

XPression Video I/O Card and 3rd Party Driver Specifications

This document lists the specifications for the supported video I/O cards and the 3rd party drivers for the various video I/O cards supported by the XPression systems. It contains the following sections:

- I/O Specifications
- IP I/O Specifications
- 3rd Party Drivers to Support XPression Video I/O Cards

Please feel free to contact us with questions at solutions@rossvideo.com.

I/O Specifications

| Vendor | HD-SDI | Audio I/O | AES | LTC I/O | Maximum XPression F/K Output Pairs | XPression Video Inputs |
|------------------------------|---|--------------------|------------------------------|-------------|---|------------------------|
| Matrox DSXLE4 ¹ | 8 bi-directional + reference | 16 embedded HD SDI | 8 in/ 8 out ² | RP-188 only | 4 (configurable) One 4x3G F/K pair for UHD | Configurable |
| Matrox XMIO2 12 ¹ | 1 in/2 out + reference | 16 embedded HD SDI | 8 in/ 16 out ² | RP-188 only | 1 | 1 |
| Matrox XMIO2 22 ¹ | 2 in/4 out + reference | 16 embedded HD SDI | 8 in/ 16 out ² | RP-188 only | 2 | 2 |
| Matrox XMIO2 24 ¹ | 4 in/4 out + reference | 16 embedded HD SDI | 8 in/ 16 out ² | RP-188 only | 2 | 4 |
| Matrox XMIO3 ³ | 8 bi-directional + reference | 16 embedded HD SDI | 8 in/ 8 out ² | RP-188 only | 4 (configurable) One 4x3G F/K pair for UHD | Configurable |
| Matrox XMIO3 12G | 2 in / 2 out (12G) + 2 out (3G) + reference | 16 embedded HD SDI | 8 in/ 8 out ² | RP-188 only | 1 12G F/K + 1 3G F/K | 2 |
| AJA IoXT ⁴ | 2 in/2 out + reference | 16 embedded HD SDI | — | RP-188 only | 1 | 2 |
| AJA Io4K ^{3 4} | 4 bi-directional + reference | 16 embedded HD SDI | — | RP-188 only | 2 (configurable) | Configurable |
| AJA Corvid22 ⁵ | 2 in/2 out + reference | 16 embedded HD SDI | — | RP-188 only | 1 | 2 |

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| Vendor | HD-SDI | Audio I/O | AES | LTC I/O | Maximum XPression F/K Output Pairs | XPression Video Inputs |
|---|--------------------------------------|----------------------------------|------------------------------|---------------|---|------------------------|
| AJA Corvid24 ⁶ | 4 bi-directional + reference | 16 embedded HD SDI | — | RP-188 only | 2 (configurable) | Configurable |
| AJA Corvid88 ⁷ | 8 bi-directional + reference | 16 embedded HD SDI | — | RP-188 only | 4 (configurable) One 4x3G F/K pair for UHD | Configurable |
| AJA Kona 3G ⁵ | 2 in/2 out + reference | 16 embedded HD SDI | 8 in/ 16 out ² | RP-188 only | 1 | 2 |
| Blackmagic 4K Extreme ^{5 8} | 2 in/2 out | 16 embedded HD SDI | — | Not supported | 1 | 2 |
| Blackmagic Quad ^{5 9} | 8 bi-directional | 16 embedded HD SDI | — | Not supported | 4 (configurable) | Configurable |
| Blackmagic Duo ^{5 9} | 4 bi-directional | 16 embedded HD SDI | — | Not supported | 2 (configurable) | Configurable |
| Blackmagic UltraStudio HD Mini ⁹ | 1 in/2 out + reference | 16 embedded HD SDI | — | Not supported | 1 | 1 |
| Bluefish444 Supernova ^{5 10} | 4 bi-directional + reference | 16 embedded HD SDI | — | Not supported | 2 (configurable) | Configurable |
| Bluefish444 Supernova+ ^{5 11} | 4 bi-directional + reference | 16 embedded HD SDI | — | Not supported | 2 (configurable) | Configurable |
| Bluefish444 Epoch 4K Neutron ⁶ | 1 in/2 out + reference | 16 embedded HD SDI | — | Not supported | 1 | 1 |
| Ross Graphite | 4 in (internal)/ 4 out (internal) | 16 embedded HD SDI ¹² | — | Not supported | 2 (configurable) | Configurable |

1. XPression Studio/BlueBox single and dual channel variants.
2. Per video stream, with no audio down the alpha channels unless using the FILL2 option.
3. User supplied. Not tested by Ross.
4. XPression GO!.
5. XPression Prime.
6. Supported for user supplied platforms for XPression Studio, Prime, and BlueBox.
7. Used for 4K support.
8. No hardware framebuffers. Cannot regulate frame accuracy.
9. XPression GO! Mini.
10. Full length card.
11. Shorter card. Fifth port is “copy” of port 2 output.
12. XPression system specs when using Graphite; RAVE handles all other audio I/O.

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IP I/O Specifications

| Vendor | Supported SMPTE Protocol | I/O | Audio I/O | LTC I/O | Maximum XPression F/K Output Pairs | XPression Video Inputs |
|-------------------------------|------------------------------|---|---|-------------|------------------------------------|---------------------------------|
| Matrox DSXLE4L/E | SMPTE 2022-6/7 SMPTE 2110 | 2 SFP modules for 4 input streams and 4 output streams | 16 embedded (2022-6) or 8 AES-67 (2110) | RP-188 only | Maximum 2 | Maximum 4 |
| Matrox DSXLE4L/E4 | SMPTE 2022-6/7 SMPTE 2110 | 2 SFP modules for a maximum of 4 I/O | 16 embedded (2022-6) or 8 AES-67 (2110) | RP-188 only | Maximum 2 | Maximum 4 (with 0 outputs) |
| Matrox XMIO3L/E ¹ | SMPTE 2022-6/7 SMPTE 2110 | 2 SFP modules for 4 input streams and 4 output streams | 16 embedded (2022-6) or 8 AES-67 (2110) | RP-188 only | Maximum 2 | Maximum 4 |
| Matrox XMIO3L/E4 ¹ | SMPTE 2022-6/7 SMPTE 2110 | 2 SFP modules for a maximum of 4 I/O | 16 embedded (2022-6) or 8 AES-67 (2110) | RP-188 only | Maximum 2 | Maximum 4 (with 0 outputs) |
| AJA Kona IP | SMPTE 2022-6/7 | 2 SFP modules for 4 input streams and 4 output streams (for a maximum of 4 framebuffers ²) + 1 HDMI out | 16 embedded HD SDI | RP-188 only | Maximum 2 | Maximum 4 (with 0 output pairs) |

1. User-supplied. Not tested by Ross.
2. Maximum of 4 framebuffers, where a single framebuffer is 1 fill/key, or 1 fill, or 1 internal keyer, or 1 input. For example, a configuration of 2 fill/key output streams + 2 inputs (4 output streams + 2 input streams) makes use of all 4 available framebuffers.

3rd Party Drivers to Support XPression Video I/O Cards

| Vendor | XPression V7.0 | XPression V8.0 | XPression V8.5 | XPression V9.0 (and higher) |
|------------------|----------------|----------------|-------------------------|-----------------------------|
| Matrox DSXLE4 | — | 9.9.1.23067 | 9.9.1.23067 | 9.9.1.23067 |
| Matrox DSXLE4L/E | — | 9.9.1.23067 | 9.9.1.23067 | 10.0.100 |
| Matrox XMIO2 12 | 9.4.2.9297 | 9.4.2.9297 | 9.4.2.9297 ¹ | 9.4.2.9297 ¹ |
| Matrox XMIO2 22 | 9.4.2.9297 | 9.4.2.9297 | 9.4.2.9297 ¹ | 9.4.2.9297 ¹ |
| Matrox XMIO2 24 | 9.4.2.9297 | 9.4.2.9297 | 9.4.2.9297 ¹ | 9.4.2.9297 ¹ |
| Matrox XMIO3 | — | 9.9.1.23067 | 9.9.1.23067 | 9.9.1.23067 |
| Matrox XMIO3 12G | — | 9.9.1.23067 | 9.9.1.23067 | 9.9.1.23067 |

XPression

| Vendor | XPression V7.0 | XPression V8.0 | XPression V8.5 | XPression V9.0 (and higher) |
|--------------------------------|--|--------------------------------------|---|---|
| AJA IoXT | 12.5.1 10.3.5.25 (for AJA legacy) | 12.5.7 10.3.5.25 (for AJA legacy) | 12.5.7 ² 10.3.5.25 (for AJA legacy) | 12.5.7 ² 10.3.5.25 (for AJA legacy) |
| AJA Io4K | 12.5.1 | 12.5.7 | 12.5.7 ² | 12.5.7 ² |
| AJA Corvid22 | 12.3.7.85 and 12.5.1 10.3.5.25 (for AJA legacy) | 12.5.7 10.3.5.25 (for AJA legacy) | 12.5.7 ² 10.3.5.25 (for AJA legacy) | 12.5.7 ² 10.3.5.25 (for AJA legacy) |
| AJA Corvid24 | 12.3.7.85 and 12.5.1 10.3.5.25 (for AJA legacy) | 12.5.7 10.3.5.25 (for AJA legacy) | 12.5.7 ² 10.3.5.25 (for AJA legacy) | 12.5.7 ² 10.3.5.25 (for AJA legacy) |
| AJA Corvid88 | 12.3.7.85 and 12.5.1 | 12.5.7 | 12.5.7 ² | 12.5.7 ² |
| AJA Kona 3G | 12.3.7.85 and 12.5.1 10.3.5.25 (for AJA legacy) | 12.5.7 10.3.5.25 (for AJA legacy) | 12.5.7 ² 10.3.5.25 (for AJA legacy) | 12.5.7 ² 10.3.5.25 (for AJA legacy) |
| AJA Kona IP | 12.5.1 | 12.5.7 | 12.5.7 ² | 12.5.7 ² |
| Blackmagic 4K Extreme | 10.9.7 | 10.9.7 | 10.9.7 ³ | 10.9.7 ³ |
| Blackmagic Quad | 9.5.3 | 9.5.3 | 9.5.3 (for Blackmagic legacy) | 9.5.3 (for Blackmagic legacy) |
| Blackmagic Duo | 9.5.3 | 9.5.3 | 9.5.3 (for Blackmagic legacy) | 9.5.3 (for Blackmagic legacy) |
| Blackmagic UltraStudio HD Mini | 10.9.7 | 10.9.7 | 10.9.7 ³ | 10.9.7 ³ |
| Bluefish444 Supernova | 5.10.2.9 | 5.10.2.9 | 5.11.0.55 ⁴ | 5.11.0.55 ⁴ |
| Bluefish444 Supernova+ | 5.10.2.9 | 5.10.2.9 | 5.11.0.55 ⁴ | 5.11.0.55 ⁴ |
| Bluefish444 Epoch 4K Neutron | — | — | 5.11.0.55 ⁴ | 5.11.0.55 ⁴ |

1. If using Matrox XMIO2 and upgrading to XPression 64-bit, Matrox driver 9.4.2.9297 must be installed.
2. If using an AJA card and upgrading to XPression 64-bit, AJA driver 12.5.7 must be installed.
3. If using a Blackmagic card and upgrading to XPression 64-bit, Blackmagic driver 10.9.7 must be installed.
4. If using a Bluefish card and upgrading to XPression 64-bit, Bluefish driver 5.11.0.55 must be installed.

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