

Product Code: DEC150

Revision: 01

VideoSys
Broadcast

Decoder – DEC150

Product Manual



T: +44 (0)1293 541 200

E: sales@videosys.tv

W: videosys.tv

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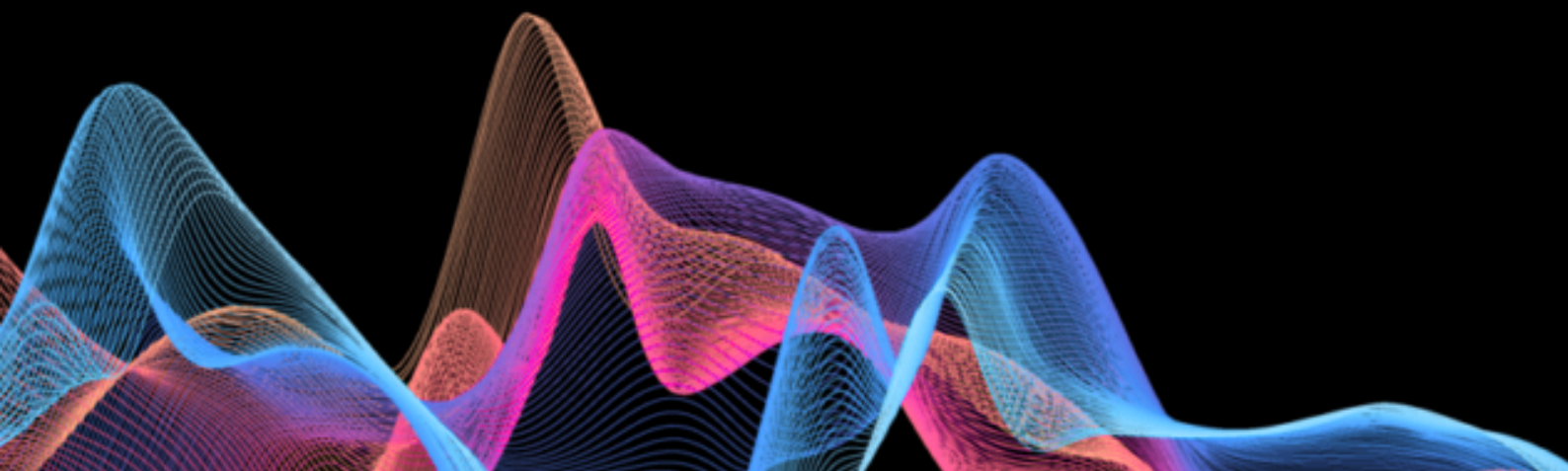
Menu Structure Document

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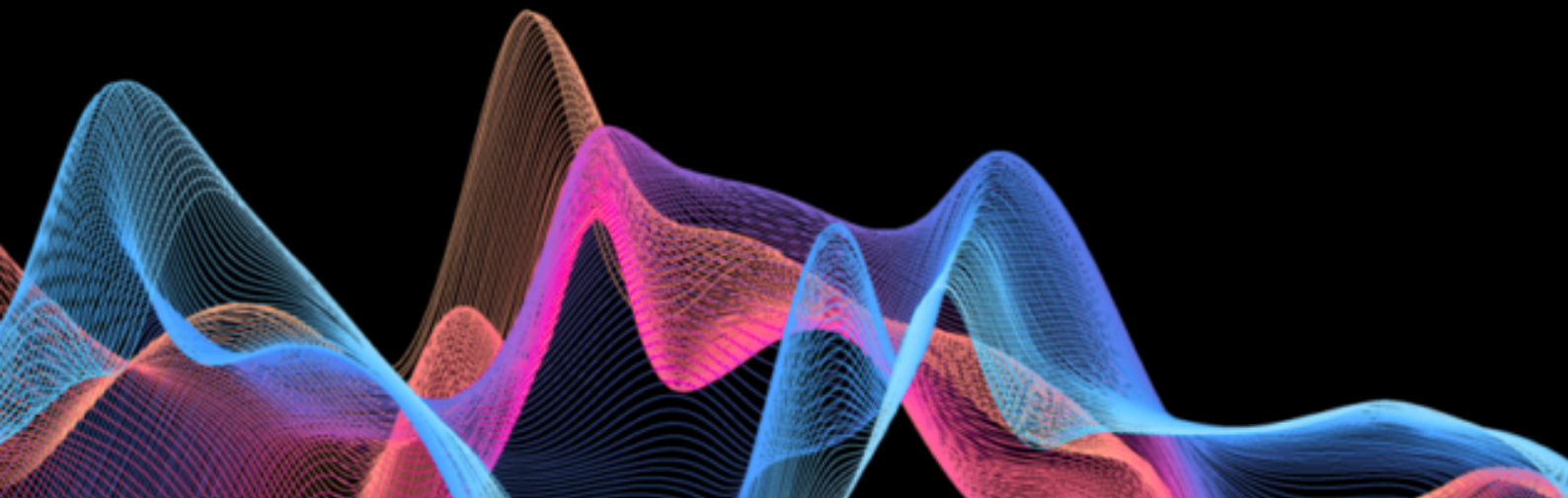
Connector Guide

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Web Pages



PRODUCT DATA SHEET



PRODUCT DATA SHEET

DECISO

DECODER

VideoSys
Broadcast

Technical Specification:

Connectors

Power DC 12V	4-Pin XLR BNC x
Video In SDI 1-4	4 BNC x 1 BNC x 1
Monitor	BNC x 1 BNC x 1
ASI In	Ethernet RJ45 x 1
ASI Out	Ethernet RJ45 x 1
Genlock	5-Pin Lemo x 2 7-
Stream	Pin Lemo x 1
Control	
Audio In/Out	
Data Output Connector	

Video Inputs / Outputs

SDI 1 - 4	Single-link 12G/6G/3G/HD/SD-SDI
	Dual-link 6g-sdi
	Quad-link 3G/HD-SDI
SDI 5	Monitor / Single Link

Video Decoder

HEVC Profiles	4K Ultra HD (4096 x 2160 pixels)
	4:2:2/4:2:0, 8/10-bit
	2160p/23.98/24/25/29.97/30/50/59.94/60
	Full HD/DCI (2048 x 1080 pixels)
	4:2:2/4:2:0, 8/10-bit
HDR/WCG	Rec. ITU-R BT .2100-2 (PQ and HLG)
	Rec. ITU-R BT .2020

Audio

Format	Embedded
Encoder	LPCM (SMPTE 302M) 16/20/24-bit
	MPEG-1 Layer I
	MPEG-1 Layer II
Number of Decoders	16 Channels /8 pairs
Analogue Audio	2 x Balanced outputs

Decoder option Add-ons

LIC-4K	4K Licence
LIC-QUAD	QuadSync (4x HD Inputs/Outputs)
LIC-PSF	PSF Video Formats
LIC-STR	License for IP streaming and decoding
RCK-S1RU	Single Unit Rack Kit
RCK-D1RU	Dual Unit Rack Kit

Basic Specifications

Dimensions	(WxDxH) W 220mm x D 358mm x H 44mm (1RU)
Weight	1.76Kg
Mounting	Side-by-Side mount kit available as an option
DC Input	12VDC nominal
Power consumption	Typically 19.2W
Temperature range	-10°C to +50°
Humidity	Less than 85% non-condensing

Control

Local	Enter / Cancel / Navigation Push Button and Menu Screen
Remote	IP web browser Control

Genlock Input

Format	Tri Level Composite
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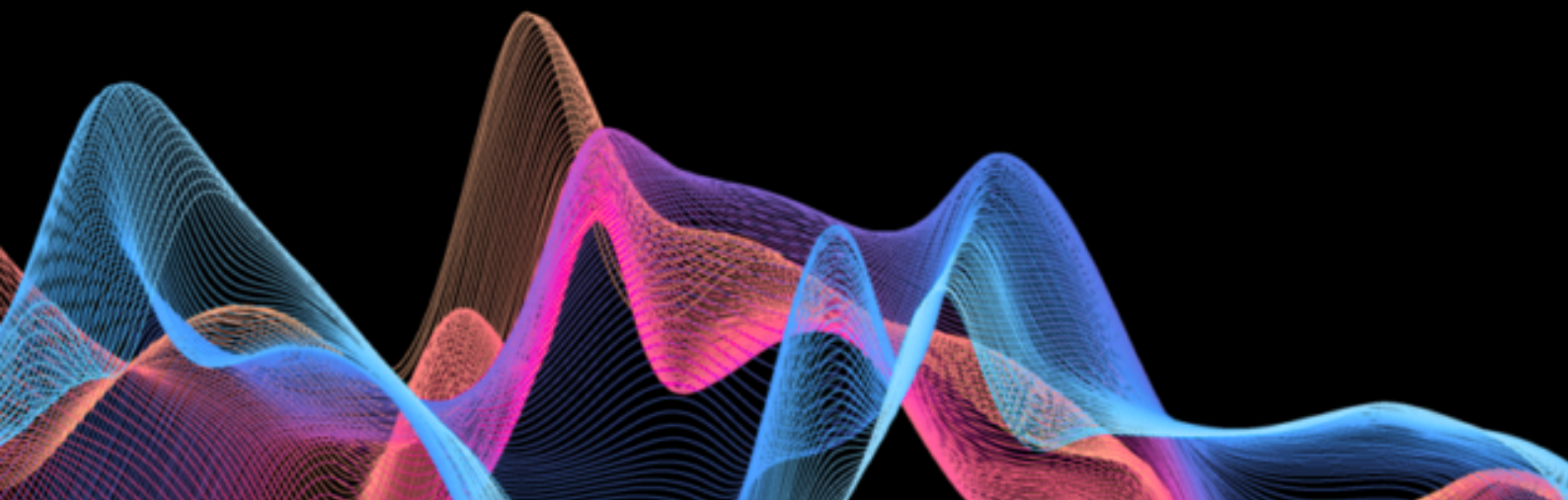
Streaming

ASI	Transport stream
IP Streaming	1000Base - T Ethernet
	ST 2022-2 (compressed transport streams)
	ST 2022-7 (seamless protection switching, ST 2022-2)

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MENU STRUCTURE



DECO150 Main Menu Structure

Main Menu

Status Page:

Decoder Main Menu

Menus:

Decoder Status

Decoder Config

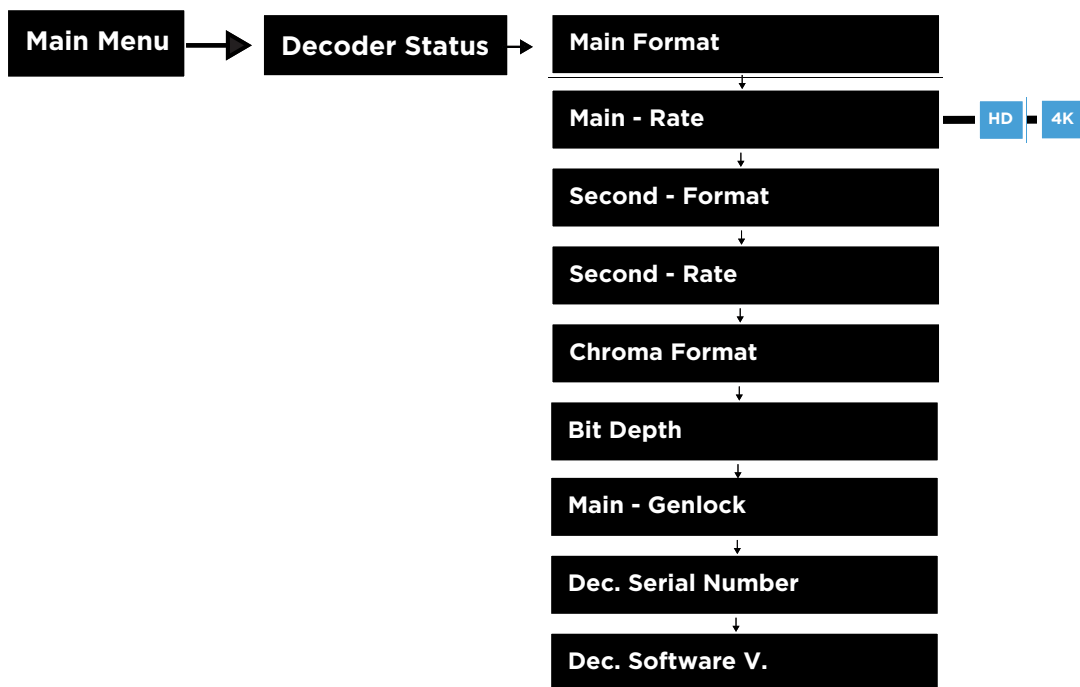
Controller System

Controller Network

DEC150 Status Menu

Decoder - Status

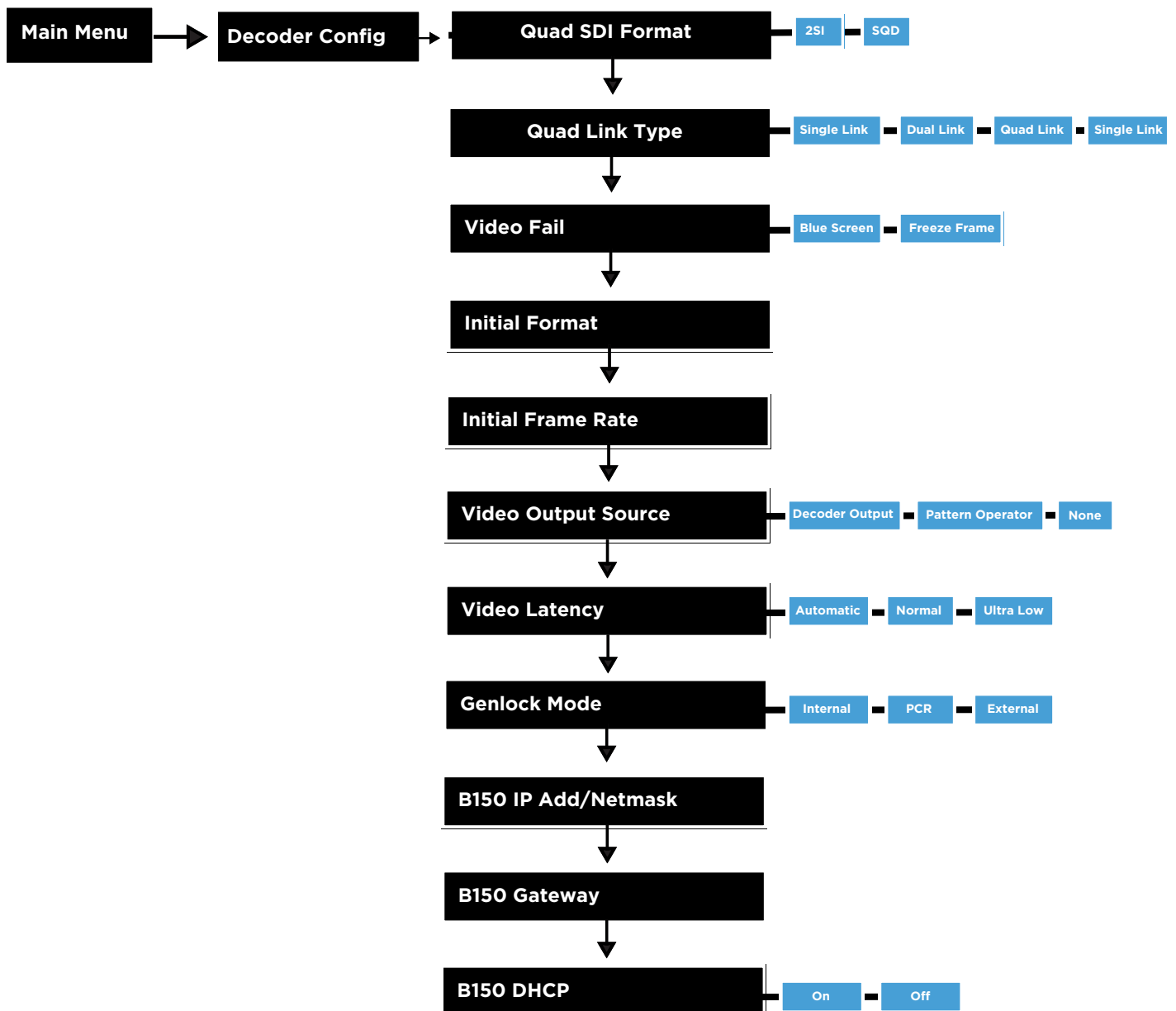
Home Menu



DEC150 Config Menu

Decoder - Config

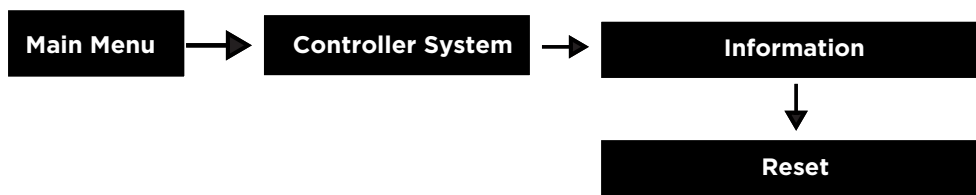
Home Menu



DEC150 Config Menu

Decoder - Controller System

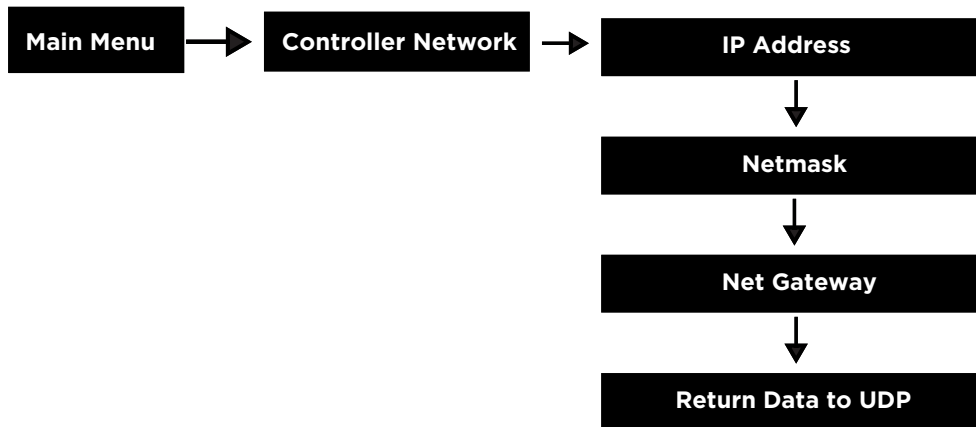
Home Menu



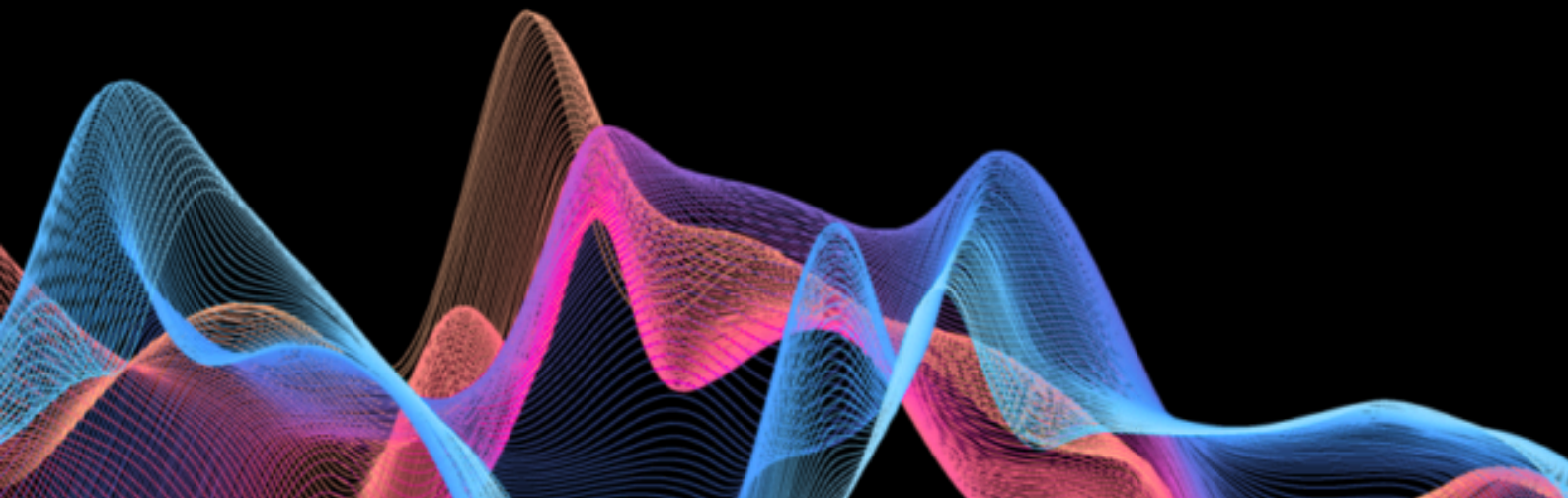
DEC150 Config Menu

Decoder - Controller Network

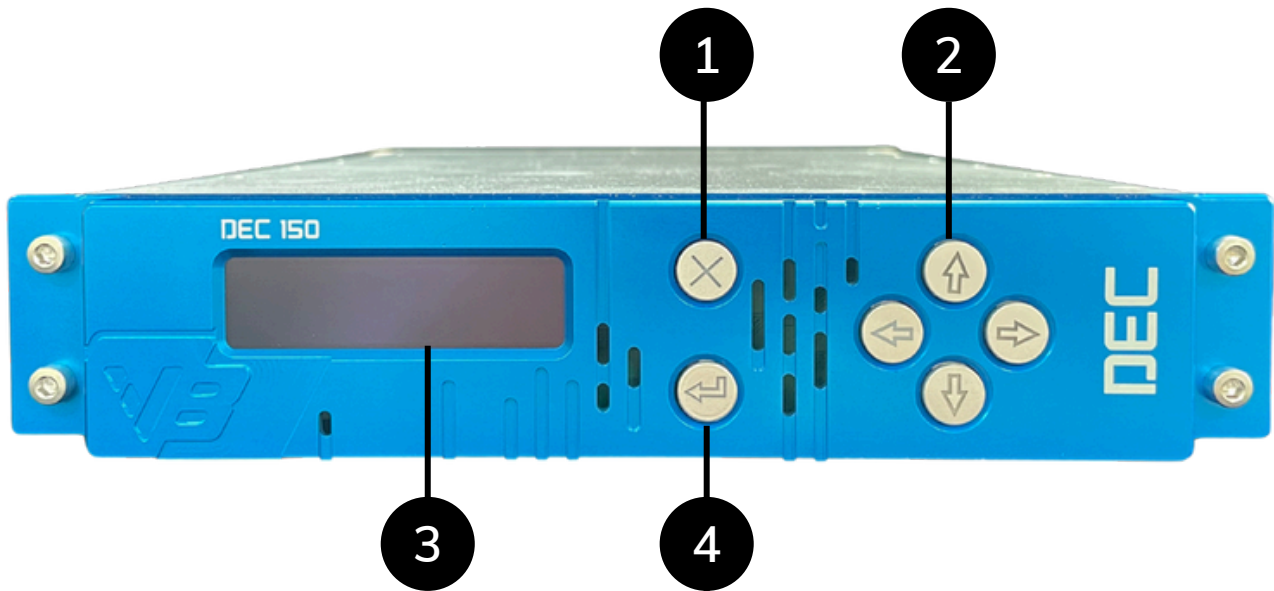
[Home Menu](#)



CONNECTOR GUIDE

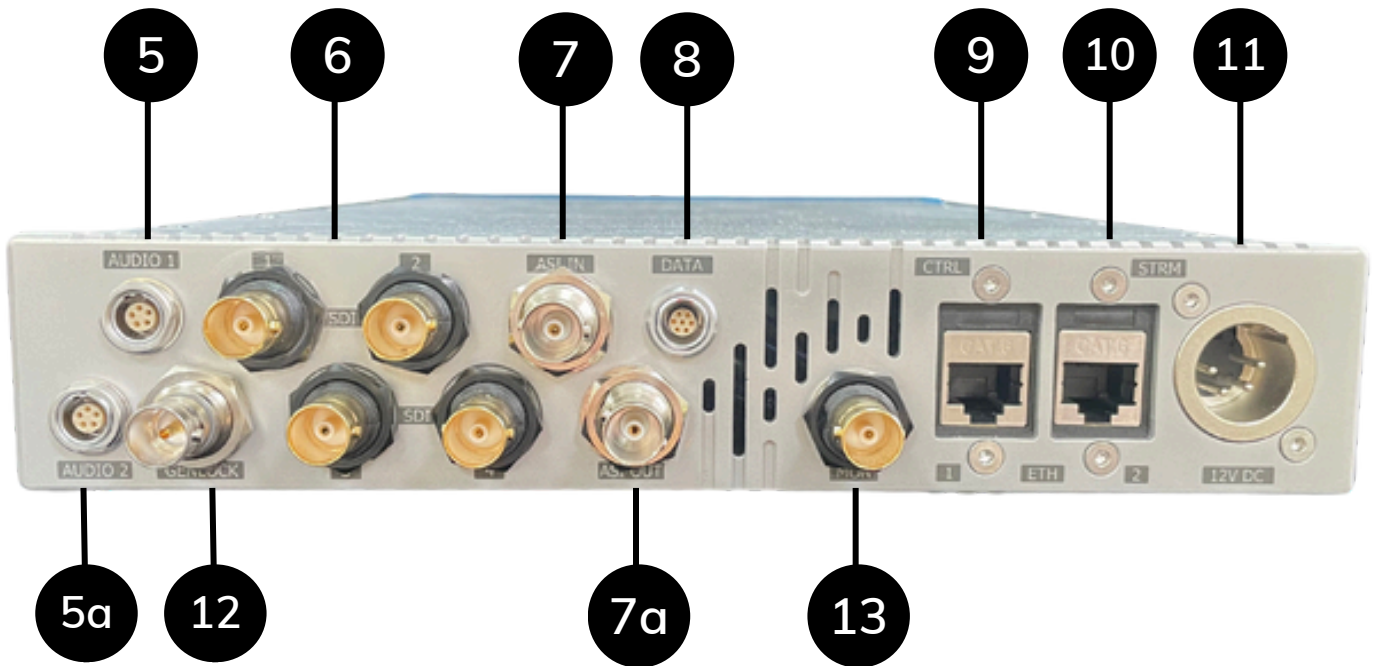


BROADCAST SYSTEM - DEC150- FRONT PANEL



No	Item	Used for
1	OLED Display x 1	Displaying Fibre Level and Unit menus
2	Cancel Button x 1	The Up, Down, Left, Right, Enter and Cancel buttons can be used to navigate through the menus
3	Enter Button x 1	
4	Navigation x 4	

BROADCAST SYSTEM - DEC150 - BACK PANEL

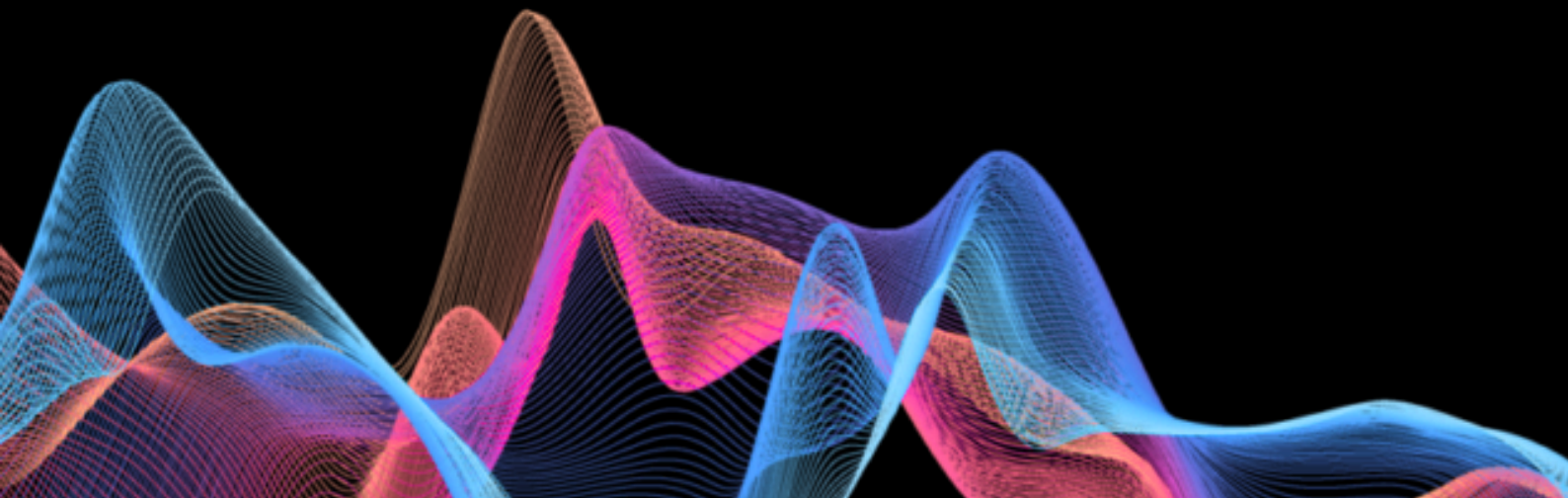


No	Item	Used for
5	Lemo 5-way jack x 1 (sockets) labelled Audio 1	2 x Balanced outputs
5a	Lemo 5-way jack x 1 (sockets) labelled Audio 2	
6	BNC x 1 labelled SDI 1-4	Video - Single Link, Dual Link, and Quad Link supported
7	BNC x 1 labelled ASI In	ASI in/out Transport stream
7a	BNC x 1 labelled ASI out	

BROADCAST SYSTEM - DEC150 - BACK PANEL

No	Item	Used for
8	7-Pin Lemo x 1 labelled Data	Data Output Connector. (BiDi return to IDU)
9	RJ45 x 1 labelled CTRL	Ethernet Connector for Control web GUI.
10	RJ45 x 1 labelled STRM	Ethernet Connector for IP Streaming
11	4-Pin XLR labelled 12V DC	Local 12V power
12	BNC x 1 labelled Genlock	Connect a Genlock device to this port to keep the decoder synchronised with all the other equipment in your facility.
13	BNC x 1 labelled MON	Monitor / Single Link

WEB PAGES




DEC 150 Web Page

1. Overview

VideoSys Broadcast Version: 2.1.RC1

Overview Details Controller


ASI In




Locked

Matched Service

1 Service 1




Video




Locked

Audio




No Lock

Main SDI



3840x2160p50

Temperature



43.0°C

Video Decoder

PID	Resolution	Standard	Chroma	Bit Depth	Latency
100	3840x2160p50.0	HEVC	4:2:0	8	normal

Audio Decoder

PID	Standard	State	Bitrate	Level A	Level B
-----	----------	-------	---------	---------	---------

Default Controller(CTRL) IP Address 192.168.1.230
Default B150 board(STRM) IP Address 192.168.1.20

2.1 Detail/Service Tab

VideoSys Broadcast Version: 2.1.RC1

Overview Details Controller

Service SDI Genlock Video Audio Unit

Available Services

Program	Name	Provider
1	Service 1	BWS Ltd

Service Demux Settings

Source

None

ASI In

ASI Out

Mode

Automatic

Manual

Service Selection

Auto Program No

Auto Service Name

Manual PIDs

PID 0

PID 1

PID 2

PID 3

PID 4

ASI Input Status

Stream Lock	yes
Transmission Mode	burst
Signal Polarity	normal
Bitrate (bps)	12064240

ASI Output Status

Bitrate (bps)	12064232
---------------	----------

2.2 Detail/SDI

VideoSys Broadcast Version: 2.1.RC1

Overview	Details	Controller			
Service	SDI	Genlock	Video	Audio	Unit

SDI 1-4 Output Settings

Source <input type="radio"/> None <input type="radio"/> Pattern <input checked="" type="radio"/> Decoder	Link Type <input checked="" type="radio"/> Single-link <input type="radio"/> Single-link (duplicate) <input type="radio"/> Dual-link <input type="radio"/> Quad-link	Sample Format <input checked="" type="radio"/> 2SI <input type="radio"/> SQD	Conversion <input checked="" type="radio"/> None <input type="radio"/> HD-SDI 1080i <input type="radio"/> HD-SDI 1080psf <input type="radio"/> HD-SDI 1080p <input type="radio"/> 3G-SDI 1080p
--	---	---	--

SDI 5 (Monitor Output)

Source <input type="radio"/> None <input type="radio"/> Pattern <input checked="" type="radio"/> Decoder	Conversion <input type="radio"/> None <input type="radio"/> HD-SDI 1080i <input type="radio"/> HD-SDI 1080psf <input type="radio"/> HD-SDI 1080p <input type="radio"/> 3G-SDI 1080p <input checked="" type="radio"/> 3G/HD-SDI 1080p 2SI
--	---

[Apply & Save](#)

Main SDI (1-4) Status Genlock: none Video Format: 3840x2160p50 Link Type: single Output Name: sdi1	Secondary SDI (5) Status Genlock: none Video Format: 3840x2160p50 Link Type: single Output Name: sdi5
---	--

In this section you can set the SDI output depends on your preference and monitor type. i.e.- A single link with no conversion with a monitor that supports 12G input.

2.3 Detail/Genlock

VideoSys Broadcast Version: 2.1.RC1

Overview	Details	Controller			
Service	SDI	Genlock	Video	Audio	Unit

Genlock Settings

Mode <input type="radio"/> External <input checked="" type="radio"/> Internal <input type="radio"/> PCR External Mode Offset (us): <input style="width: 50px;" type="text" value="0.0"/>	Genlock State Input Ref. Standard: None Input Lock State: reset Frame Buffer Lock: freerun PCR Recovery Lock: locked
---	---

Frame Buffer

Main SDI Output Interface Name: sdi1 Delay (us): 11184.193	Secondary SDI Interface Name: sdi5 Delay (us): 15775.496
---	---

[Apply & Save](#)

2.4 Detail/Video

VideoSys Broadcast Version: 2.1.RC1

Overview | Details | Controller

Service | SDI | Genlock | Video | Audio | Unit

Decoder Settings

Initial Output

Video Format

- 720x480i
- 720x576i
- 1280x720p
- 1920x1080i
- 1920x1080psf
- 2048x1080psf
- 1920x1080p
- 2048x1080p
- 3840x2160p
- 4096x2160p

Frame Rate [fps]

- 23.976
- 24
- 25
- 29.97
- 30
- 47.952
- 48
- 50
- 59.94
- 60

Failure Mode

- Freeze Frame
- Blue Screen

Pattern Generator

Specification:

Video Format:

Frame Rate:

Latency Mode

- Automatic
- Normal
- Ultra-Low

[Apply & Save](#)

Video Decoder

PID	Resolution	Standard	Chroma	Bit Depth	Latency
100	3840x2160p50.0	HEVC	4:2:0	8	normal

2.5 Detail/Audio

VideoSys Broadcast Version: 2.1.RC1

Overview | Details | Controller

Service | SDI | Genlock | Video | Audio | Unit

Analog Audio Balanced Output

Output 1

Source:

Channel:

Volume: dB

Output 2

Source:

Channel:

Volume: dB

Output 3

Source:

Channel:

Volume: dB

Output 4

Source:

Channel:

Volume: dB

Audio Decoder Settings

Decoder 1 Delay: ms

Decoder 2 Delay: ms

Decoder 3 Delay: ms

Decoder 4 Delay: ms

Decoder 5 Delay: ms

Decoder 6 Delay: ms

Decoder 7 Delay: ms

Decoder 8 Delay: ms

Analog Ref Level:

[Apply & Save](#)

No audio streams detected.

Audio Decoder

PID	Standard	State	Bitrate	Level A	Level B
-----	----------	-------	---------	---------	---------

2.6 Detail/Unit



Version: 2.1.RC1

Overview	Details	Controller			
Service	SDI	Genlock	Video	Audio	Unit
Licences M50 Decoder licenced UHD licenced BISS 2 unlicenced IP Serial unlicenced M30 Encoder unlicenced Pass-Through unlicenced QuadSync unlicenced RX unlicenced IP Streaming unlicenced			Decoder Information Software Version onyx-b150_3.27.1 FPGA Temperature 43.0°C Voltage (V) 12.025C Power (W) 16.979C Current (A) 1.412 Serial Number 40020000015df6a724512245		
Decoder Network Settings IP Address/Netmask 192.168.1.20/24 Gateway 255.255.255.0 DHCP <input type="radio"/> Yes <input type="radio"/> IPv6 Only <input type="radio"/> IPv4 Only <input checked="" type="radio"/> No					

Apply & Save

3.1 Controller-Network



Version: 2.1.RC1

Overview	Details	Controller
Network	Maintenance	Front Panel
Network Settings IP Address 192.168.1.230 IP Mask 255.255.255.0 IP Gateway 192.168.1.254 UDP Sender Enable <input checked="" type="checkbox"/> User Data UDP IP 192.168.1.200 User Data UDP Port 1090 <input type="button" value="Save Settings"/>		

UDP sender Enable: It is used for bidirectional camera control. The User Data UDP IP is the main IP address of the IDU The Bidi Data return over IP only support with IDU version 152.1

3.2 Controller- Maintenance

Overview	Details	Controller
Network	Maintenance	Front Panel

Software Update

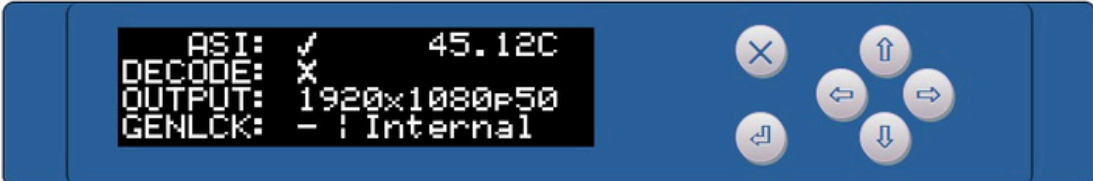
Select the software file: No file chosen

Diagnostics

MAC Address	d8-47-8f-f0-3c-a5
Application Version	2.1.RC1
Unit Serial Number	880110

3.3 Controller-Front panel

Overview	Details	Controller
Network	Maintenance	Front Panel



VideoSys Broadcast

