



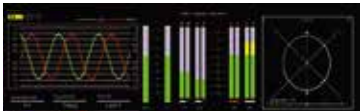
UMC-2016M UHD Master Switcher



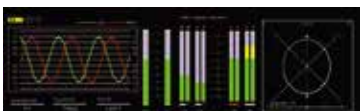
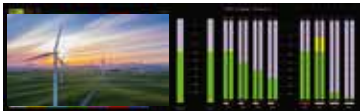
UMC-2016C Master Switcher Remote

Feature & Functions

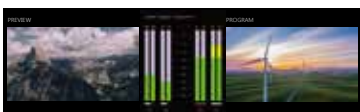
— PVW MODE : AUDIO&VIDEO METER —



— PGM MODE : AUDIO&VIDEO METER —




— PVW+PGM(LINE) MODE : AUDIO&VIDEO —

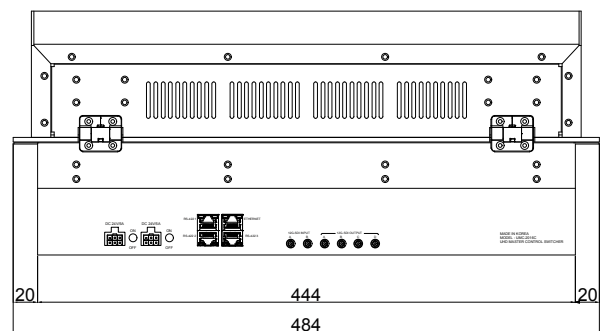
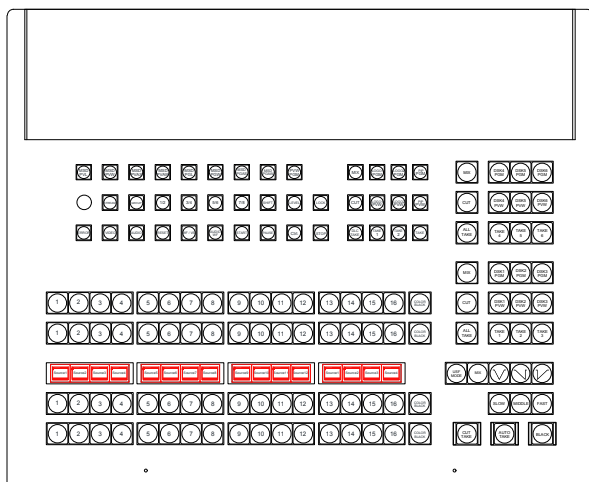


UMC-2016C Master Switcher Remote

- 18 SDI input X 5 Control : PGM 2ch, PVW 2ch, Clean 2ch, AUX 1ch, AES/EBU 2ch, Line 2ch
- 6ch DSK control : Basic 3ch, Optional 3ch
- LKFS Display 6 Mode hot buttons (+9dB/+18dB. Level Meter, Pause, Control, Start, Stop)
- Master Measurement & LKFS Process Control on monitor of the Control Panel
- 16 Buttons of Program & Preview
- AUX EXT, HDR WFM, PGM, PVW, CLEAN on AUX Block
- HDR Monitoring button from AUX
- Logo Generator 3ch or Logo 2ch with PIP 1ch (Option)
- 16LCD (64 X 32 pixel) for naming display
- Dual Power Supply (+24V DC x 2)
- 8 inch Single LCD
- System controlled by SNMP

UMC-2016C / Master Switcher Remote	
Image	
I/O Port	
SDI	12G-SDI : Monitoring input 1ch & Loop output 1ch 3G-SDI : Loudness 1ch, PGM 1ch, PVW 1ch, AUX 1ch
Standard Equalization	12G, 3G,-SDI SMPTE ST-2082-10, SMPTE 424M (Level-A, Level-B) 85m at 11.88Gb/s, 200m at 2.97Gb/s, 250m at 1.485Gb/s (Typical maximum equalized length of 5C Cable)
Ethernet RS422	RS-422 3ch, 100/10 Ethernet 1ch Data Format : 9600-115200 baud rate Connector : RJ-45
Switching Button & Monitor	
LCD	8 Different Monitoring (Video: PGM, PVW) (Audio: Embeded Audio)
Switching Panel	PGM 16ch, PVW 16ch, DSK 6ch, Logo 3ch, Loudness control pack Audio Gain Control, Payout automation, Main/Backup remote
Electrical & Miscellaneous	
Dimension	484(W) X 201.12(H) X 396(D)mm
Weight	10Kg (22lb)
Power	Dual Power, DC 24V

Dimension





HEC 1604 Mini Master Switcher Remote



UMC-2016M UHD Master Switcher



HES-1604 HD Master Switcher

HEC-1604

Feature & Functions

1 PGM	PGM	K-PGM	Lg-PGM	AUDIO	PG-LV	AUX
	CAM-1	K-12	Lg-1234	NOMAL	-12DB	5S Keep
	CAM-2	K-**	Lg-****	ST	0DB	
	Σ			L+L	+12DB	
	SOURCE			R+R		

2 PVW STATUS	PVW	K-PVW	Lg-PVW	AUDIO	PV-LV	AUX
	CAM-1	K-12	Lg-1234	NOMAL	-12DB	5S Keep
	CAM-2	K-**	Lg-****	ST	0DB	
	Σ			L+L	+12DB	
	SOURCE			R+R		


3 INPUT MODE	PGM	PVW	K-1	K-2	PIP	AUX
	OK	OK	OK	OK	OK	5S Keep
	Err	Err	Err	Err	Err	
	LOSS	LOSS	LOSS	LOSS	LOSS	

4 AUDIO STATUS	AUDIO	GROUP	PHASE	PGM-LV	PVW-LV	AUX
	NORMAL	1234	NORMAL	-12DB	-12DB	5S Keep
	L+L	****	REVERSE	0DB	0DB	
	R+R			12DB	12DB	

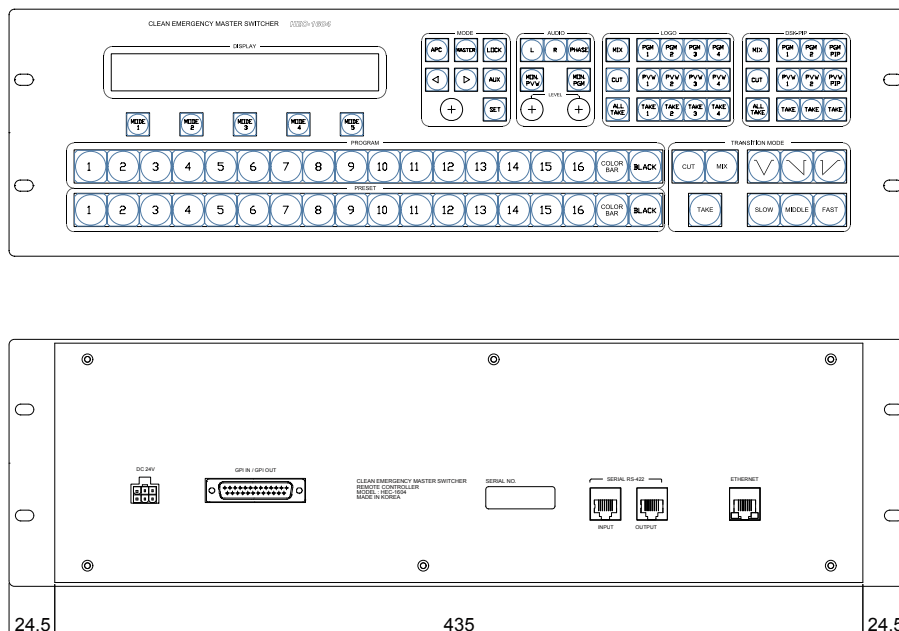
5 ETC.	REF.	APC.	LOGO PRESET	PIP.	AUX.
	N/A	N/A	P1-P*-P*-P*	OFF	Source1
	OK	OK	P2-P*-P*-P*	ON-LU	Σ Source16
	59,94		P3-P*-P*-P*	ON-RU	
	50H		Pn-P*-P*-P*	ON-LD ON-RD	

HEC 1604 Mini Master Switcher Remote

- 16x4 Master Control Switcher
-(Program 2Ch, Preview 2Ch, Clean 2Ch, AUX 2Ch)
- Always 'Clean' Output(Cut / Mixing) A/V Signals without instant loss of synchronizer will not effect final PGM signal.
- 3ch DSK
- 12G/3G/HD Embedded Audio Processing
-(Gain, Delay, Master Fade and Mix)
- 12G/3G/HD Video Processing
-(Frame Synchronizer, Line Buffer)
- 3G-SDI SMPTE 424M LEVEL A, LEVEL B Compliant
- 5 Status Monitoring Mode
- System controlled by SNMP
- GPIO 16ch, Logo 3ch, DSK 3ch control pin
- 19 inch standard rack mountable (3RU)

HEC-1604 / Mini Master Switcher Remote	
Image	
SDI	
Ethernet RS422	RS-422 1ch, 100/10 Ethernet 1ch & Loop out Data Format : 9600-115200 baud rate Connector : RJ-45
GPIO	GPIO editable 16ch, Logo 3ch, DSK 3ch control pin
Switching Button & Monitor	
VFD-Panel	5 Different monitoring mode
Switching Panel	PGM 16ch, PVW 16ch, DSK 3ch, Logo 3ch, Audio Gain Control, Payout automation, Main/Backup remote
Electrical & Miscellaneous	
Dimension	484(W) X 50(H) X 133(D)mm
Weight	1Kg (2.2lb)
Power	DC 24V

Dimension





UMC-2016M Front

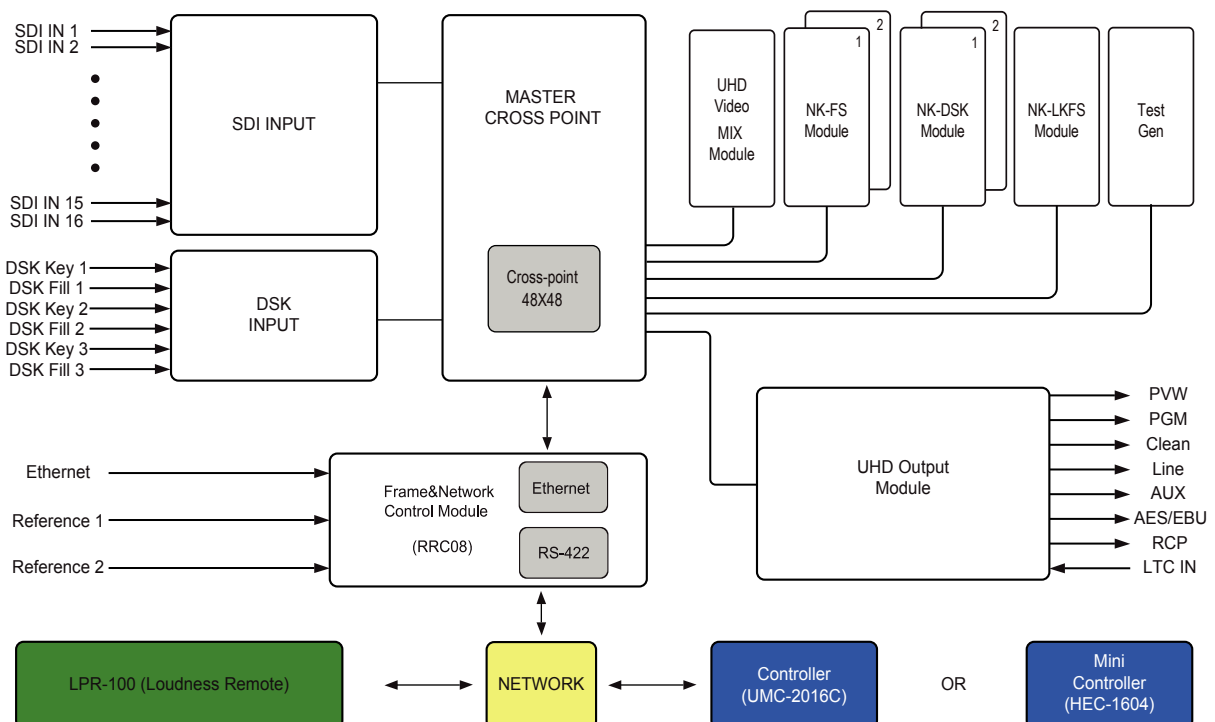



UMC-2016M Rear

Feature & Functions

- UMC-2016M (UHD Master Switcher) is designed for Live broadcaster. Built as modular system it can be fit into Frame individually.
- UMC-2016M has 16ch 12G-SDI inputs, 9ch 12G-SDI outputs, Program 2ch, Preview 2ch, Clean 2ch, Line 2ch, Aux 1ch.
- 16ch Frame synchronizer and reference error free (REF) which means Keep the output SDI signal stable from the instant input reference loses.
- Audio Level can be controlled by PVW & PGM in real time (STEREO, MONO selct / AUDIO LEVEL / PHASE / Volume Control)

Block Diagram



UMC-2016M / UHD 4K Master Switcher Main	
Image	
SDI	
Number of Input	SDI 16ch
Equalization	85m at 11.88Gb/s, 200m at 2.97Gb/s, 250m at 1.485Gb/s (Typical maximum equalized length of 5C Cable)
Standard	12G, 3G, HD-SDI ST-2082-10, SMPTE242M, SMPTE425M (Level-A, Level-B)
SDI Ouput	UMC-2016C : PGM 2ch, PVW 2ch, Clean 2ch, AUX 1ch, AES/EBU 2ch, Line 2ch, DSK 3ch *(Optional 6ch) HEC-1604 : PGM 2ch, PVW 2ch, Clean 2ch, AUX 1ch, DSK 3ch
AES/EBU	
Number of Output	2ch (75Ω)
Number of Ouput Sampling rate	32kHz to 96kHz Asynchronous, 48kHz Synchronous (SRC = Off)
Standard	AES-1992 for balanced synchronous or asynchronous PCM/AES SMPTE 276M for single ended synchronous or asynchronous PCM/AES
REFERENCE	
Input & Loop	2ch & Loop 2ch
HD Sync(Tri-level)	SMPTE274M, SMPTE296M 600mVp-p nominal, 75 ohm terminated through loop
SD Sync(B&B)	PAL Black Burst ITU624-4/SMPTE318, Composite NTSC SMPTE 170M 1Vp-p nominal, 75 ohm terminated through loop
SERIAL Interface RS-422 & Ethernet	
Ethernet	1Port 10/100base-T
RS-422	2 port & loop
System Protocol	K2E Standard
Data Format	9600~115200 baud rate
LTC Input	
Number of LTC	1ch
Input	Linear Time Code per SMPTE 12M-1
Input Level	0.5Vp-p to 5Vp-p
Electrical & Miscellaneous	
Dimension	483(W) X 89(H) X 492(D)mm
Weight	11.5Kg(25.3lbs)
Fuse	250V / 3A
Power	Dual Power, AC100V - AC240V