VC4000

4K Multi-format standards converter

■ Overview

VC4000 is a format converter that, through its highly precision motion compensation technology utilizing motion vectors, converts 4K, HDTV and SDTV formats with different frame rates and minimizes jerkiness even with fast moving images.
Supports up conversion, down conversion and cross conversion.

VC4000

■ Features

○High quality motion compensation technology with motion vectors.
○Real-time conversion with short delay possible.
○Supports 4K / HDTV / SDTV television system.
○4K to 4K cross conversion, 4K to HD down conversion, HD to 4K up conversion, HD to HD cross conversion, SD to HD up conversion.
○Two independent channel conversion is possible, when 4K to HD, HD to 4K, HD to HD, SD to HD conversion.
○4K supports 3G-quad, Square / 2SI, Level-A / B, 4:2:2 10 bit.
○HDR (HLG) to SDR gamma conversion, SDR to HDR (HLG) gamma conversion
○4K to 4K structure conversion (Square ⇔ 2SI, Level-A ⇔ Level-B)
○Rec. ITU-R BT.709 ⇔ BT.2020 color space conversion
○Embedded audio 48 kHz, 24 bit, 16 channel
○Audio channel mapping function
○Web remote control
○Redundant power supply

■ Television system conversion correspondence table

IN \ OUT		2160p		1080i	
		59.94	50	59.94	50
2160p	59.94	Standard equipment		Option 1 VC4000SYS	
	50				
1080i	59.94	Option 2 VC4000SYS		Option 3 VC4000SYS	
	50				
720p	59.94	Option 4 VC4000SYS		Option 5 VC4000SYS	
	50				
625i	50			Option 6	

Main Specifications

Video	
Television format	3840×2160p 59.94Hz 3840×2160p 50Hz 1920×1080i 59.94Hz 1920×1080i 50Hz 1280×720p 59.94Hz 1280×720p 50Hz 720×576i 50Hz
Sampling	4K　Square / 2SI, Level-A / Level-B, 4:2:2 10 bit HD　4:2:2 10 bit
SDI rate	3G-SDI　2.97 Gbps, 2.97 / 1.001 Gbps (SMPTE 424M, SMPTE 425M) HD-SDI　1.485 Gbps, 1.485 / 1.001 Gbps (SMPTE 292M) SD-SDI　270 Mbps (SMPTE 259M)
SDI input	when 4K to 4K conversion:　BNC×4, 1 input, 75 ohm when other than those above conversion:　BNC×1, 2 input, 75 ohm
SDI output	when 4K to 4K conversion:　BNC×4, 1 input, 75 ohm when other than those above conversion:　BNC×1, 2 output, 75 ohm
Audio	
Embedded audio	48 kHz (Synchronized with video clock), 24 bit, 16 channel
Reference input	
Input	BNC, 2 input, 75 ohm
Signal	525BB / 625BB / Tri-sync (Automatically detect)
Signal level (Black burst)	525：286 mVp-p ± 6 dB 625：300 mVp-p ± 6 dB
Signal level (Tri-sync)	± 300 mVp-p ± 6 dB
Functions	
Motion compensation	Parameter setting is possible
Color space conversion	Rec. ITU-R BT.709 ⇔ BT.2020
4K to 4K structure conversion	Square ⇔ 2SI, Level-A ⇔ Level-B
HDR / SDR conversion	HDR (HLG) ⇔ SDR
Audio channel mapping	Freely select audio channel assignment
Timecode	ATC-LTC, ATC-VITC (SMPTE ST 12M)
LAN (SNMP / Web remote)	RJ-45　10 / 100 BASE-T　1 port
General	
Chassis size	426 mm(W) × 132 mm(H) × 540(D)mm (exclude Rack mount panel and protrusion)
Power requirements	AC100V～240V　50Hz / 60Hz

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