Specifications

Specifications are for CUSTOMPRO-HUB modular chassis only

Audio Input Connections: 8x 3.5mm stereo jack

RS-232 serial port: 1x DB-9, female, 8x 3 pin Phoenix

TCP/IP Control: 1x RJ45, female

Rack-Mountable: 2U rack height, rack ears included

Casing Dimensions (W x H x D): 440mm x 283mm x 87mm, without feet

Dimensions (W x D x H): 440mm x 291mm x 94mm, with feet

Shipping Weight: 5.5kg

Operating Temperature: 32°F to 104°F (0°C to 40°C)

Storage Temperature: -4°F to 140°F (-20°C to 60°C)

Power Supply: 1x 24V/8A DC

Package Contents

- 1 x CUSTOMPRO-HUB
- 1 x Rack mounting kit
- 1 x 24V/8A power supply
- 1 x Remote control
- 1 x Quick reference guide

Note: PRO Matrix input/output cards are sold separately

Pro Matrix Solution Modular options

Custom Pro Chassis	
CUSTOMPRO-HUB	Custom Pro Matrix Hub

| Custom Pro Feature Boards	
PRO-8IR	8-Way IR Control Board
PRO-8RS232	8-Way RS-232 Control Board
PRO-8AB	8-Way Audio Breakout Board
PRO-8ABV	8-Way Audio Breakout Board with Volume Control

Custom Pro Video Input Boards	
PRO-IN2H	2 Input HDMI Board
PRO-IN4H	4 Input HDMI Board
PRO-IN2H2V	4 Input HDMI 2.0 & VGA Board
PRO-IN2HAB	2 Input HDMI Board with Audio Breakout
PRO-IN4HAB	4 Input HDMI Board with Audio Breakout

Custom Pro Video Output Boards	
PRO-OUT2H	2 Output HDMI Board
PRO-OUT4H	4 Output HDMI Board
PRO-OUT2TL	2 Output HDBaseT™ Lite Board (70m)
PRO-OUT4TL	4 Output HDBaseT™ Lite Board (70m)
PRO-OUT4TLS	4 Output HDBaseT™ Lite / HDMI Board (70m)
PRO-OUT2H-V2	2 Output HDMI 2.0 Board
PRO-OUT4H-V2	4 Output HDMI 2.0 Board
PRO-OUT2TL-V2	2 Output HDBaseT™ Lite CSC Board (70m)
PRO-OUT4TL-V2	4 Output HDBaseT™ Lite CSC Board (70m)
PRO-OUT4TLS-V2	4 Output Dual HDMI 2.0/HDBaseT™ Lite CSC Board (70m)
PRO-OUT2TCS	2 Output HDBaseT™ CSC Board (100m)
PRO-OUT4TCS	4 Output HDBaseT™ CSC Board (100m)
PRO-OUT4HTCS	4 Output Dual HDMI 2.0/HDBaseT™ CSC Board (100m)

For the full Blustream ProMatrix User Manual please visit the download area of our website www.blustream.co.uk

Pro Matrix Solution

Quick Reference Guide

BLUSTREAM→

Custom Pro 4K UHD Video Matrix

| 1 | 2 | 3/‹ | 4/∧ | ≡ | ⏻ |
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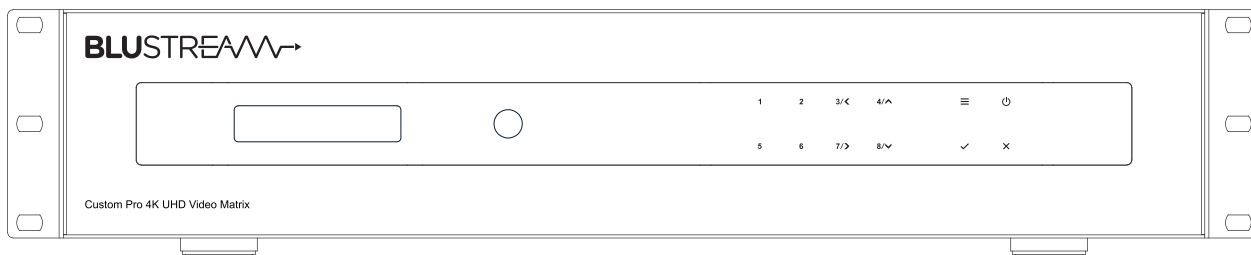
Introduction

The Custom Pro Matrix achieves new levels of both performance and flexibility. AV installers can now easily specify their desired I/O structure and choose the additional control features required for a specific project. The Custom Pro Matrix has been specifically designed to operate in challenging AV environments. Its robust housing and interlocking board configuration make both installation and maintenance a seamless experience. Advanced optional features include HDMI and HDBaseT™ boards featuring CSC for support of all the latest 4K resolutions including 4K 60 Hz 4:4:4 colour space & HDR, audio breakout with variable line level outputs, simultaneous HDBaseT™/HDMI outputs, 2-way routed IR and RS-232 pass through. A web browser interface module for control and configuration of the matrix is included as standard as well as analogue audio embedding per zone.

Key Features

- Custom Pro Matrix with 8x modular bays for population of input/output boards
- Supports up to 8x video inputs and 8x video outputs using a combination of 2-way and 4-way interchangeable input and output boards
- Supports 4K UHD video up to 4K 60Hz 4:4:4
- Optional Color Space Conversion (CSC) boards support HDMI 2.0 18Gbps specification including HDR over HDBaseT™
- 8x analogue L/R audio inputs which can be embedded onto corresponding HDMI/HDBaseT™ zone outputs
- Optional control boards; IR routing, Audio breakout (with line-level volume control) and RS-232 routing
- Web browser interface for control and configuration of Matrix
- Control via front panel, IR, RS-232 and TCP/IP
- Supports PoH (Power over HDBaseT™) to power compatible HDBaseT™ receivers
- 3rd Party drivers available for all major home control brands
- Advanced EDID management
- HDCP 2.2 compliant

  * full 4K 60Hz 4:4:4 support is subject to input/output boards specified

Panel Descriptions

Front Panel
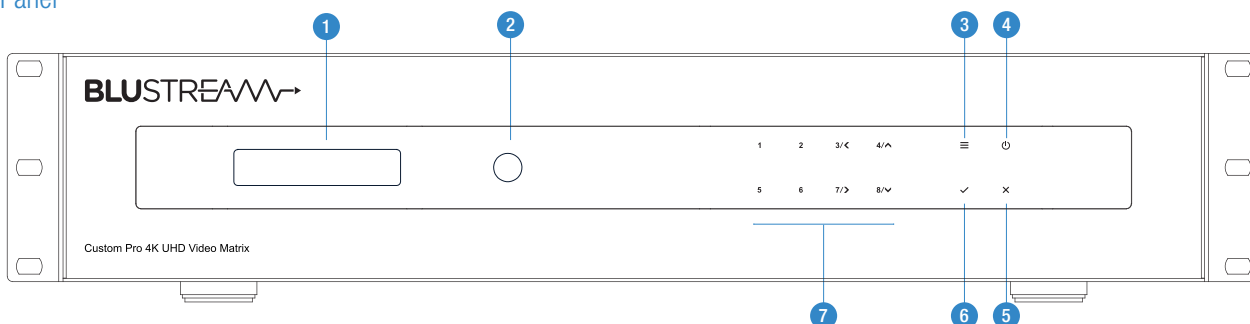
1 LCD display – Shows the status of input/output selection, EDID etc.

2 IR receiver window.

3 Menu button – Press to enter EDID set mode.

4 Power button – Press to power on/off the Matrix.

5 ESC – Press to quit MENU mode.

Press and hold button for 10 seconds to lock Matrix front panel.

6 Select button – Press to confirm changes within the Matrix menu.

7 Selection buttons - Multi-use buttons

Primary use:

First press = HDMI output selection buttons 1 to 8 – Press to select the output from 1 to 8. Output selected will be displayed on the Matrix display.

Second Press = HDMI input selection buttons 1 to 8 - Press to select the input from 1 to 8. Input selected will be
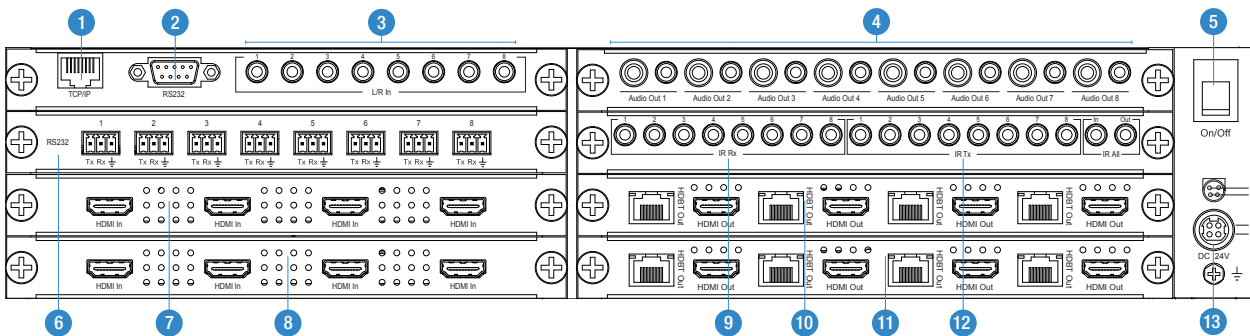
displayed on the Matrix display.

Secondary use:

When the MENU button has been pressed buttons 3,4,7 & 8 are used as cursors to navigate the MENU system.

3 = Left

4 = Up

7 = Right

8 = Down

Rear Panel

1 TCP/IP (RJ45) – Connect to LAN for TCP/IP & web browser interface control of Matrix.

2 RS-232 port - For control of the Matrix from from PC or third party control processor.

3 Analogue L/R line level input (3.5mm stereo jack) Audio can be embeded onto video outputs

4 Audio Output Card (Optional) - Coaxial digital audio output and L/R line level analog audio outputs (3.5mm stereo jack). Extracted audio will be concurrent with the corresponding HDMI video output. Please note: input must be PCM 2ch audio as Matrix does not down-mix 5.1ch audio signals.

5 Power switch.

6 RS-232 Routing Card (Optional) - Bi-directional RS-232 ports. Connect to third party control device to extend RS-232 commands to HDBaseT receivers RS-232 port.

7 Video Input Card 1 (Optional) - HDMI inputs – Connect to HDMI sources.

8 Video Input Card 2 (Optional) - HDMI inputs – Connect to HDMI sources.

9 IR Routing Card (Optional) - IR inputs (3.5mm stereo jack). Transmits IR to the zone HDBaseT receiver (displays). When using the IRCAB cable (supplied with modular card) ensure cable direction is correct.

10 Video Output Card 1(Optional) - HDBaseT/HDMI simultaneous output. Connect to HDBaseT receiver and HDMI display.

11 Video Output Card 2 (Optional) - HDBaseT/HDMI simultaneous output. Connect to HDBaseT receiver and HDMI display.

12 IR Routing Card (Optional) - IR outputs (3.5mm mono jack). Routed IR from HDBaseT extender (zone output).

13 Power port – Use supplied 24V 8A DC adaptor to power Matrix.

Understanding the Matrix / Receiver status lights

The Blustream Matrix and HDBaseT extender solutions include status LED indicators on both the Matrix and Receiver products to show all connections are active and to help diagnose possible problems.

Understanding the status lights:-

Blustream Matrix:

- The Yellow HDBaseT status link light will be off when the zone output has been turned off or there is a problem with the specific Matrix output.
- The Yellow HDBaseT status link light will blink when the zone output is on and working
- The Green HDBaseT link light will blink if there is an unstable connection between the Blustream Matrix and HDBaseT Receiver
- The Green HDBaseT link light will be lit when a there is an active HDBaseT Receiver connected to the Matrix
- The Green HDBaseT link light will be off when a there is no connection with a HDBaseT receiver

Blustream HDBaseT Receiver:

- The HDMI link light will be off when there is no connection with a display
- The HDMI link light will be on when there is an active connection with a display (NOTE - Not all HDBaseT RX feature a HDMI status LED)
- The HDBaseT link light will be off when there is no CAT cable/active HDBaseT connection on the RJ45 HDBaseT input
- The HDBaseT link light will blink if there is an unstable connection between the Blustream Matrx and HDBaseT receiver
- The HDBaseT link light will be lit when a CAT cable is connected to the HDBaseT RJ45 output on the Matrix and an active connection is achieved with the Blustream HDBaseT Receiver.

EDID Control

EDID (Extended Display Identification Data) is a data structure that is used between a display and a source. This data is used by the source to find out what audio and video resolutions are supported by the display then from this information the source will discover what the best audio and video resolutions need to be outputted.

While the objective of EDID is to make connecting a digital display to a source a simple plug and play procedure issues do arise when multiple displays or video matrix switching is introduced because of the increased number of variables.

By pre-determining the video resolution and audio format of the source and display device you can reduce the time need for EDID hand shaking thus making switching quicker and more reliable.

Configuration of Matrix EDID settings can be acheived in one of three ways:-

1   Using Matrix web browser interface (See 'Blustream Web Browser Interface Guide' for further details available at www.blustream.co.uk)
2   Using Matrix Front Panel (See below))
3   Using Supplied Blustream Matrix IR Remote Control (For further details see 'Pro Matrix User Manual')

To change the input signal type using the Matrix front panel press the following:-
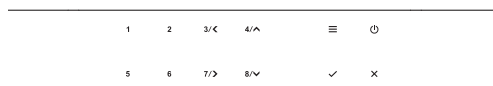
Using Matrix Front Panel Buttons

    a.   Press the MENU button

    b.   Matrix front panel will display 'EDID settings'. Press the SELECT button to enter into EDID configuration mode

    c.   Select the input you wish to fix the EDID on (1-8) or select 'All'. Use UP/DOWN buttons (buttons 4 & 8) to toggle the selection and press the RIGHT button (button 7) to move to resolution setup.

    d.   Select video resolution required (4K, 1080p, 3D etc). Use UP/DOWN buttons (buttons 4 & 8) to toggle the selection and press the RIGHT button (button 7) to move to resolution setup.

    e.   Select audio resolution required (2CH, 5.1 or 7.1). Use UP/DOWN buttons (buttons 4 & 8) to toggle the selection and press the SELECT button to confirm

    f.   Press the ESC button to exit