Matrox MC-100

User Guide

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Digital Video Solutions

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Contents

1

Introduction

This chapter lists the Matrox MC-100 requirements, and explains how to update the MC-100 hardware.

Welcome to Matrox MC-100

Matrox MC-100 is a dual SDI to HDMI mini converter that supports a wide range of display resolutions through 3G, dual link, HD, and SD-SDI. The Matrox MC-100 unit can be used as an HD-SDI switcher, a distribution amplifier, a multiplexer, and a 3D processing unit. The Matrox MC-100 is configured using an on-screen display (OSD) that is accessed by three buttons directly on the unit. The Matrox MC-100 unit has predefined and user-defined DIP switches. In addition, you can update MC-100's firmware using a Mini USB cable.

Matrox MC-100 requirements

MC-100 is designed to work independently of a computer. However, you will require the following:

- At least one SDI or HDMI display device for specifying the MC-100 settings.
- If using an HDMI display device, a good-quality HDMI cable for connecting the HDMI display device to the HDMI output connector on the Matrox MC-100 unit.

⚠ **Caution** Using a low-quality HDMI cable can damage the HDMI connector on the Matrox MC-100 unit.

- To perform the hardware update, you will a computer with the following:
  – Microsoft Windows 7 (32-bit and 64-bit) with Service Pack 1, or Microsoft Windows XP (32-bit) with Service Pack 3.
  – A USB port and a third-party USB cable to connect Matrox MC-100 to your computer. If your computer does not have a USB port, or if it has a different type of USB port, you can use a compatible USB adapter/cable.

Updating your MC-100 hardware

Matrox MC-100 has a Mini USB Type B port that is used for updating the hardware's firmware and FPGA. In order to perform a hardware update for MC-100, you must download and run the latest version of the Matrox MC Updater on a Windows system. A third-party USB cable is also required for the hardware update. To see if a new hardware update is available for your MC-100, visit the Downloads section of our website at www.matrox.com/video/support.

📝 **Note** Although MC-100 is designed to work independently of a computer, you must download and run the updater on a Windows system. The Matrox MC Updater does not support Mac OS systems.

⇒ **To update the MC-100 hardware:**

1 Download the latest version of the Matrox MC Updater on a Windows system.

2 Disconnect all SDI and HDMI cables from MC-100.

3 Power your MC-100 (see "Powering Matrox MC-100" on page 6), and then connect a third-party USB cable from MC-100's USB port to your computer's USB port.

📝 **Note** If your computer does not have a USB port, or if it has a different type of USB port, you can use a compatible USB adapter/cable.

4 Run the Matrox MC Updater.

5 If an update is required for your MC-100 firmware and/or FPGA, the **Update** button will be active in the Matrox MC Updater window. If the MC-100 hardware is up to date, but you wish to force a hardware update, select **Force update**. Click **Update** to begin the MC-100 update.

ⓘ **Important** To avoid damaging the MC-100 hardware, do not turn off your computer, remove power from MC-100, or disconnect it from your computer during the hardware update.

6 When prompted by the updater, disconnect and then reconnect the MC-100 power supply cable to complete the firmware update.

Last-minute information

Any important information that wasn't available for inclusion in this manual by publication time is provided to you in the *Matrox MC-100 Release Notes*.

Your notes

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Connecting External Devices to Matrox MC-100

This chapter shows how to supply power and connect external devices to Matrox MC-100.

Available Matrox MC-100 connections

Matrox MC-100 provides the following inputs and outputs for connecting external devices:

- Two BNC SDI input connectors, and two BNC SDI output connectors, with up to 16 channels of embedded audio per connector.
- One HDMI output connector with up to eight channels of embedded audio.

Powering Matrox MC-100

You can supply power to Matrox MC-100 using an AC outlet via the Matrox external power supply cable. To turn MC-100 off, unplug the Matrox external power supply cable from the AC outlet.

Note For a secure power connection, use the locking connector supplied on the power supply cable to fasten it to MC-100.
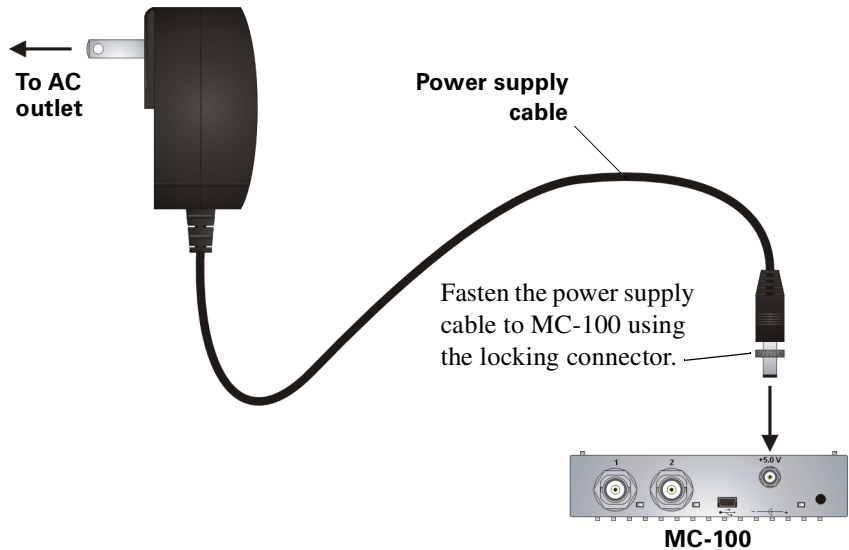
Matrox MC-100 operating safety feature

Matrox MC-100 has an operating safety feature that will cause all four SDI LEDs to flash red as a warning when the MC-100 unit exceeds normal operating temperature. If all four SDI LEDs flash red, unplug the external power supply cable from the AC outlet, and wait a few minutes for the MC-100 unit to cool before reconnecting the power supply cable back into the AC outlet.

Matrox MC-100 power supply and adapter plugs

Matrox MC-100 provides an external power supply cable with international adapter plugs for use in different regions:

- To remove an adapter plug from the power adapter, hold down the button on the adapter plug, and then slide the adapter plug up until it releases from the power adapter.
- To insert an adapter plug into the power adapter, ensure that the adapter plug is properly aligned with the corresponding slot on the power adapter, and then slide the adapter plug down into the power adapter until it locks into place.

Removing an adapter plug

Inserting an adapter plug

Adapter plug

Power adapter

To AC outlet

Power supply cable

Fasten the power supply cable to MC-100 using the locking connector.

MC-100

Powering Matrox MC-100
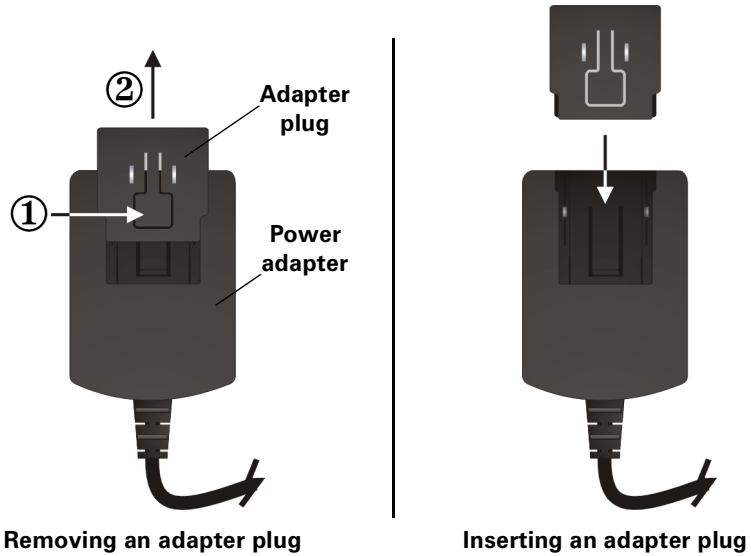
Connecting input and output devices

The Matrox MC-100 unit supports two SDI input sources via two BNC input connectors, two SDI output devices via two BNC output connectors, and one HDMI output device. For a list of the supported input and output formats, see Appendix A, "Matrox MC-100 Supported Output Formats," on page 25.

(i) **Important**   If you're connecting two input sources to MC-100, the input sources must be the same video format.
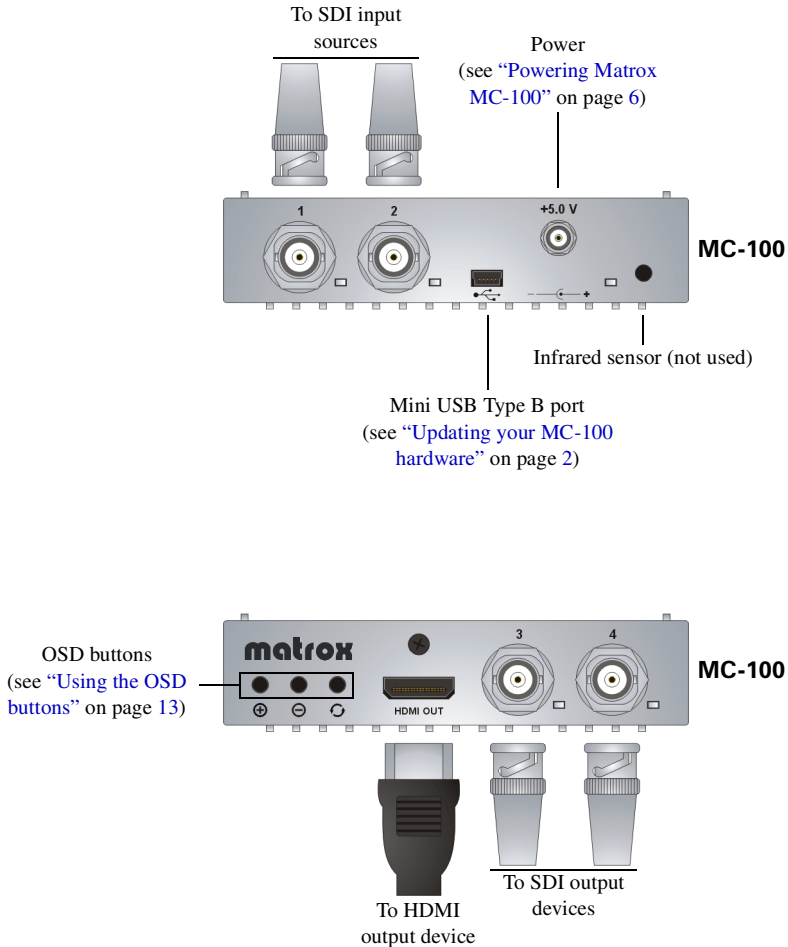
To SDI input
sources

Power
(see "Powering Matrox
MC-100" on page 6)

+5.0 V

MC-100

Infrared sensor (not used)

Mini USB Type B port
(see "Updating your MC-100
hardware" on page 2)

OSD buttons
(see "Using the OSD
buttons" on page 13)

HDMI OUT

MC-100

To HDMI
output device

To SDI output
devices

⚠ **Caution**   Using a low-quality HDMI cable can damage the HDMI connector on the Matrox MC-100 unit.

3

Using Your Matrox MC-100 Hardware

This chapter explains how to use your Matrox MC-100 hardware.

Overview

Matrox MC-100 is operated through an on-screen display (OSD) using the OSD buttons, which are located on the MC-100 unit. MC-100 also features status LEDs (see "Understanding the MC-100 status LEDs"), and eight DIP switches for performing various functions (see "Using the MC-100 DIP switches").

Understanding the MC-100 status LEDs

Matrox MC-100 features the following status LEDs:

- **SDI 1 and SDI 2**
  - **Green**   An input source is detected.
  - **Red**   An input source is not connected.
- **SDI 3 and SDI 4**
  - **Green**   The output is supported.
  - **Red**   The output is not supported.
- **Power**   The LED is green when power is supplied to MC-100 and the hardware is functioning properly.

Note   If the MC-100 unit exceeds normal operating temperature, all four SDI LEDs will flash red as a warning. For more information see "Matrox MC-100 operating safety feature" on page 6.

Using the MC-100 DIP switches

Matrox MC-100 features eight DIP switches on the side of the unit for locking/unlocking the on-screen display (OSD) buttons, displaying the OSD or heads-up display (HUD) on the SDI or HDMI output, enabling/disabling the loss-of-signal switcher feature, and loading user-defined settings. A DIP switch is ON when the switch is down, and OFF when it is up.

MC-100
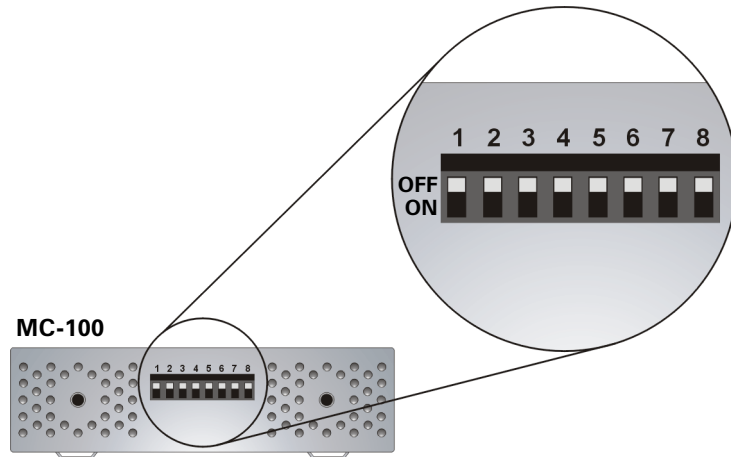
- **DIP switch 1**   When ON, the OSD buttons are locked and will not function.
- **DIP switch 2**   When ON, the OSD or HUD is displayed on the SDI outputs.
- **DIP switch 3**   When ON, the OSD or HUD is not displayed on the HDMI output.
- **DIP switch 4**   When ON, the loss-of-signal switcher feature is enabled (see "Loss-of-signal switcher" on page 13").
- **DIP switches 5 to 8**   Used for loading user-defined presets of input, output, and 3D settings. For information on how to save user-defined presets, see "Saving option settings" on page 23.

📝 **Note**   MC-100 can have only one user-defined preset loaded at any given time. This means that if a DIP switch associated with a user-defined preset is ON, you must turn it OFF before loading another preset.

MC-100 channel definitions

Matrox MC-100 can process up to two video channels at one time. Use the following channel definitions when specifying the output settings:

- For all input video signals except 3G level B, channel 1 refers to the input signal on SDI 1, and channel 2 refers to the input signal on SDI 2.

- If one 3G level B input video signal is connected to MC-100, channel 1 and channel 2 refer to the two channels in the 3G level B signal. If you connect two 3G level B input signals, channel 1 and channel 2 refer to the two channels in input SDI 1, and the 3G level B signal connected to SDI 2 can be output using the **SDI 2 bypass** option only (see "Specifying your output settings" on page 17).

- When you select the **Channel 1**, **Channel 2**, **3D**, **Analysis**, or **Multiplex** option for a given output (see "Specifying your output settings" on page 17), channel 1 and/or channel 2 is output using the current MC-100 settings. If you want to output an input video signal without applying the MC-100 settings, choose the **SDI 1 bypass** or **SDI 2 bypass** output option instead.

Amplifying input signals

MC-100 also functions as an input signal amplifier. Input signals connected to MC-100 are automatically amplified within MC-100. This allows you to transfer the SDI and HDMI output signals over greater distances. The distances for the different input types are as follows:

- **SD**   300 meters (984 feet)
- **HD**   100 meters (328 feet)
- **3G**   70 meters (229 feet)

Time base correction and synchronization

When input sources are connected to SDI 1 and SDI 2, MC-100's time base corrector ensures that the two video signals are synchronized at the output by using the video signal that is set as the reference source (see "Specifying your input settings" on page 15) to correct the other video signal. MC-100's time base does not correct the audio portion of the signal.

Note   The time base corrector does not apply when using the **SDI 1 bypass** or **SDI 2 bypass** output setting (see "Specifying your output settings" on page 17). This means that if the two input sources are not synchronized using an external reference source, the input signals may not be synchronized at the output. Depending on the amount of discrepancy between the two input signal clocks, the input signal that is not set as the reference source may not be output.

Loss-of-signal switcher

If you have two input channels connected to MC-100, and an SDI/HDMI output is set to **Channel 1** or **Channel 2** (see "Specifying your output settings" on page 17), the loss-of-signal switcher feature enables MC-100 to automatically switch to the other channel if a loss of signal is detected on the channel that was selected for that output. For example, if you have two 1920×1080p video input signals connected to different SDI inputs, and SDI 3 and HDMI are set to output channel 2, MC-100 will automatically switch to channel 1 on the SDI 3 and HDMI outputs if a signal loss is detected on channel 2. Switching between channel 1 and channel 2 is done glitch-free on SDI outputs only. To enable or disable the loss-of-signal switcher feature, set DIP switch 4 accordingly (see "Using the MC-100 DIP switches" on page 11).

Note   The loss-of-signal switcher feature should not be used when working with a 3G level B input signal. Since channels 1 and 2 on 3G level B signals are on the same SDI cable, the signal loss will affect both channels.

Using the OSD buttons

The on-screen display (OSD) buttons are used to navigate through the Matrox MC-100 options in the OSD menu.

Note   You can lock the OSD buttons by using DIP switch 1 (see "Using the MC-100 DIP switches" on page 11).

- ⊕ and ⊖   (Cycle buttons) Use these buttons to cycle through the OSD menu options and settings, or available settings when in selection mode (see "Using the MC-100 selection modes" on page 21).

- ⟳   (Select button) Use this button to select the highlighted OSD menu option, currently selected option, or to exit selection mode (see "Using the MC-100 selection modes" on page 21).

Accessing the OSD main menu

The Matrox MC-100 on-screen display (OSD) main menu is accessed using the OSD buttons. The OSD main menu allows you to set the input, output, and 3D settings, and allows you to access the various selection modes (see "Using the MC-100 selection modes" on page 21).
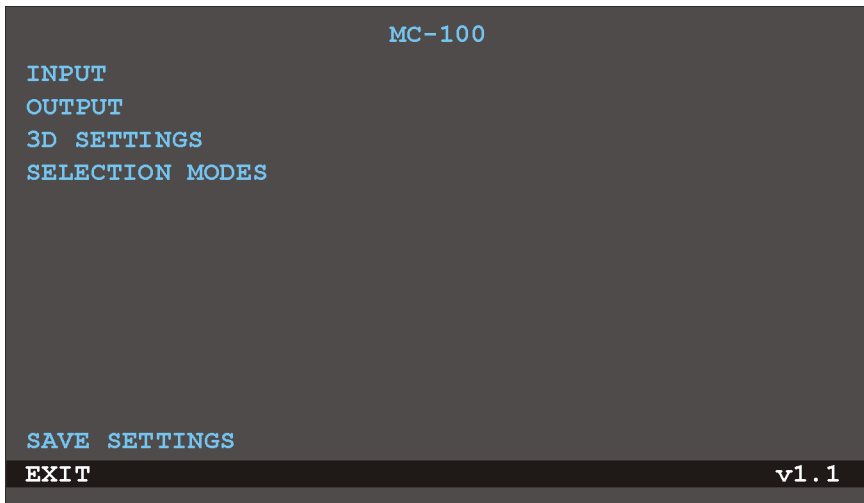
To access the Matrox MC-100 OSD main menu:

1 Make sure that power is supplied to Matrox MC-100 (see "Powering Matrox MC-100" on page 6), and you have at least one SDI or HDMI output display device connected to Matrox MC-100 (see "Connecting input and output devices" on page 8).

✎ **Note** By default, the OSD will appear on the display device connected to MC-100's HDMI output only. To hide the OSD on the HDMI output, or to display it on the SDI outputs, you must set the MC-100 DIP switches accordingly (see "Using the MC-100 DIP switches" on page 11).

2 Press any OSD button on the Matrox MC-100 unit. The Matrox MC-100 OSD main menu will appear on the display device connected to MC-100's SDI and/or HDMI output. Select **EXIT** to close the OSD.

```
                         MC-100

INPUT
OUTPUT
3D SETTINGS
SELECTION MODES




                                                 





SAVE SETTINGS
EXIT                                              v1.1
```
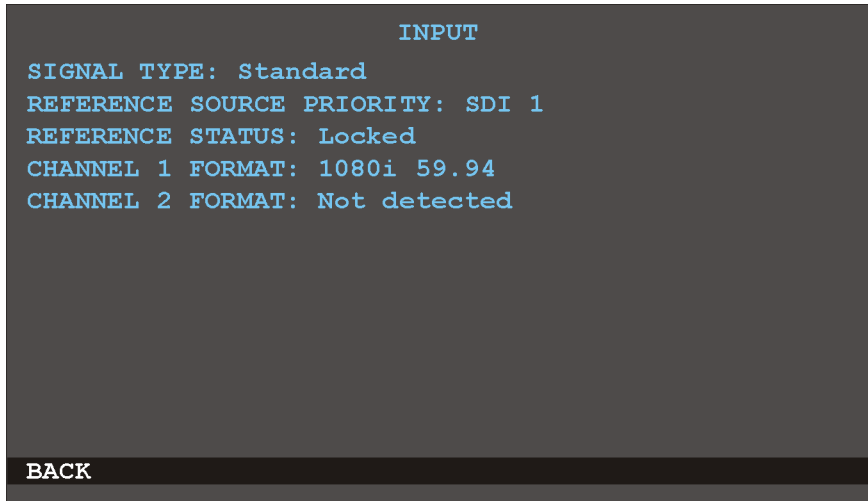
Specifying your input settings

The **INPUT** menu allows you to select the input signal type and reference source priority. You can also view the reference status, and the video formats for the connected input sources.

⟹ **To set the input settings:**

1 Access the Matrox MC-100 on-screen display (OSD) main menu.

2 Select **INPUT** from the OSD main menu.

```
                          INPUT
SIGNAL TYPE: Standard
REFERENCE SOURCE PRIORITY: SDI 1
REFERENCE STATUS: Locked
CHANNEL 1 FORMAT: 1080i 59.94
CHANNEL 2 FORMAT: Not detected




BACK
```

3 Select **SIGNAL TYPE**, and then select the setting that corresponds to the format of the input source connected to MC-100's SDI input. For a list of the supported input video formats, see "Supported input formats" on page 16.

ⓘ **Important** If you have input sources connected to SDI 1 and SDI 2, the two video formats must be the same.

- **Standard** Select this setting for progressive or interlaced SD, progressive or interlaced HD, 3G level A, or 3G level B input signals.
- **PsF** Select this setting for progressive segmented frame input signals.
- **Dual link** Select this setting for dual link input signals.
- **Dual link PsF** Not supported.

✎ **Note** PsF input video signals are not supported on the HDMI output. For SDI outputs, PsF input video signals are only supported in bypass mode (see "Specifying your output settings" on page 17).

4 Select **REFERENCE SOURCE PRIORITY** to set the SDI input video signal that will be used as the reference source when input sources are connected to SDI 1 and SDI 2. For information on how the input signals are synchronized

using MC-100's time base corrector, see "Time base correction and synchronization" on page 12. When only one input source is connected to MC-100, this option does not apply, and the connected video signal is automatically used as the reference source.

- **SDI 1** Sets the video signal connected to the SDI 1 input as the reference.
- **SDI 2** Sets the video signal connected to the SDI 2 input as the reference.

Viewing input information

The **INPUT** menu also allows you to view the following input information:

- **REFERENCE STATUS** Indicates whether or not the reference is locked to the input source.
- **CHANNEL 1 FORMAT** and **CHANNEL 2 FORMAT** Indicates the video format that is detected for channels 1 and 2. MC-100 cannot detect a PsF or dual link video signal.

Note For more information on the MC-100 channels, see "MC-100 channel definitions" on page 12.

Supported input formats

MC-100 supports the following input video formats. To see the possible outputs for the supported input formats, see Appendix A, "Matrox MC-100 Supported Output Formats," on page 25.

Note 4:4:4 input video signals are not supported.

- NTSC
- PAL
- 1280×720p at 50, 59.94, and 60 fps
- 1920×1080i at 50, 59.94, and 60 fps
- 1920×1080PsF at 23.98, 24, 25, 29.97, and 30 fps
- 1920×1080p at 23.98, 24, 25, 29.97, and 30 fps
- 3G level A 1920×1080p at 50, 59.94, and 60 fps
- 3G level B 1920×1080p at 50, 59.94, and 60 fps
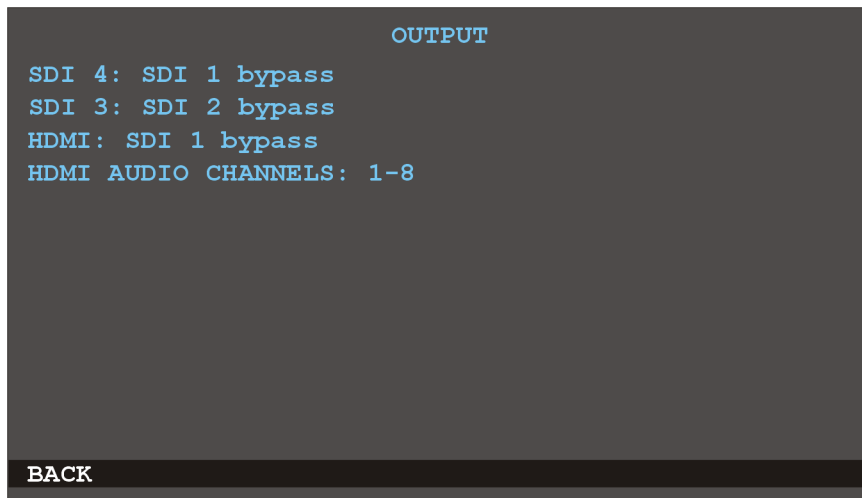- Dual link 1920×1080p (4:2:2) at 50, 59.94, and 60 fps

Specifying your output settings

The **OUTPUT** menu allows you to select the video signal for a given output connector, as well as the HDMI audio channels. The output signal also includes the ancilliary data contained in the input video signal. If you select **3D** or **Analysis**, the ancilliary data that is output is from channel 1 only.

⟹ **To set the output settings:**

1 Access the Matrox MC-100 on-screen display (OSD) main menu.

2 Select **OUTPUT** from the OSD main menu.

```
                        OUTPUT
SDI 4: SDI 1 bypass
SDI 3: SDI 2 bypass
HDMI: SDI 1 bypass
HDMI AUDIO CHANNELS: 1-8




BACK
```

3 For the SDI and HDMI outputs, select **SDI 4**, **SDI 3**, or **HDMI**, and then select your desired output setting. For information on the MC-100 channels, see "MC-100 channel definitions" on page 12.

Remarks

- PsF input video signals are not supported on the HDMI output. For SDI outputs, PsF input video signals are only supported in bypass mode.
- You must have two input channels for the **3D**, **Analysis**, and **Multiplex** option settings to function properly.
- **3D** and **Analysis** output settings are not supported for 3G level A input signals.
- **Multiplex** is not supported on the HDMI output or for 3G level A input signals.
- In order to view the selected video output format, the format must be supported by your SDI or HDMI display device. If the format is not supported, a purple screen is displayed and the OSD is available if the

> appropriate DIP switch for the OSD has been set (see "Using the MC-100 DIP switches" on page 11).

- **SDI 1 bypass** Outputs the video signal connected to input SDI 1 as is, without any processing. The MC-100 settings do not apply for this option.
- **SDI 2 bypass** Outputs the video signal connected to input SDI 2 as is, without any processing. The MC-100 settings do not apply for this option.
- **Channel 1** Outputs the video signal on channel 1 using the current MC-100 settings.
- **Channel 2** Outputs the video signal on channel 2 using the current MC-100 settings.
- **3D** Outputs the channel 1 and 2 input video signals as set in the **3D MODE** option in the **3D SETTINGS** menu. The channel flip and channel offset options are also applied to the output (see "Specifying your 3D settings" on page 19).
- **Analysis** Outputs the channel 1 and 2 input video signals as set in the **ANALYSIS MODE** option in the **3D SETTINGS** menu. The channel flip and channel offset options are also applied to the output (see "Specifying your 3D settings" on page 19).
- **Multiplex** (SDI 4 and SDI 3 only) Combines the video and audio input signals from channel 1 and channel 2 into one 3G level B video signal on the output. The channel flip and channel offset options are also applied to the output (see "Specifying your 3D settings" on page 19).

4 If you have an HDMI output device connected to MC-100, select **HDMI AUDIO CHANNELS**, and then select the audio channels that you want to output on HDMI. The source of the audio channels is defined by the output setting selected in step 3.

📝 **Note** When using the **3D** or **Analysis** output setting in step 3, or when using a 3G level B input video signal, the HDMI audio channels are selected from channel 1 only.
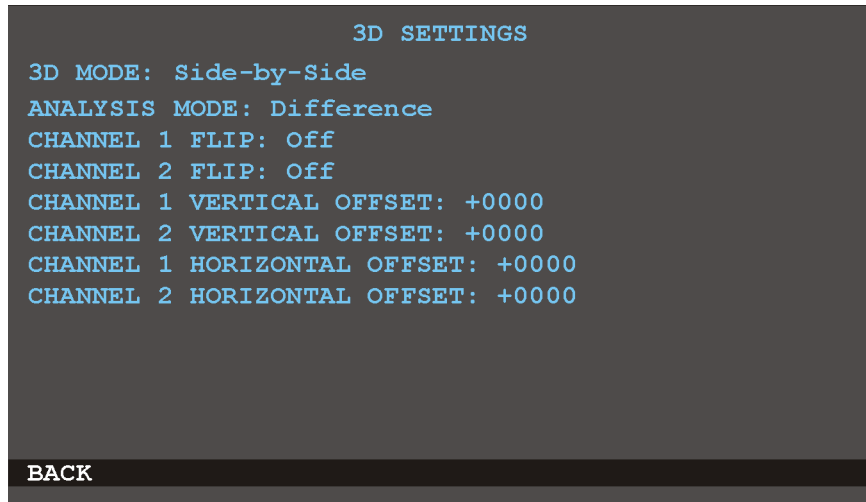
- **1-8** Outputs audio input channels 1 to 8.
- **9-16** Outputs audio input channels 9 to 16.

Specifying your 3D settings

The **3D SETTINGS** menu allows you to select the 3D viewing mode and 3D analysis mode for channels 1 and 2. It also allows you to flip the channel 1 and channel 2 video input signals horizontally or vertically, as well as apply a vertical and horizontal offset to channels 1 and 2. See "MC-100 channel definitions" on page 12 for information about the MC-100 channels.

⟹ **To set the 3D settings:**

1 Access the Matrox MC-100 on-screen display (OSD) main menu.

2 Select **3D SETTINGS** from the OSD main menu.

```
                    3D SETTINGS
3D MODE: Side-by-Side
ANALYSIS MODE: Difference
CHANNEL 1 FLIP: Off
CHANNEL 2 FLIP: Off
CHANNEL 1 VERTICAL OFFSET: +0000
CHANNEL 2 VERTICAL OFFSET: +0000
CHANNEL 1 HORIZONTAL OFFSET: +0000
CHANNEL 2 HORIZONTAL OFFSET: +0000




BACK
```

3 Select **3D MODE**, and then select the 3D viewing mode for channels 1 and 2. If your display device supports the selected 3D viewing mode option, then the image is 3D. To apply the selected **3D MODE** setting on a given output, you must select **3D** for the **SDI 4**, **SDI 3**, or **HDMI** option in the **OUTPUT** menu (see "Specifying your output settings" on page 17).

ⓘ **Important** You must have two input channels for the **3D MODE** option to function properly.

– **Side-by-Side** Outputs horizontally compressed side-by-side 3D video (also referred to as side-by-side horizontal), with channel 1 on the left and channel 2 on the right.

– **Over/Under** Outputs over/under 3D video (also referred to as top/bottom), with channel 1 on the top and channel 2 on the bottom.

– **Frame Packing** Stacks the channel 1 and channel 2 video input signals into a single frame with twice the normal bandwidth.

Remarks

– The **3D MODE** option is not supported for 3G level A input signals.

– **Frame Packing** is not supported on the SDI outputs.

4 Select **ANALYSIS MODE**, and then select the layering method that you want to use to analyze the two video input channels. This option is useful for finding disparities between the two input channel images. To apply the selected setting on a given output, you must select **Analysis** for the **SDI 4**, **SDI 3**, or **HDMI** option in the **OUTPUT** menu (see "Specifying your output settings" on page 17).

– **Difference** Superimposes channels 1 and 2 and subtracts the differences between the two images.

– **50/50** Channels 1 and 2 are superimposed at 50% opacity.

– **Anaglyph** Channels 1 and 2 are superimposed using red for channel 1 and cyan for channel 2. This is useful when using anaglyph glasses to analyze the channel images. Since there are differences between anaglyph glasses, not all anaglyph glasses will produce the same effect when using the **Anaglyph** setting.

5 Select **CHANNEL 1 FLIP** and/or **CHANNEL 2 FLIP,** and then select the orientation for the image on channel 1/channel 2. To apply this option on a given output, you must select **Channel 1**, **Channel 2**, **3D**, or **Analysis** for the **SDI 4**, **SDI 3**, or **HDMI** option in the **OUTPUT** menu (see "Specifying your output settings" on page 17).

– **Off** The image on channel 1/channel 2 is displayed in its original orientation.

– **Horizontal** The image on channel 1/channel 2 is flipped horizontally.

– **Vertical** The image on channel 1/channel 2 is flipped vertically.

– **Horizontal/Vertical** The image on channel 1/channel 2 is flipped both horizontally and vertically.

6 Select **CHANNEL 1 VERTICAL OFFSET** and/or **CHANNEL 2 VERTICAL OFFSET** to adjust the vertical offset for the channel in pixels. To apply this option on a given output, you must select **Channel 1**, **Channel 2**, **3D**, or **Analysis** for the **SDI 4**, **SDI 3**, or **HDMI** option in the **OUTPUT** menu (see "Specifying your output settings" on page 17).

7 Select **CHANNEL 1 HORIZONTAL OFFSET** and/or **CHANNEL 2 HORIZONTAL OFFSET** to adjust the horizontal offset for the channel in 1/4 pixels. To apply this option on a given output, you must select **Channel 1**, **Channel 2**, **3D**, or **Analysis** for the **SDI 4**, **SDI 3**, or **HDMI** option in the **OUTPUT** menu (see "Specifying your output settings" on page 17).

Using the MC-100 selection modes

Matrox MC-100 offers different selection modes that allow you to quickly cycle through different output options without having to change the MC-100 settings. When using the MC-100 selection modes, the on-screen display (OSD) is replaced by a heads-up display (HUD) at the bottom of the video output that allows you to view the current selection mode setting. When cycling through the settings in a selection mode, the corresponding options in the **OUTPUT** and **3D SETTINGS** menus will change automatically. For information on the MC-100 channels, see "MC-100 channel definitions" on page 12.
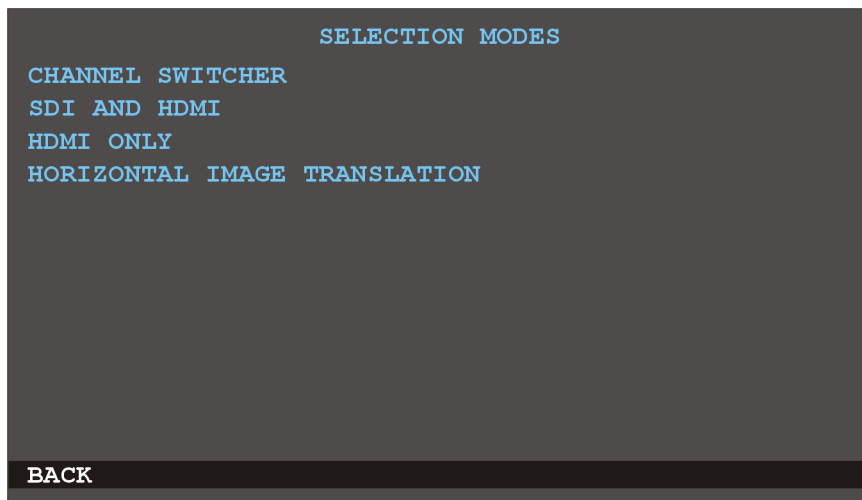
Note Press the Select button (see "Using the OSD buttons" on page 13) to exit the selection mode and return to the OSD menu.

▭▷ **To select a selection mode:**

1 Access the Matrox MC-100 OSD main menu.

2 Select **SELECTION MODES** from the OSD main menu.

```
                    SELECTION MODES
CHANNEL SWITCHER
SDI AND HDMI
HDMI ONLY
HORIZONTAL IMAGE TRANSLATION




BACK
```

3 Select **CHANNEL SWITCHER**, and then use the cycle buttons (see "Using the OSD buttons" on page 13) to switch between channel 1 and channel 2 on the SDI and HDMI outputs.

Note Switching between channel 1 and channel 2 is done glitch-free on SDI outputs only.

4 Select **SDI AND HDMI** or **HDMI ONLY**, and then use the cycle buttons (see "Using the OSD buttons" on page 13) to switch between the following output options on the SDI and/or HDMI output.

Remarks

- PsF input video signals are not supported on the HDMI output. For SDI outputs, PsF input video signals are only supported in bypass mode.

- You must have two input channels for the **3D**, **Anaglyph**, **50/50**, and **Difference** option settings to function properly.

- The **3D** output setting does not support 3G level A input signals.

- The channel flip and channel offset options in the **3D SETTINGS** menu (see "Specifying your 3D settings" on page 19) are also applied to the output when using any setting other than **SDI 1 bypass** or **SDI 2 bypass**.

– **SDI 1 bypass**   Outputs the video signal connected to input SDI 1 as is, without any processing. The MC-100 settings do not apply for this option.

– **SDI 2 bypass**   Outputs the video signal connected to input SDI 2 as is, without any processing. The MC-100 settings do not apply for this option.

– **Channel 1**   Outputs the video signal on channel 1 using the current MC-100 settings.

– **Channel 2**   Outputs the video signal on channel 2 using the current MC-100 settings.

– **3D**   Outputs the channel 1 and 2 input video signals as set in the **3D MODE** option in the **3D SETTINGS** menu. The channel flip and channel offset options are also applied to the output (see "Specifying your 3D settings" on page 19).

– **Anaglyph**   Channels 1 and 2 are superimposed using red for channel 1 and cyan for channel 2. This is useful when using anaglyph glasses to analyze the channel images. Since there are differences between anaglyph glasses, not all anaglyph glasses will produce the same effect when using the **Anaglyph** setting.

– **50/50**   Channels 1 and 2 are superimposed at 50% opacity.

– **Difference**   Superimposes channels 1 and 2 and subtracts the differences between the two images.

5 Select **HORIZONTAL IMAGE TRANSLATION** to change the horizontal offset for channel 1 and channel 2 simultaneously on the SDI and HDMI outputs. This is used primarily for correcting the parallax between corresponding points on the two channel images. The channel flip and vertical channel offset options in the **3D SETTINGS** menu (see "Specifying your 3D settings" on page 19) are also applied to the output. When in the Horizontal Image Translation selection mode, you can use the cycle buttons (see "Using the OSD buttons" on page 13) to adjust the horizontal offset for channels 1 and 2 simultaneously.

Saving option settings

The **SAVE SETTINGS** menu allows you to save the currently selected input, output, and 3D settings to one of four available DIP switches (DIP switches 5 to 8) so that you can quickly set the appropriate settings for a particular workflow by simply turning the corresponding DIP switch ON. See "Using the MC-100 DIP switches" on page 11 for more information. The **SAVE SETTINGS** menu also allows you to restore the settings for the MC-100 options back to factory defaults.
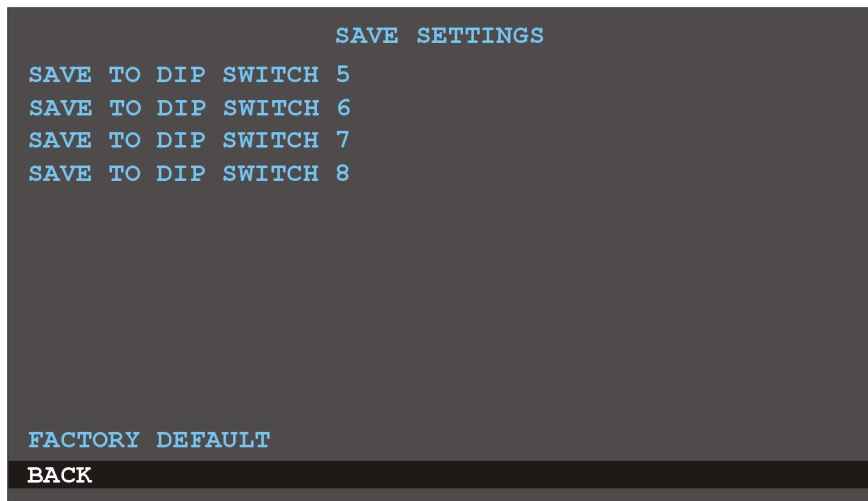
Note MC-100 can have only one user-defined preset loaded at any given time. This means that if a DIP switch associated with a user-defined preset is ON, you must turn it OFF before loading another preset.

⟹ **To save option settings to a DIP switch:**

  1 Access the Matrox MC-100 on-screen display (OSD) main menu.

  2 Select **SAVE SETTINGS** from the OSD main menu.

  3 Select the DIP switch to which you want to save the current MC-100 settings.

```
                     SAVE SETTINGS
SAVE TO DIP SWITCH 5
SAVE TO DIP SWITCH 6
SAVE TO DIP SWITCH 7
SAVE TO DIP SWITCH 8




FACTORY DEFAULT
BACK
```

Resetting the DIP switches to factory defaults

To restore the settings for the MC-100 options back to factory defaults, select **FACTORY DEFAULT** in the **SAVE SETTINGS** menu.

ⓘ **Important** This action cannot be undone.

Your notes

A

Matrox MC-100 Supported Output Formats

This appendix provides information on the output formats that are supported on Matrox MC-100.

Supported output formats when using input SDI 1 only

The following table lists the video formats that are supported on the SDI and HDMI outputs based on the MC-100 output settings (see "Specifying your output settings" on page 17) when using an input source on SDI 1 only.

✎ **Note** In order to view the selected video output format, the format must be supported by your SDI or HDMI display device. If the format is not supported, a purple screen is displayed and the on-screen display (OSD) is available if the appropriate DIP switch for the OSD has been set (see "Using the MC-100 DIP switches" on page 11).

Input source format		HDMI/SDI output								
SDI 1	SDI 2	SDI 1 bypass	SDI 2 bypass	Channel 1	Channel 2	3D Over/Under	3D Side-by-Side	3D Frame Packing[1]	Analysis	Multiplex[2]
NTSC	—	NTSC	—	—	—	—	—	—	—	—
PAL	—	PAL	—	—	—	—	—	—	—	—
1280×720p at 50 fps	—	1280×720p at 50 fps	—	1280×720p at 50 fps	—	—	—	—	—	—
1280×720p at 59.94 fps	—	1280×720p at 59.94 fps	—	1280×720p at 59.94 fps	—	—	—	—	—	—
1280×720p at 60 fps	—	1280×720p at 60 fps	—	1280×720p at 60 fps	—	—	—	—	—	—
1920×1080p at 23.98 fps	—	1920×1080p at 23.98 fps	—	1920×1080p at 23.98 fps	—	—	—	—	—	—
1920×1080p at 24 fps	—	1920×1080p at 24 fps	—	1920×1080p at 24 fps	—	—	—	—	—	—
1920×1080p at 25 fps	—	1920×1080p at 25 fps	—	1920×1080p at 25 fps	—	—	—	—	—	—
1920×1080p at 29.97 fps	—	1920×1080p at 29.97 fps	—	1920×1080p at 29.97 fps	—	—	—	—	—	—
1920×1080p at 30 fps	—	1920×1080p at 30 fps	—	1920×1080p at 30 fps	—	—	—	—	—	—
1920×1080i at 50 fps	—	1920×1080i at 50 fps	—	1920×1080i at 50 fps	—	—	—	—	—	—
1920×1080i at 59.94 fps	—	1920×1080i at 59.94 fps	—	1920×1080i at 59.94 fps	—	—	—	—	—	—
1920×1080i at 60 fps	—	1920×1080i at 60 fps	—	1920×1080i at 60 fps	—	—	—	—	—	—
1920×1080PsF at 23.98 fps	—	1920×1080PsF at 23.98 fps[2]	—	—	—	—	—	—	—	—
1920×1080PsF at 24 fps	—	1920×1080PsF at 24 fps[2]	—	—	—	—	—	—	—	—
1920×1080PsF at 25 fps	—	1920×1080PsF at 25 fps[2]	—	—	—	—	—	—	—	—
1920×1080PsF at 29.97 fps	—	1920×1080PsF at 29.97 fps[2]	—	—	—	—	—	—	—	—
1920×1080PsF at 30 fps	—	1920×1080PsF at 30 fps[2]	—	—	—	—	—	—	—	—

Appendix A, Matrox MC-100 Supported Output Formats

Input source format		HDMI/SDI output								
SDI 1	SDI 2	SDI 1 bypass	SDI 2 bypass	Channel 1	Channel 2	3D Over/Under	3D Side-by-Side	3D Frame Packing[1]	Analysis	Multiplex[2]
1920×1080p at 50 fps (3G level A)	—	1920×1080p at 50 fps (3G level A)	—	1920×1080p at 50 fps (3G level A)	—	—	—	—	—	—
1920×1080p at 59.94 fps (3G level A)	—	1920×1080p at 59.94 fps (3G level A)	—	1920×1080p at 59.94 fps (3G level A)	—	—	—	—	—	—
1920×1080p at 60 fps (3G level A)	—	1920×1080p at 60 fps (3G level A)	—	1920×1080p at 60 fps (3G level A)	—	—	—	—	—	—
1920×1080p at 50 fps (3G level B)	—	1920×1080p at 50 fps (3G level B)	—	1920×1080p at 25 fps	1920×1080p at 25 fps	1920×1080p at 25 fps	1920×1080p at 25 fps	1920×1080p at 50 fps	1920×1080p at 25 fps	2 1920×1080p at 25 fps (3G level B)
1920×1080p at 59.94 fps (3G level B)	—	1920×1080p at 59.94 fps (3G level B)	—	1920×1080p at 29.97 fps	1920×1080p at 29.97 fps	1920×1080p at 29.97 fps	1920×1080p at 29.97 fps	1920×1080p at 59.94 fps	1920×1080p at 29.97 fps	2 1920×1080p at 29.97 fps (3G level B)
1920×1080p at 60 fps (3G level B)	—	1920×1080p at 60 fps (3G level B)	—	1920×1080p at 30 fps	1920×1080p at 30 fps	1920×1080p at 30 fps	1920×1080p at 30 fps	1920×1080p at 60 fps	1920×1080p at 30 fps	2 1920×1080p at 30 fps (3G level B)

[1] Not supported on the SDI outputs.
[2] Not supported on the HDMI output.

Supported output formats when using input SDI 1 only

Supported output formats when using input SDI 2 only

The following table lists the video formats that are supported on the SDI and HDMI outputs based on the MC-100 output settings (see "Specifying your output settings" on page 17) when using an input source on SDI 2 only.

✎ **Note** In order to view the selected video output format, the format must be supported by your SDI or HDMI display device. If the format is not supported, a purple screen is displayed and the on-screen display (OSD) is available if the appropriate DIP switch for the OSD has been set (see "Using the MC-100 DIP switches" on page 11).

Input source format		HDMI/SDI output									
SDI 1	SDI 2	SDI 1 bypass	SDI 2 bypass	Channel 1	Channel 2	3D Over/Under	3D Side-by-Side	3D Frame Packing[1]	Analysis	Multiplex[2]
—	NTSC	—	NTSC	—	—	—	—	—	—	—
—	PAL	—	PAL	—	—	—	—	—	—	—
—	1280×720p at 50 fps	—	1280×720p at 50 fps	—	1280×720p at 50 fps	—	—	—	—	—
—	1280×720p at 59.94 fps	—	1280×720p at 59.94 fps	—	1280×720p at 59.94 fps	—	—	—	—	—
—	1280×720p at 60 fps	—	1280×720p at 60 fps	—	1280×720p at 60 fps	—	—	—	—	—
—	1920×1080p at 23.98 fps	—	1920×1080p at 23.98 fps	—	1920×1080p at 23.98 fps	—	—	—	—	—
—	1920×1080p at 24 fps	—	1920×1080p at 24 fps	—	1920×1080p at 24 fps	—	—	—	—	—
—	1920×1080p at 25 fps	—	1920×1080p at 25 fps	—	1920×1080p at 25 fps	—	—	—	—	—
—	1920×1080p at 29.97 fps	—	1920×1080p at 29.97 fps	—	1920×1080p at 29.97 fps	—	—	—	—	—
—	1920×1080p at 30 fps	—	1920×1080p at 30 fps	—	1920×1080p at 30 fps	—	—	—	—	—
—	1920×1080i at 50 fps	—	1920×1080i at 50 fps	—	1920×1080i at 50 fps	—	—	—	—	—
—	1920×1080i at 59.94 fps	—	1920×1080i at 59.94 fps	—	1920×1080i at 59.94 fps	—	—	—	—	—
—	1920×1080i at 60 fps	—	1920×1080i at 60 fps	—	1920×1080i at 60 fps	—	—	—	—	—
—	1920×1080PsF at 23.98 fps	—	1920×1080PsF at 23.98 fps[2]	—	—	—	—	—	—	—
—	1920×1080PsF at 24 fps	—	1920×1080PsF at 24 fps[2]	—	—	—	—	—	—	—
—	1920×1080PsF at 25 fps	—	1920×1080PsF at 25 fps[2]	—	—	—	—	—	—	—
—	1920×1080PsF at 29.97 fps	—	1920×1080PsF at 29.97 fps[2]	—	—	—	—	—	—	—
—	1920×1080PsF at 30 fps	—	1920×1080PsF at 30 fps[2]	—	—	—	—	—	—	—

Appendix A, Matrox MC-100 Supported Output Formats

Input source format		HDMI/SDI output								
SDI 1	SDI 2	SDI 1 bypass	SDI 2 bypass	Channel 1	Channel 2	3D Over/Under	3D Side-by-Side	3D Frame Packing[1]	Analysis	Multiplex[2]
—	1920×1080p at 50 fps (3G level A)	—	1920×1080p at 50 fps (3G level A)	—	1920×1080p at 50 fps (3G level A)	—	—	—	—	—
—	1920×1080p at 59.94 fps (3G level A)	—	1920×1080p at 59.94 fps (3G level A)	—	1920×1080p at 59.94 fps (3G level A)	—	—	—	—	—
—	1920×1080p at 60 fps (3G level A)	—	1920×1080p at 60 fps (3G level A)	—	1920×1080p at 60 fps (3G level A)	—	—	—	—	—
—	1920×1080p at 50 fps (3G level B)	—	1920×1080p at 50 fps (3G level B)	1920×1080p at 25 fps	1920×1080p at 25 fps	1920×1080p at 25 fps	1920×1080p at 25 fps	1920×1080p at 50 fps	1920×1080p at 25 fps	2 1920×1080p at 25 fps (3G level B)
—	1920×1080p at 59.94 fps (3G level B)	—	1920×1080p at 59.94 fps (3G level B)	1920×1080p at 29.97 fps	1920×1080p at 29.97 fps	1920×1080p at 29.97 fps	1920×1080p at 29.97 fps	1920×1080p at 59.94 fps	1920×1080p at 29.97 fps	2 1920×1080p at 29.97 fps (3G level B)
—	1920×1080p at 60 fps (3G level B)	—	1920×1080p at 60 fps (3G level B)	1920×1080p at 30 fps	1920×1080p at 30 fps	1920×1080p at 30 fps	1920×1080p at 30 fps	1920×1080p at 60 fps	1920×1080p at 30 fps	2 1920×1080p at 30 fps (3G level B)

[1] Not supported on the SDI outputs.
[2] Not supported on the HDMI output.

Supported output formats when using input SDI 2 only

Supported output formats when using inputs SDI 1 and SDI 2

The following table lists the video formats that are supported on the SDI and HDMI outputs based on the MC-100 output settings (see "Specifying your output settings" on page 17) when using an input source on both SDI 1 and SDI 2.

📝 **Note** In order to view the selected video output format, the format must be supported by your SDI or HDMI display device. If the format is not supported, a purple screen is displayed and the on-screen display (OSD) is available if the appropriate DIP switch for the OSD has been set (see "Using the MC-100 DIP switches" on page 11).

Input source format		HDMI/SDI output								
SDI 1	**SDI 2**	**SDI 1 bypass**	**SDI 2 bypass**	**Channel 1**	**Channel 2**	**3D Over/Under**	**3D Side-by-Side**	**3D Frame Packing[1]**	**Analysis**	**Multiplex[2]**
NTSC	NTSC	NTSC	NTSC	—	—	—	—	—	—	—
PAL	PAL	PAL	PAL	—	—	—	—	—	—	—
1280×720p at 50 fps	1280×720p at 50 fps	1280×720p at 50 fps	1280×720p at 50 fps	1280×720p at 50 fps	1280×720p at 50 fps	1280×720p at 50 fps	1280×720p at 50 fps	1280×720p at 50 fps	1280×720p at 50 fps	2 1280×720p at 50 fps (3G level B)
1280×720p at 59.94 fps	1280×720p at 59.94 fps	1280×720p at 59.94 fps	1280×720p at 59.94 fps	1280×720p at 59.94 fps	1280×720p at 59.94 fps	1280×720p at 59.94 fps	1280×720p at 59.94 fps	1280×720p at 59.94 fps	1280×720p at 59.94 fps	2 1280×720p at 59.94 fps (3G level B)
1280×720p at 60 fps	1280×720p at 60 fps	1280×720p at 60 fps	1280×720p at 60 fps	1280×720p at 60 fps	1280×720p at 60 fps	1280×720p at 60 fps	1280×720p at 60 fps	1280×720p at 60 fps	1280×720p at 60 fps	2 1280×720p at 60 fps (3G level B)
1920×1080p at 23.98 fps	1920×1080p at 23.98 fps	1920×1080p at 23.98 fps	1920×1080p at 23.98 fps	1920×1080p at 23.98 fps	1920×1080p at 23.98 fps	1920×1080p at 23.98 fps	1920×1080p at 23.98 fps	1920×1080p at 23.98 fps	1920×1080p at 23.98 fps	2 1920×1080p at 23.98 fps (3G level B)
1920×1080p at 24 fps	1920×1080p at 24 fps	1920×1080p at 24 fps	1920×1080p at 24 fps	1920×1080p at 24 fps	1920×1080p at 24 fps	1920×1080p at 24 fps	1920×1080p at 24 fps	1920×1080p at 24 fps	1920×1080p at 24 fps	2 1920×1080p at 24 fps (3G level B)
1920×1080p at 25 fps	1920×1080p at 25 fps	1920×1080p at 25 fps	1920×1080p at 25 fps	1920×1080p at 25 fps	1920×1080p at 25 fps	1920×1080p at 25 fps	1920×1080p at 25 fps	1920×1080p at 25 fps	1920×1080p at 25 fps	2 1920×1080p at 25 fps (3G level B)
1920×1080p at 29.97 fps	1920×1080p at 29.97 fps	1920×1080p at 29.97 fps	1920×1080p at 29.97 fps	1920×1080p at 29.97 fps	1920×1080p at 29.97 fps	1920×1080p at 29.97 fps	1920×1080p at 29.97 fps	1920×1080p at 29.97 fps	1920×1080p at 29.97 fps	2 1920×1080p at 29.97 fps (3G level B)
1920×1080p at 30 fps	1920×1080p at 30 fps	1920×1080p at 30 fps	1920×1080p at 30 fps	1920×1080p at 30 fps	1920×1080p at 30 fps	1920×1080p at 30 fps	1920×1080p at 30 fps	1920×1080p at 30 fps	1920×1080p at 30 fps	2 1920×1080p at 30 fps (3G level B)
1920×1080i at 50 fps	1920×1080i at 50 fps	1920×1080i at 50 fps	1920×1080i at 50 fps	1920×1080i at 50 fps	1920×1080i at 50 fps	1920×1080i at 50 fps	1920×1080i at 50 fps	1920×1080i at 50 fps	1920×1080i at 50 fps	2 1920×1080i at 50 fps (3G level B)
1920×1080i at 59.94 fps	1920×1080i at 59.94 fps	1920×1080i at 59.94 fps	1920×1080i at 59.94 fps	1920×1080i at 59.94 fps	1920×1080i at 59.94 fps	1920×1080i at 59.94 fps	1920×1080i at 59.94 fps	1920×1080i at 59.94 fps	1920×1080i at 59.94 fps	2 1920×1080i at 59.94 fps (3G level B)
1920×1080i at 60 fps	1920×1080i at 60 fps	1920×1080i at 60 fps	1920×1080i at 60 fps	1920×1080i at 60 fps	1920×1080i at 60 fps	1920×1080i at 60 fps	1920×1080i at 60 fps	1920×1080i at 60 fps	1920×1080i at 60 fps	2 1920×1080i at 60 fps (3G level B)
1920×1080PsF at 23.98 fps	1920×1080PsF at 23.98 fps	1920×1080PsF at 23.98 fps[2]	1920×1080PsF at 23.98 fps[2]	—	—	—	—	—	—	—

Appendix A, Matrox MC-100 Supported Output Formats

Input source format		HDMI/SDI output								
SDI 1	**SDI 2**	**SDI 1 bypass**	**SDI 2 bypass**	**Channel 1**	**Channel 2**	**3D Over/Under**	**3D Side-by-Side**	**3D Frame Packing[1]**	**Analysis**	**Multiplex[2]**
1920×1080PsF at 24 fps	1920×1080PsF at 24 fps	1920×1080PsF at 24 fps[2]	1920×1080PsF at 24 fps[2]	—	—	—	—	—	—	—
1920×1080PsF at 25 fps	1920×1080PsF at 25 fps	1920×1080PsF at 25 fps[2]	1920×1080PsF at 25 fps[2]	—	—	—	—	—	—	—
1920×1080PsF at 29.97 fps	1920×1080PsF at 29.97 fps	1920×1080PsF at 29.97 fps[2]	1920×1080PsF at 29.97 fps[2]	—	—	—	—	—	—	—
1920×1080PsF at 30 fps	1920×1080PsF at 30 fps	1920×1080PsF at 30 fps[2]	1920×1080PsF at 30 fps[2]	—	—	—	—	—	—	—
1920×1080p at 50 fps (3G level A)	1920×1080p at 50 fps (3G level A)	1920×1080p at 50 fps (3G level A)	1920×1080p at 50 fps (3G level A)	1920×1080p at 50 fps (3G level A)	1920×1080p at 50 fps (3G level A)	—	—	—	—	—
1920×1080p at 59.94 fps (3G level A)	1920×1080p at 59.94 fps (3G level A)	1920×1080p at 59.94 fps (3G level A)	1920×1080p at 59.94 fps (3G level A)	1920×1080p at 59.94 fps (3G level A)	1920×1080p at 59.94 fps (3G level A)	—	—	—	—	—
1920×1080p at 60 fps (3G level A)	1920×1080p at 60 fps (3G level A)	1920×1080p at 60 fps (3G level A)	1920×1080p at 60 fps (3G level A)	1920×1080p at 60 fps (3G level A)	1920×1080p at 60 fps (3G level A)	—	—	—	—	—
1920×1080p at 50 fps (3G level B)	1920×1080p at 50 fps (3G level B)	1920×1080p at 50 fps (3G level B)	1920×1080p at 50 fps (3G level B)	1920×1080p at 25 fps	1920×1080p at 25 fps	1920×1080p at 25 fps	1920×1080p at 25 fps	1920×1080p at 50 fps	1920×1080p at 25 fps	2 1920×1080p at 25 fps (3G level B)
1920×1080p at 59.94 fps (3G level B)	1920×1080p at 59.94 fps (3G level B)	1920×1080p at 59.94 fps (3G level B)	1920×1080p at 59.94 fps (3G level B)	1920×1080p at 29.97 fps	1920×1080p at 29.97 fps	1920×1080p at 29.97 fps	1920×1080p at 29.97 fps	1920×1080p at 59.94 fps	1920×1080p at 29.97 fps	2 1920×1080p at 29.97 fps (3G level B)
1920×1080p at 60 fps (3G level B)	1920×1080p at 60 fps (3G level B)	1920×1080p at 60 fps (3G level B)	1920×1080p at 60 fps (3G level B)	1920×1080p at 30 fps	1920×1080p at 30 fps	1920×1080p at 30 fps	1920×1080p at 30 fps	1920×1080p at 60 fps	1920×1080p at 30 fps	2 1920×1080p at 30 fps (3G level B)
Dual link 1920×1080p at 50 fps (4:2:2)		Dual link 1920×1080p at 50 fps (4:2:2)		1920×1080i at 50 fps	1920×1080i at 50 fps	—	—	—	—	1920×1080p at 50 fps
Dual link 1920×1080p at 59.94 fps (4:2:2)		Dual link 1920×1080p at 59.94 fps (4:2:2)		1920×1080i at 59.94 fps	1920×1080i at 59.94 fps	—	—	—	—	1920×1080p at 59.94 fps
Dual link 1920×1080p at 60 fps (4:2:2)		Dual link 1920×1080p at 60 fps (4:2:2)		1920×1080i at 60 fps	1920×1080i at 60 fps	—	—	—	—	1920×1080p at 60 fps

[1] Not supported on the SDI outputs.
[2] Not supported on the HDMI output.

Supported output formats when using inputs SDI 1 and SDI 2

Your notes

B

Matrox MC-100 Specifications

This appendix provides specifications for the Matrox MC-100.

Matrox MC-100 specifications

General

- **Video formats**   NTSC, PAL, 720p, 1080p/i/PsF
- **Regulatory compliance**
  - FCC Class B, CE Mark Class B, ACMA Class B
  - RoHS Directive 2002/95/EC
- **Dimensions**
  - Length   125 mm (4.92 in)
  - Width   118 mm (4.65 in)
  - Height   26 mm (1.02 in)
- **External AC/DC adapter**
  - Input: 100-240 VAC 50-60 Hz
  - Output: +5V DC, 3A max
  - Dimensions: L 78 mm × W 46 mm × H 36 mm (3.1" × 1.8" × 1.4")
- **Total power consumption**   12 watts

Video

- **SDI input and output**
  - Compliant with SMPTE-259M/292M/372M/424M/425M
  - SDI support of YUV 4:2:2 8-bit/10-bit
  - SDI inputs with loss-of-signal switcher
  - Automatic SDI output selection between 3G/HD/SD-SDI dependent on input signal
  - 16 channels of embedded audio
  - Two BNC SDI connectors (75 Ω), terminated
- **HDMI output**
  - HDMI support of YUV 4:2:2 and RGB
  - Eight channels of embedded audio (selectable between the first and second set of four pairs)
  - Standard Type A HDMI connector (19 pins)
- **Display formats**
  - 3D display formats on SDI: Over/Under and Side-by-Side
  - 3D display formats on HDMI: Over/Under, Side-by-Side, and Frame Packing
  - Analysis mode display: Anaglyph, 50/50, and Difference

Environmental specifications

- Minimum/maximum operating temperature: 0 to 40º C
- Minimum/maximum storage temperature: –40 to 75º C
- Maximum altitude for operation: 3,000 meters
- Maximum altitude for transport: 12,000 meters
- Operating humidity: 20 to 80% relative humidity (non-condensing)
- Storage humidity: 5 to 95% relative humidity (non-condensing)

Your notes

C
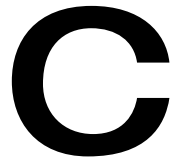
Matrox Customer Support

This appendix explains how you can register your Matrox product and obtain customer support.

How to get Matrox customer support

If you have a problem that you're unable to solve by referring to the documentation for your Matrox product, please contact your Matrox representative. He or she should be able to help you quickly correct any installation or system configuration problem.

If your representative is unable to solve your problem, contact Matrox for further information and assistance.

Registration

You can register your Matrox product in the Matrox Support section of our website at www.matrox.com/video/support.

(i) **Important**   Only registered users are entitled to customer support, software updates, special promotional offers, and access to our user forum.

Keep up to date with our website

In addition to registering your Matrox product, our website offers you up-to-the-minute information about Matrox products and software updates. Be sure to place our site in your favorites or bookmarks: www.matrox.com/video/support.

Contacting us

Matrox is proud to offer worldwide customer support. Please use the contact information for your Matrox product and area as provided on our website at www.matrox.com/video/support.

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Your notes

Compliance Statements

USA
FCC Compliance Statement
Remark for the Matrox hardware products supported by this guide These devices have been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment causes harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: • Reorient or relocate the receiving antenna • Increase the separation between the equipment and receiver • Connect the equipment into an outlet on a circuit different from that to which the receiver is connected • Consult the dealer or an experienced radio/TV technician for help.

WARNING Changes or modifications to this unit not expressly approved by the party responsible for the compliance could void the user's authority to operate this equipment. The use of shielded cables for connection of equipment and other peripherals to the card is required to meet FCC requirements.

Declaration of conformity of a Class B digital device according to the FCC rules
We, the Responsible Party Matrox, 625 State Route 3, Unit B, Plattsburgh, NY 12901-6530 • Telephone: (514) 822-6000 (ext. 2026) • Attention: Conformity Group

Declaration The Matrox hardware products supported by this guide comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) these devices may not cause harmful interference, and (2) these devices must accept any interference received, including interference that may cause undesired operation. Any question regarding this declaration should be forwarded to the above coordinates.

Canada
(English) Industry Canada Compliance Statement
CAN ICES-3 (B)/NMB-3 (B)
Remark for the Matrox hardware products supported by this guide These digital devices do not exceed the Class B limits for radio noise emission from digital apparatus devices set out in the Radio Interference Regulation of Industry Canada.

(Français) Conformité avec les exigences du ministère de l'Industrie Canada
CAN ICES-3 (B)/NMB-3 (B)
Remarque sur les produits matériels Matrox couverts par ce guide Ces appareils numériques n'émettent aucun bruit radioélectrique dépassant les limites applicables aux appareils numériques de Classe B prescrites dans le Règlement sur le brouillage radioélectrique édicté par Industrie Canada.

Japan
VCCI Compliance Statement
Remark for the Matrox hardware products supported by this guide These are Class B products based on the standard of the Voluntary Control Council for Interference from Information Technology Equipment (VCCI). If these are used near a radio or television receiver in a domestic environment, they may cause radio interference. Install and use the equipment according to instructions in the manual.

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＢ情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。
取扱説明書に従って正しい取り扱いをして下さい。

Europe
(English) European user's information – Declaration of Conformity
Remark for the Matrox hardware products supported by this guide These devices comply with EC Directive 2006/95/EC for a Class B digital device. They have been tested and found to comply with EN55022/CISPR22 and EN55024/CISPR24. In a domestic environment these products may cause radio interference in which case the user may be required to take adequate measures. To meet EC requirements, shielded cables must be used to connect equipment and other peripherals to the card. These products have been tested in a typical class B compliant host system. It is assumed that these products will also achieve compliance in any class B compliant system.

(Français) Informations aux utilisateurs Européens – Déclaration de conformité
Remarque sur les produits matériels Matrox couverts par ce guide Ces unités sont conformes à la directive communautaire 2006/95/EC pour les unités numériques de classe B. Les tests effectués ont prouvé qu'elles sont conformes aux normes EN55022/CISPR22 et EN55024/CISPR24. Le fonctionnement de ces produits dans un environnement résidentiel peut causer des interférences radio, dans ce cas l'utilisateur peut être amené à prendre les mesures appropriées. Pour respecter les impératifs communautaires, les câbles de connexion entre l'équipement ou autres périphériques et la carte doivent être blindés. Ces produits ont été testés dans un système hôte typique compatible classe B. On suppose qu'ils présenteront la même compatibilité dans tout système compatible classe B.

(Deutsch) Information für europäische Anwender – Konformitätserklärung
Anmerkung für die Matrox Hardware-Produktunterstützung durch dieses Handbuch Diese Geräte entsprechen EC Direktive 2006/95/EC für ein digitales Gerät Klasse B. Sie wurden getestet und entsprechen demnach EN55022/CISPR22 und EN55024/CISPR24. In einer Wohnumgebung können diese Produkte Funkinterferenzen erzeugen, und der Benutzer kann genötigt sein, entsprechende Maßnahmen zu ergreifen. Um EG-Anforderungen zu entsprechen, müssen zum Anschließen des ausrüstung und anderer Peripheriegeräte an die Karte abgeschirmte Kabel verwendet werden. Diese Produkt wurden in einem typischen, der Klasse B entsprechenden, Host-System getestet. Es wird davon ausgegangen, daß diese Produkte auch in jedem Klasse B entsprechenden System entsprechend funktionieren.

(Italiano) Informazioni per gli utenti europei – Dichiarazione di conformità
Nota per i prodotti hardware Matrox supportati da questa guida Questi dispositivi sono conformi alla direttiva CEE 2006/95/EC relativamente ai dispositivi digitali di Classe B. Sono stati provati e sono risultati conformi alle norme EN55022/CISPR22 e EN55024/CISPR24. In un ambiente domestico, questi prodotti possono causare radiointerferenze, nel qual caso all'utente potrebbe venire richiesto di prendere le misure adeguate. Per soddisfare i requisiti CEE, l'apparecchiatura e le altre periferiche vanno collegati alla scheda grafica con cavi schermati. Questi prodotti sono stati provati in un tipico sistema host conforme alla classe B. Inoltre, si dà per scontato che questi prodotti acquisiranno la conformità in qualsiasi sistema conforme alla classe B.

(Español) Información para usuarios europeos – Declaración de conformidad
Observación referente a los productos de hardware de Matrox apoyados por este manual Estos dispositivos cumplen con la directiva de la CE 2006/95/EC para dispositivos digitales de Clase B. Dichos dispositivos han sido sometidos a prueba y se ha comprobado que cumplen con las normas EN55022/CISPR22 y EN55024/CISPR24. En entornos residenciales, estos productos pueden causar interferencias en las comunicaciones por radio; en tal caso el usuario deberá adoptar las medidas adecuadas. Para satisfacer las disposiciones de la CE, deberán utilizarse cables apantallados para conectar el equipo y demás periféricos a la tarjeta. Estos productos han sido sometidos a prueba en un típico sistema anfitrión que responde a los requisitos de la clase B. Se supone que estos productos cumplirán también con las normas en cualquier sistema que responda a los requisitos de la clase B.

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