)

Pin	RS-422
1	Tx+
2	Tx-
3	Rx+
4	n/c
5	n/c
6	Rx-
7	Ground
8	Ground

### GPI I/O (female DB37)

Pin	Signal	Pin	Signal
1	GPI I/O 1	20	GPI I/O 20
2	GPI I/O 2	21	GPI I/O 21
3	GPI I/O 3	22	GPI I/O 22
4	GPI I/O 4	23	GPI I/O 23
5	GPI I/O 5	24	GPI I/O 24
6	GPI I/O 6	25	Ground
7	GPI I/O 7	26	GPI I/O 25
8	GPI I/O 8	27	GPI I/O 26
9	GPI I/O 9	28	GPI I/O 27
10	GPI I/O 10	29	GPI I/O 28
11	GPI I/O 11	30	GPI I/O 29
12	GPI I/O 12	31	Ground
13	GPI I/O 13	32	GPI I/O 30
14	GPI I/O 14	33	GPI I/O 31
15	GPI I/O 15	34	GPI I/O 32
16	GPI I/O 16	35	GPI I/O 33
17	GPI I/O 17	36	GPI I/O 34
18	GPI I/O 18	37	(unused)
19	GPI I/O 19		

### Tally (female DB37)

Pin	Tally	Pin	Tally
1	Common (2-6, 20-25)	20	Tally 18
2	Tally 1	21	Tally 19
3	Tally 2	22	Tally 20
4	Tally 3	23	Tally 21
5	Tally 4	24	Tally 22
6	Tally 5	25	Tally 23
7	Tally 6	26	Tally 24
8	Tally 7	27	Tally 25
9	Tally 8	28	Tally 26
10	Tally 9	29	Tally 27
11	Tally 10	30	Tally 28
12	Tally 11	31	Common (7-12, 26-30)
13	Tally 12	32	Tally 29
14	Tally 13	33	Tally 30
15	Tally 14	34	Tally 31
16	Tally 15	35	Tally 32
17	Tally 16	36	Tally 33
18	Tally 17	37	Tally 34
19	Common (13-18, 32-37)		

**Note:** The tally pin must be connected to the proper common to complete the circuit. For example, tally 6 on pin 7 must be connected to the common on pin 31.

## Specifications

### HDMI Input Formats

VGA	640x480 (4:3)
SVGA	800x600 (4:3)
XGA	1024x769 (4:3)
SXGA	1280x1024 (5:4)
720p	1280x720 (16:9)
1080i	1920x1080 (16:9)
1080p	1920x1080 (16:9)

### SDI Input Formats

480i	59.94Hz
576i	50Hz
720p	59.94Hz
720p	50Hz
1080i	59.94Hz
1080i	50Hz
1080pSF	23.98Hz
1080pSF	25Hz
1080pSF	29.97Hz
1080p	29.97Hz
1080p	50Hz Level A
1080p	59.94Hz Level A

### Default Values

Frame IP (LAN1)	192.168.0.123
Frame IP (LAN2)	0.0.0.0
FTP User name	user
FTP Password	password

### Tally Rating

Input Voltage:	24VAC (rms) / 40VDC
Maximum Current:	120mA
Impedance:	< 15 ohms

### Temperature

Operating:	0 - 40°C (32 - 104°F)
Storage:	-20 - 85°C (-4 - 185°F)

### Input Voltages

Panel/Frame	100 - 120V~
	220 - 240V~
	47-63Hz

### Frame Power Consumption

Carbonite	90W 7.5A 12V
Carbonite+	110W 9.2A 12V
Carbonite MM	125W 10.4A 12V

### Weights

Carbonite 10	7lb (3.2kg)
Carbonite 1-A	13lb (5.9kg)
Carbonite 1M	15lb (6.8kg)
Carbonite 2	20lb (9.1kg)
Carbonite 2M	24lb (10.9kg)
Carbonite 2S	26lb (11.8kg)
Carbonite 2X	29lb (13.2kg)
Carbonite 3S	37lb (16.8kg)
Carbonite 3X	41lb (18.6kg)
Carbonite	17lb (7.7kg)
Carbonite+	18lb (8.2kg)
Carbonite MM	19lb (8.6kg)

### Panel Power Consumption

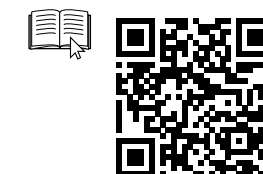
Carbonite 10	24W 2.0A 12V
Carbonite 1-A	30W 2.5A 12V
Carbonite 1M	30W 2.5A 12V
Carbonite 2	42W 3.5A 12V
Carbonite 2M	50W 4.2A 12V
Carbonite 2S	54W 4.5A 12V
Carbonite 2X	66W 5.5A 12V
Carbonite 3S	66W 5.5A 12V
Carbonite 3X	84W 7.0A 12V

### Video Input Specifications

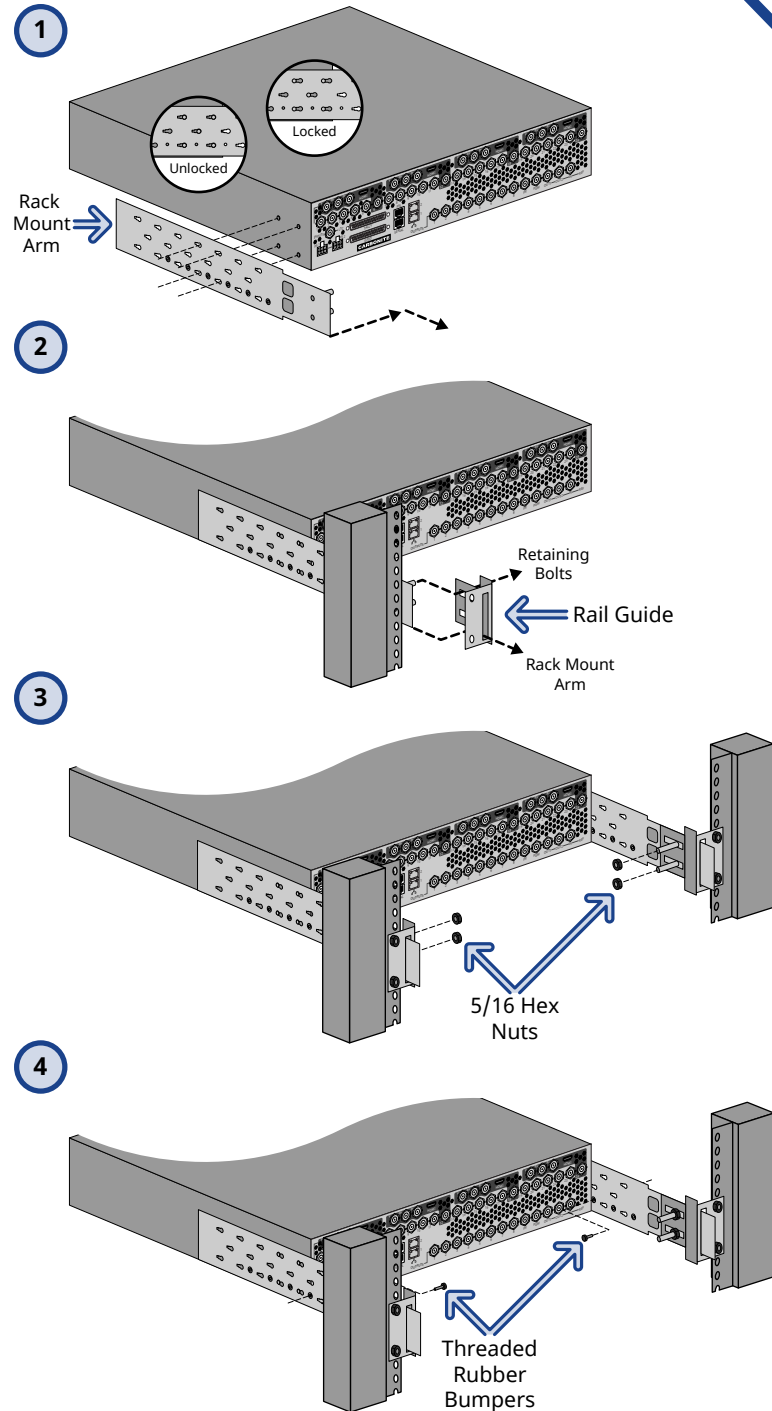
Equalization (using Belden 1694 cable)	>100m @ 1.5 Gb/s >300m @ 270 Mb/s (5°-40°C)
Impedance	75 ohm, terminating
Video Inputs, SDI	SMPT 259M/292M serial digital (non-looping)
Video Inputs, HDMI	HDMI 1.4 High Speed HDMI Cable (Max 10m)
Video Inputs, Analog	Levels — 1V peak-to-peak, nominal
Reference Inputs (non-terminating, looping)	Standard Definition — analog black High Definition — tri-level sync

### Video Output Specifications

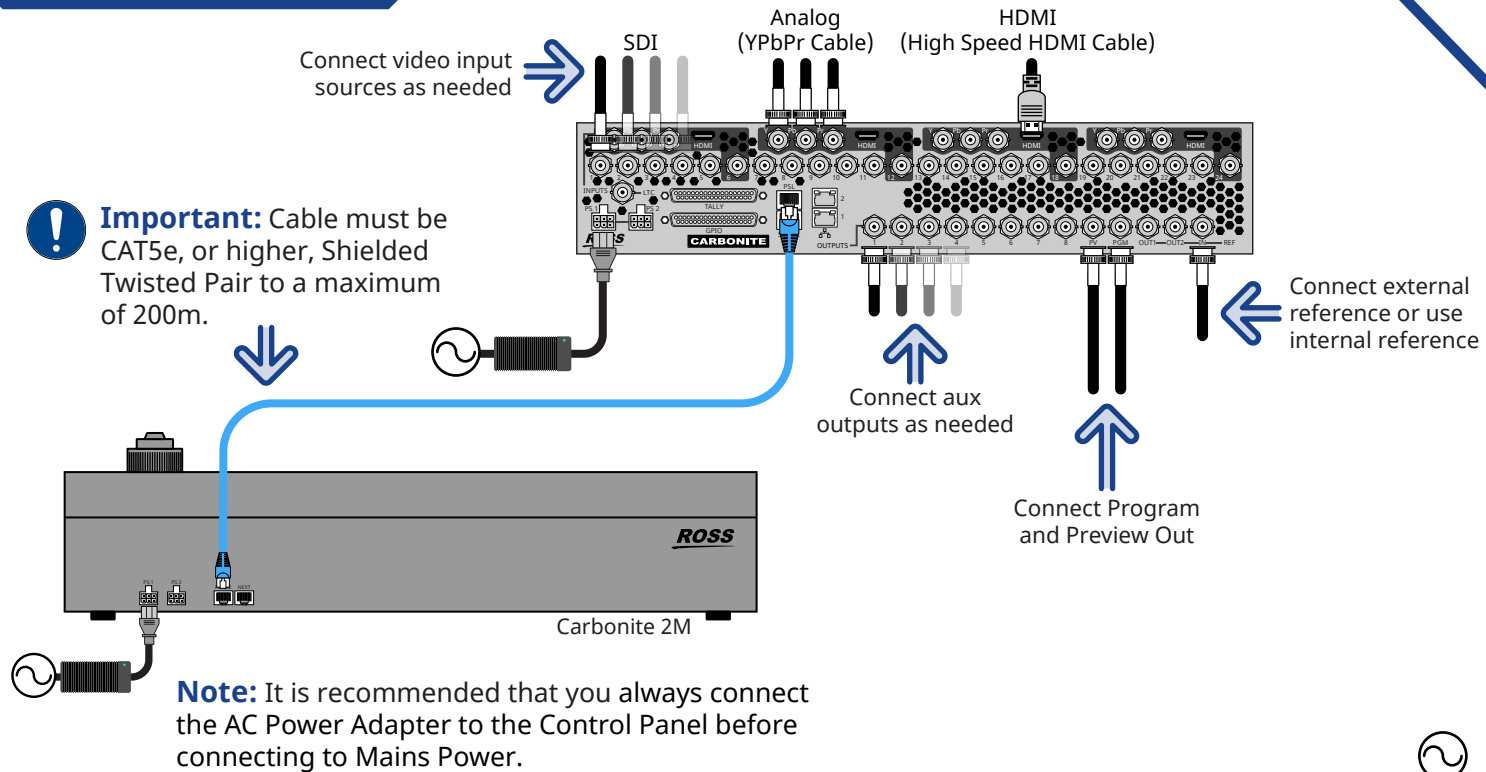
Return Loss	< -23dB @ 1.5GHz < -18dB @ 3GHz
Rise and Fall Time	800ps +/- 10% (SD) 240ps +/- 10% (HD)
Signal Level	800mV +/- 10%
DC Offset	0 Volts
Overshoot	< 10%
HD Mode	10-bit SMPTE-292M serial digital



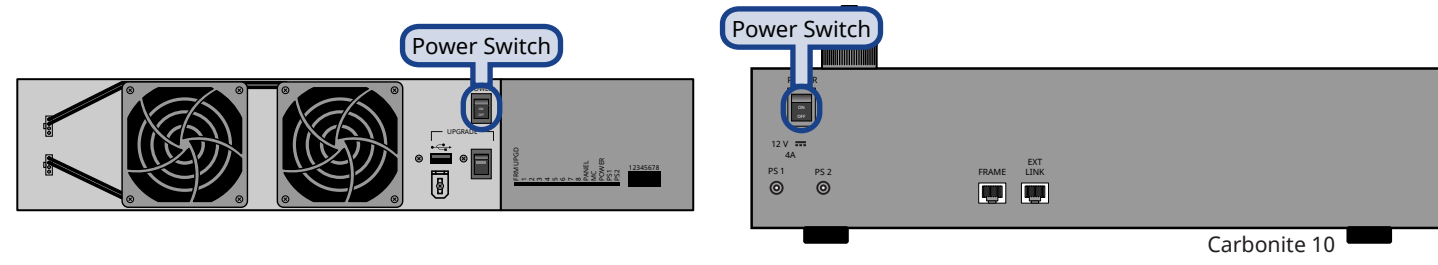
## Rack Mounting



## Power and Control Cabling

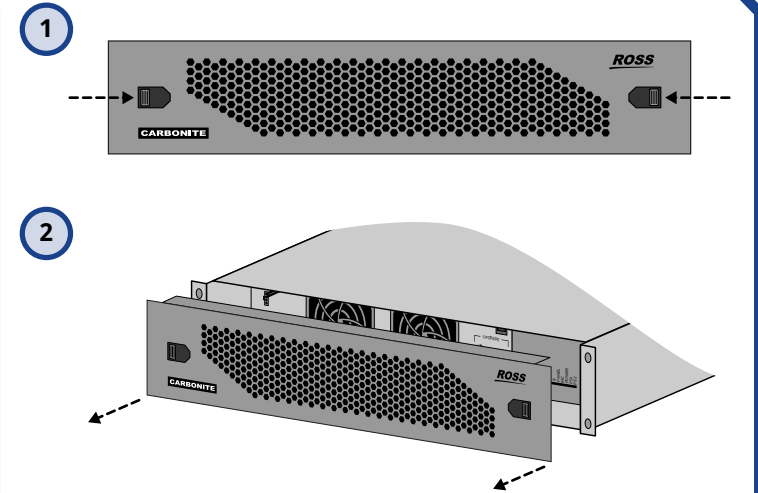


## Powering On Switcher



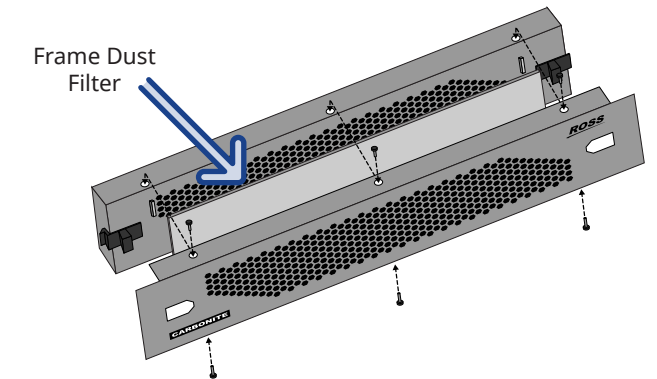
**Note:** The Carbonite 10 control panel has a power switch that must be used to power on the control panel. All other Carbonite control panels power on when plugged in.

## Frame Door Opening



## Frame Dust Filter

Remove frame door before cleaning the dust filter.



**Note:** The Dust Filter located inside the frame door should be kept clean and free of dust buildup to ensure proper cooling of the frame. Always ensure that the Dust Filter is covering all the holes in the door.

Having a problem? Call our free, 24-hour technical support hotline to speak with a live product specialist located right here in our facility.  
Tel: (+1) 613 • 652 • 4886  
Email: [techsupport@rossvideo.com](mailto:techsupport@rossvideo.com)