

## **kyrion AM2102** **H264 / MPEG2 Broadcast Encoder**



# kyrion AM2102

## High Video Quality – Low Latency – High Density

The ATEME Kyrion™ AM2102 is the High Video Quality, Multi-Channel H264 and MPEG2 encoder designed to address a broad range of Digital Television applications. Its state of the art encoding core allows bouquet aggregators, broadcasters and video service operators to save bandwidth and reach their audiences with a revolutionized picture quality.

The Kyrion AM2102 is based on ATEME 5<sup>th</sup> Generation STREAM© compression engine that delivers the highest video quality at minimum bitrates with ultra-low latency.

The Kyrion™ AM2102 comes also natively with advanced audio features (up to 8 stereo pairs per video channel) and optionally Dolby Digital (AC3) / Dolby Digital Plus (AC3+) and Dolby Digital-E support to cover any multi-language needs.

The Kyrion™ AM2102 front panel and web based user interface provide quick access to configuration menus and immediate settings ensuring a super-fast boot.

### Key Features

- SD/HD MPEG2, H264 4:2:0 8-bit
- From Single to Quad<sup>1</sup> channels encoding support with Picture-in-Picture
- Full One-SEG support for ISDB-Tb
- Simultaneous stream broadcast on up to 4 primary + 4 backup destinations over IP
- Statistical Multiplexing support
- Confidence Audio / Video input monitoring

### Benefits

- Low OPEX link with high VQ at low bitrates
- Ease of use with front panel and web GUI
- Pay as you grow – future proof investment

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## H264 / MPEG2 Broadcast Encoder

### Front Panel

Confidence Audio/Video monitoring on front panel with LCD Menus  
17-keys keyboard for input & navigation  
Presets import and export from USB slot  
Serviceable Air Filters

### Rear Panel

#### Video Input

SD-SDI (SMPTE259M-C)  
HD-SDI (SMPTE292M)  
3G-SDI (SMPTE-424M)

#### Audio Input

Embedded in SDI (up to 16 mono channels per video input)  
(SMPTE272M, SMPTE299M)  
AES-EBU input up to 16 mono channels with optional AES board

#### IP / ASI / RF

1x 100/1000 Mbps Gbe port for management  
2x 100/1000 Mbps for service streaming  
2 x ASI outputs per Video Channel

### Video

#### Video inputs formats

HD: 1080i, 1080p, 720p and 1080psf  
SD: 576i and 480i  
Input format detection

#### Video Compression

STREAM© compression engine  
H264: Baseline, Main and High 4:2:0 profile up to Level 4  
MPEG2: Main and High profile - 4:2:0 8 bits (also High 4:2:2 8 bits)  
Bitrate up to 35 Mbps  
Picture-in-Picture (option)  
CBR, VBR and Statistical multiplexing support

#### Output Resolutions

1080i x 1920, 1536, 1440, 1280 and 960 pixels  
720p x 1280, 1024, 960 and 640 pixels  
576i x 720, 640, 576, 544, 528, 480 and 352 pixels  
480i x 720, 640, 576, 544, 528, 480 and 352 pixels

#### Output Frame rates

1080i @ 25, 29.97, 30 Hz  
1080p @ 23.97, 24, 25, 29.97, 30, 50, 59.94, 60 Hz  
720p @ 50, 59.94 and 60 Hz  
576i @ 25 Hz, 480i @ 29.97 and 30 Hz

#### Picture in Picture or Low resolution

Resolutions: 288x360, 288x352, 240x 360, 240x352,  
240x320, 192x192, 144x176, 120x176, 96x128, 96x96

### Video Processing

CABAC, CAVLC, MBAFF, PAFF  
Resize & Noise Reduction filters  
Psychovisual Filter Enhancements  
Interoperable Ultra Low latency mode  
Input format detection  
Auto input format configuration mode  
Seamless Channel Insertion (SCI)  
Logo insertion – Emulated video output

### Ancillary data

AFD, WSS, WST, VPS, VPI, VITC, ATC, CC, DPI, DVB, TELETEXT, Vchp,  
SMPTE2031, OP47, SCTE35 insertion via SCTE104 triggers, DVB-subtitles  
ASI/IP multiplexing<sup>2</sup>

### Audio

#### Audio Compression

MPEG-1 Layer II Encode  
Dolby Digital-E, DD, DD+, AC3, AC3+, PCM pass-through  
*Optional:*  
MPEG-2/MPEG-4 AAC-LC, HEV1-AAC, HEV2-AAC  
Dolby Digital-E decode /Dolby Digital (AC3) Encode  
Dolby Digital plus (AC3+) Encode

### Output Transport Layer

MPEG-2 TS over UDP/ Unicast / Multicast: up to 8 IP network streams (4  
mains + 4 backups) per channel  
MPEG-2 TS over DVB-ASI (EN 50083-9)  
ASI and IP streaming simultaneously  
Selectable PID BISS encryption (EBU R139)  
VLANS - Route Table Editor - Multi-gateways

### Configuration & Management

Web based Graphic User Interface  
In-band and Out-Of-Band Management  
SNMP (MIB v2c) with remote SNMP supervisor  
128 presets configuration memory slots  
Integrated with ATEME Management System (AMS)

### Physical and Environmental

Dimensions 19" 1-RU  
(482 x 44 x 519 mm/19"x1.73"x 20.4")  
Min Weight 6.4 kg/14.1 lbs.  
Max Weight 7.3 Kg /17 lbs.  
User Serviceable Air Filters  
Cooling air flow from front to back  
Redundant Power supply 100-240 VAC, 50/60 Hz  
Optional dual power socket  
Optional 48 VDC Power supply<sup>2</sup>  
Typical consumption: 90 W Single Channel  
Operating temperature: 0 to 55 °C / +32 ° to +131°F  
Storage temperature: -20 to 70 °C / -4° to +158 °F  
Operating humidity: 5 to 90% (non-condensing)

<sup>1</sup> Committed Roadmap item

<sup>2</sup> Contact Factory for availability