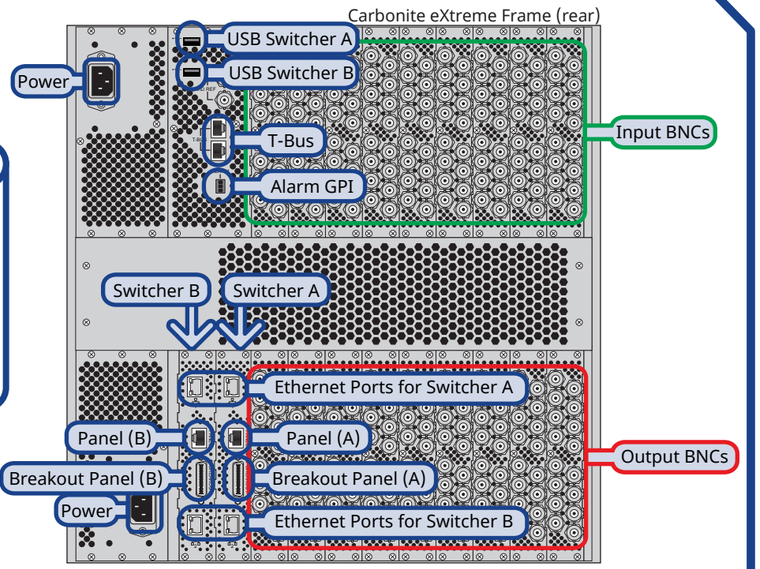
# CARBONITE

**Caution:** Before you set up and operate your switcher, see the "Important Safety Instructions" in your Setup manual.

# Switcher Specifications

## Frame Ports and Connectors

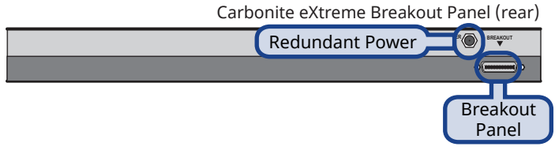



### Reference Formats

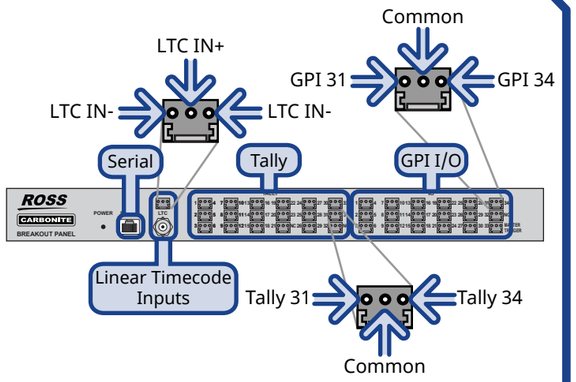
| Input Formats |
|---|
| 480i 59.94Hz |
| 576i 50Hz |
| 720p 59.94Hz |
| 720p 50Hz |
| 1080i 59.94Hz |
| 1080i 50Hz |
| 1080pSF 23.98Hz |
| 1080pSF 29.97Hz |
| 1080pSF 25 Hz |

**Note:** The number of inputs and outputs on your frame depends on the options ordered.

**Note:** Ethernet port 1 is the port located on the Switcher A module for both Switcher A and B.




## Breakout Panel Ports and Pinouts



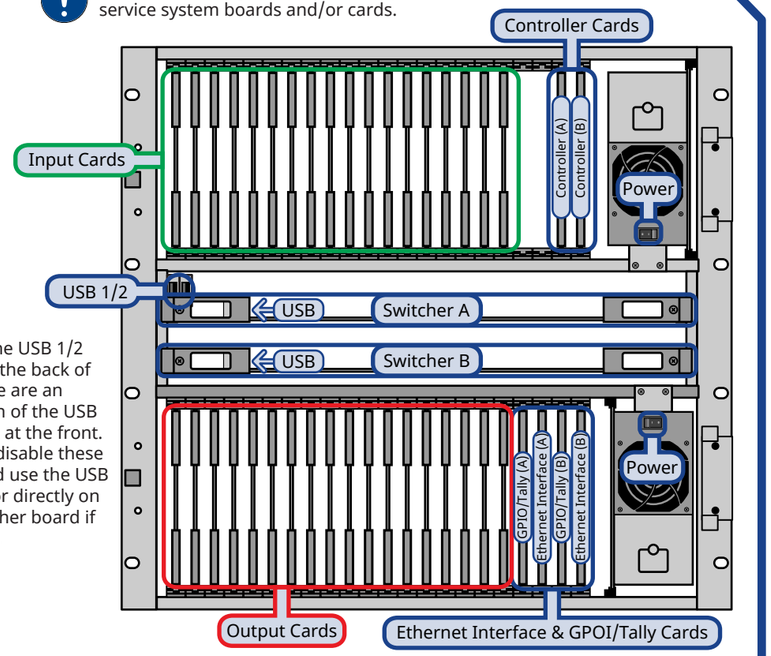

**Serial**
(female RJ-45)

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

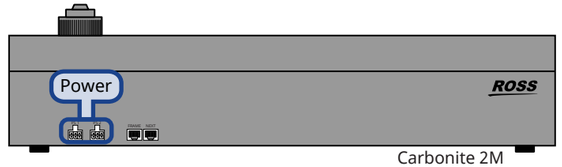
**Note:** GPI Output Master Trigger is used as an emergency bypass for Master Control. If the switcher fails, this GPI output is triggered.

## Power Switches and Frame Boards

**Important:** Only qualified service personnel are allowed to replace or service system boards and/or cards.




**Note:** The USB 1/2 ports on the back of the frame are an extension of the USB 1/2 ports at the front. You can disable these ports and use the USB connector directly on the switcher board if required.




Carbonite 2M

**Note:** The C10 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.

## Specifications

**Default Values**

| | |
|---|---|
| NK-IPS | 192.168.20.100 |
| Frame IP (LAN1) | 192.168.0.123 |
| Frame IP (LAN2) | 0.0.0.0 |
| FTP User name | user |
| FTP Password | password |

**Input Voltages**

| | |
|---|---|
| Panel | 100 - 120V~ |
| | 220 - 240V~ |
| | 47-63Hz |
| Frame | 100 - 240V~ |
| | 50-60Hz |
| | 6.25 - 3.15A |

**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) |

**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 |
| eXtreme | 500W | 34A | 14.6V |

**Video Input Specifications**

| | |
|---|---|
| Equalization (using Belden 1694 cable) | >100m @ 1.5 Gb/s<br>>300m @ 270 Mb/s (5°-40°C) |
| Impedance | 75 ohm, terminating |
| Video Inputs | SMPTE 259M/292M serial digital (non-looping) |
| Reference Inputs (non-terminating, looping) | Standard Definition — analog black<br>High Definition — tri-level sync |

**Video Output Specifications**

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

© 2024 Ross Video Limited. Ross®, CrossOver®, MiniME™ and any related marks are trademarks or registered trademarks of Ross Video Limited. All other trademarks are the property of their respective companies. PATENTS ISSUED and PENDING. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, mechanical, photocopying, recording or otherwise, without the prior written permission of Ross Video. While every precaution has been taken in the preparation of this document, Ross Video assumes no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from the use of the information contained herein.

ROSS

4803DR-200-08 Rev.02

CARBONITE

**Caution:** Before you set up and operate your switcher, see the "Important Safety Instructions" in your Setup manual.

# Frame Installation and Cabling

## Power and Cabling

**Note:** Refer to the documentation that came with the Ross Routing Systems NK-IPS for setup information.

Network connection to computer running DashBoard Control System

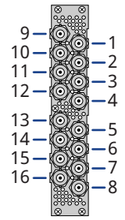
T-Bus Connections Maximum 100m cable length

Connect external reference or use internal reference

**Note:** You must terminate the looping Reference connector if you are not using it.

Terminate with 75 ohm BNC if not using

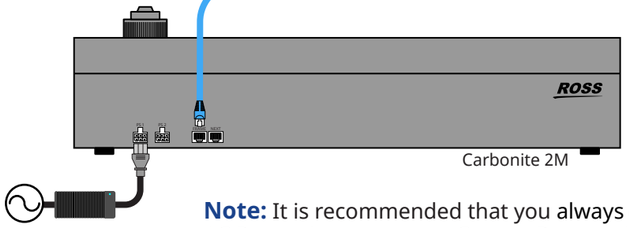
Connect video input sources as needed




Connect video outputs as needed

33-48 17-32 1-16

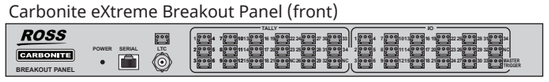
**Important:** Cable must be CAT5e, or higher, Shielded Twisted Pair to a maximum of 200m.

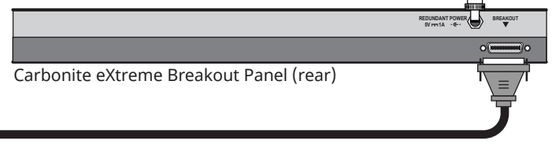



**Note:** It is recommended that you always connect the AC Power Adapter to the Control Panel before connecting to Mains Power.

70-00394 Cable Maximum 2m cable length

Carbonite eXtreme Breakout Panel (front)



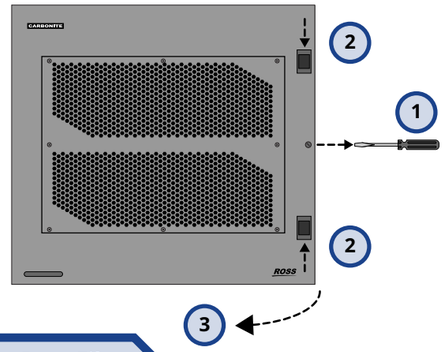

Carbonite eXtreme Breakout Panel (rear)

Redundant Power

Mains Power

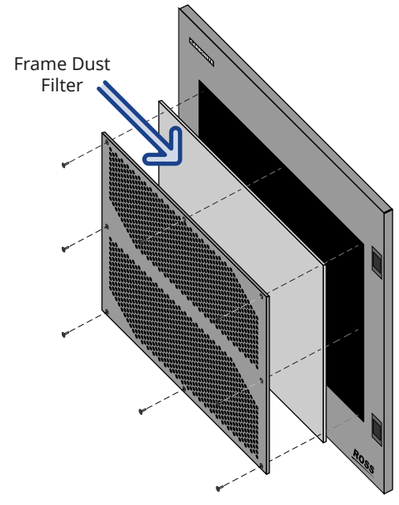
## Frame Door Opening

**Important:** Only qualified service personnel are allowed to replace or service system boards and/or cards.




## 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


ROSS


Printed In Canada