

ME-7000

Converged Compression Platform

The ME-7000 high performance converged compression platform provides multi-codec support with SD, HD encoding/transcoding and HEVC 4K with High Dynamic Range support plus multi-screen delivery for IPTV, cable and satellite applications. The ME-7000 brings forward the latest ASIC-based compression technologies coupled with ARRIS video pre-processing software enhancements to provide a future-proof, modular platform that will support changing needs without the need to upgrade platforms. The ME-7000 provides a flexible and easily upgradeable system with cost saving low power per channel to provide simultaneous multi-format outputs in any environment.



ME-7000

Features

- Converged platform for simultaneous multi-format outputs
- Flexible, easily configurable, modular chassis
- Multi-pass, Lookahead encoding for best in class video quality
- 24 HD/24 SD or 96 SD or 72 HD-to-SD channels or a combination per 1RU chassis
- Dense channel count provides best footprint and power savings for best TCO
- Support for MPEG-4, MPEG-2, HEVC /4K and MBR
- Multiple input types: SD/HD-SDI, UDP/IP and Quad 3G-SDI/12G-SDI for 4K
- CBR, CF-CBR, MBR, VBR and Statistical Multiplexing modes
- Digital audio encoding, transcoding and pass through modes
- Compact, 1RU platform



ME-7000
(Front View)



ME-7000
(Rear View)

General Specifications

Video Inputs	
Ethernet	Eight 1GB/four 10GB optical/Cu ports IGMPv2/v3 for multicast support
SDI/HD-SDI/3G-SDI/12G-SDI	Eight BNC inputs per SDI module Up to 3 modules per chassis SMPTE-259M, -292M, -425M, -ST-2082
MPEG-2 inputs up to MP@ML	SPTS or MPTS, CBR or VBR
MPEG-4 inputs up to HP@L4	SPTS or MPTS, CBR or VBR
Video	
MPEG-2	MP@ML, MP@HL
MPEG-4 AVC	MP/HP@3.1, MP/HP@4.1/4.2 Low resolution proxy (PIP)
HEVC / 4K	Main/Main10/High@3/4.1/5.2
HD to SD down conversion	
Audio	
Pass-through, Encode, Transcode and Auto Leveling options, ARIB B-39	Dolby Digital, Dolby Digital Plus, MPEG-1 Layer 2, HE-AAC, AAC-LC
Video Outputs	
Eight 1-GB/four 10-GB Ethernet optical/copper ports	
Unicast or Multicast	
Main Plus Picture-in-Picture (PIP)	
MBR: Multi bit-rate groups with aligned GOP/IDR boundaries	
MBR Video Formats	
Multi bit-rate (GOP/IDR aligned): MPEG-4 AVC: MP/HP@3.1, 4.0, 4.1 HEVC: Main@4.1 (future)	
Progressive and Interlaced video at 59.94, 50, 29.97 or 25 frames	
MPEG-2/MPEG-4 AVC: Up to 1920 x 1080 resolutions HEVC: Up to 3840 x 2160	
Seamless Program Splicing	
MPEG-2, MPEG-4 & HEVC Ad insertion	
Data	
SCTE 35 ad insertion splice points from SCTE104	
EIA 608/708 CC, SCTE27 support, Teletext, OP-47, DVB Subtitling, ARIB B-37/B-24	
PSI Generation, DVB SI Insertion, DVB Scrambling (future)	
Data component PID pass through (grooming)	

Control Management	
Management Ports	Two 10/100/1000 Base-T Gigabit Ethernet ports for management
Browser launched Java based GUI for single unit control and provisioning	
SNMPv2/v3 with published MIB	
XML configuration over HTTPS	
Physical and Electrical	
Size	1RU, 1.75" high by 17.6" wide by 26.5" deep (44.5mm x 447mm x 673mm)
Weight	39 lbs (17.7 kg)
Typical Power Consumption	
1-module (plus Host I/O)	260 watts
2-modules (plus Host I/O)	330 watts
3-modules (fully loaded)	400 watts
Power Supply	Dual, hot-swappable AC: 100 to 240 VAC, 50 to 60 Hz DC: -44 to -60 VDC
Front and rear panel Status LEDs	
Environmental	
Operating temperature	0° to +50°C (32° to +122°F)
Storage temperature	-20° to +70°C (-4° to +158°F)
Operating altitude	0 to 10,000 feet (0 to 3048 meters)
Operating relative humidity	5% to 95%
Cooling	Front to rear
Regulatory Compliance	
Certifications	UL, CAN/CSA, CB, CE, GS, VCCI, FCC, ICES, CISPR, RoHS, WEEE, REACH



Video and Audio Encoding/Transcoding

The ME-7000 incorporates the latest generation silicon and software compression algorithm technology based on a 20+ year history of delivering state-of-the-art digital video encoding and transcoding products. This provides the ME-7000 with exceptional video quality and encoding/transcoding capacity of up to 24 channels of High VQ HD or up to 96 High VQ SD channels within a single platform.

Improved video compression efficiency lets operators deliver a better experience to their subscribers. For equivalent bit-rates, the ME-7000 offers high quality video, at higher resolutions, than current technology. Alternatively, operators can deliver more streams in the same bandwidth with equivalent video quality, important for bandwidth-constrained environments.

The use of dedicated programmable silicon designed for multi-codec compression provides the ME-7000 with a consistent, high density channel count within a 1RU platform, independent of input or output encoding formats. The dual power supplies offer ultimate flexibility for 24/7 delivery operations. Flexible configuration options simplify headend architectures, reduce chassis count, and increase reliability, in addition to reducing capital and operational costs through reduced power and cooling requirements.

Advanced pre-processing support complements advanced compression algorithms to deliver exceptional video quality. Through the use of innovative video processing technology, the ME-7000 optimally applies video enhancements to the video content. The net result is the delivery of better quality video at lower bit rates.

Management and Redundancy

The ME-7000 is designed for 24x7 operation with dual, hot-swappable, power supplies, dual fan trays and available chassis redundancy using 1:1 or N:1 autonomous control and redundancy software. In addition, the ME-7000 includes an embedded Java based GUI for easy drag and drop configuration and management along with XML configuration over HTTPS. NMS support is available through an SNMP MIB for alarms.

Physical

The ME-7000 is available in a high-availability 1RU package. There are three application module slots that allow encoding, transcoding and multi-bitrate functions to scale from small systems to larger systems. Upgrades are simple and can be facilitated without removing the unit from the rack. The unit comes standard with ten(10) Gigabit Ethernet ports for input/output and management control. Optionally, eight(8) SD/HD-SDI uncompressed inputs can also be included with the application module. Up to three (3) SDI modules can be included in a chassis for a total of 24 SD/HD/12G-SDI inputs. The dense channel capability of the ME-7000 also provides operational savings by requiring less rack space and reduced power requirements per channel.

Summary

The ARRIS ME-7000 converged compression platform provides unmatched video compression efficiency for the highest quality video at all bit-rates. Dedicated encoding/transcoding hardware, using the latest compression silicon designs and software techniques, delivers incredible density, saving valuable space and power. Designed for 24x7 operation, the ME-7000 is the best choice for service providers delivering multi-format video services to their subscribers.

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