ST-6000 SERIES

ADVANCED MULTI-CHANNEL MULTI-FORMAT VIDEO TRANSCODER

MOTOROLA

High-Performance MPEG-2 & MPEG-4 AVC Multi-Channel Video Processing Platform

Product Overview

The ST-6000 series high-performance multi-channel video processing platform supports MPEG-2 and MPEG-4 standard and high-definition transcoding for satellite, cable, and IPTV applications. The platform is available in 3-, 6-, or 12-channel configurations enabling a wide range of deployment scenarios. Dual AC or DC power supplies provide increased reliability for 24/7 delivery operations. Quad Gigabit Ethernet ports provide networking flexibility and further increase reliability through port redundancy.

The ST-6000 series processes up to 12 channels per rack unit with a maximum power consumption of only 200 watts, reducing total box count and wiring needs and lowering capital and operational costs. The platform offers software upgrades from standard definition to high definition and from MPEG-2 to MPEG-4 AVC, preserving capital investments as video delivery requirements evolve. All primary channels can be accompanied by an optional picture-in-picture channel, bringing the maximum channel count per unit to 12 primary plus 12 picture-in-picture channels. All channels utilize advanced compression algorithms and look-ahead driven rate control to deliver exceptional video quality.

Dual power supplies, quad Ethernet ports and picture-in-picture come standard on all ST-6000 series products.

Highlights Include:

- Compression Flexibility

- Support for MPEG-2 Main Profile @ Main Level

- Support for MPEG-2 Main Profile @ High Level

- Support for MPEG-4 AVC Main and High Profile @ Level 3.1

- Support for MPEG-4 AVC Main and High Profile @ Level 4.0

- Multi-pass CBR and CF-CBR encoding

- Integrated low-resolution proxy (PIP)

- Motion Compensated Temporal Filter video pre-processing

- Constrained Fidelity (CF-CBR) capped VBR mode

- Four independent GigE Ethernet ports

- Down conversion HD to SD (AFD per S2016-1- 2007)

- Web browser interface

Ordering Information

Product	Description
ST-6103	MPEG-2 3-channel SD Transcoder
ST-6106	MPEG-2 6-channel SD Transcoder
ST-6112	MPEG-2 12-channel SD Transcoder
ST-6203	MPEG-2 3-channel HD/SD Transcoder
ST-6206	MPEG-2 6-channel HD/SD Transcoder
ST-6212	MPEG-2 12-channel HD/SD Transcoder
ST-6303	AVC 3-channel SD Transcoder
ST-6306	AVC 6-channel SD Transcoder
ST-6312	AVC 12-channel SD Transcoder
ST-6403	AVC 3-channel HD/SD Transcoder
ST-6406	AVC 6-channel HD/SD Transcoder
ST-6412	AVC 12-channel HD/SD Transcoder

Ordering Options – Software Licensed

Product	Description
ST6K-SLK-HDU	6XXX-SLK-HDU, SD to HD Upgrade (per channel)
ST6K-SLK-AVC	6XXX-SLK-AVC, MPEG-2 to AVC Encoding Upgrade (per channel)
ST6K-SLK-HD2SD	6XXX-SLK-HD2SD, Downconversion HD to SD (per channel)
ST6K-SLK-xPULSE	6XXX-SLK-xPULSE, Audio Transcoding to PULSE/AAC (check for availability)
ST6K-SLK-xDD	6XXX-SLK-xDD, Audio Transcoding to AAC (check for availability)
ST6K-SLK-xDD-PLUS	6XXX-SLK-xDD-PLUS, Audio Transcoding to Dolby Digital+ (check for availability)

Specifications

MPEG-2 FEATURES

MPEG-2 Main Profile @ High Level

MBAFF and Frame picture coding, PAFF Field and Frame motion compensation

Rate Control:	Look-ahead encoding with CF-CBR rate control, IBBP GOP structure (Open or Closed)

MPEG-4 FEATURES

MPEG-4 Profile:	Main and High Profile
Motion Estimation:	Supports P, B & reference B frames; 16x16 and 8x8 block sizes; 1/4 pixel motion estimation; weighted prediction
Rate Control:	Look-ahead encoding with CBR and CF-CBR rate control, Dynamic GOP, Selectable GOP structure
Coding:	CABAC entropy coding
Other:	De-blocking filter

VIDEO PROCESSING

Formats:	1080i/29.97; 720p/59.94 1080i/25; 720p/50 (HD) 625i/50; 525i/29.97 (SD)
Video Pre-Processing:	Motion Compensated Temporal Filter

UPD / IP INPUTS

MPEG-2:	Up to MP@HL
MPEG-4:	Up to HP@L4

AUDIO PROCESSING

Dolby® Digital pass-through

ANCILLARY SIGNAL SUPPORT

Signals:	L21 EIA 608, EIA 708 closed captioning, Teletext, WSS, AFD

COMPRESSED STREAM OUTPUT

Ethernet:	4 Gigabit, RJ-45
IP:	Unicast or Multicast Main plus PIP on SPTS MPEG-2 / UDP / IP
MPEG-2 transport output:	MPEG-2 Transport Stream over UDP/IP

PHYSICAL

Width:	18.9 in (48 cm)
Depth:	15.5 in (39.4 cm)
Height:	1RU, 1.75 in (5 cm)
Weight:	20 lb (9.1 Kg)
Packaged Weight:	33 lb (15 Kg)
Power:	100–240V (continuous), 47–63Hz
Power Consumption:	Less than 200W
Cooling Air:	Front to rear
Temperature:	0° C to 40° C

OTHER

Compliance:	FCC, CE, UL, RoHS, and TUV

Note: All features, functionality, and other product specifications are subject to change without notice or obligation.

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