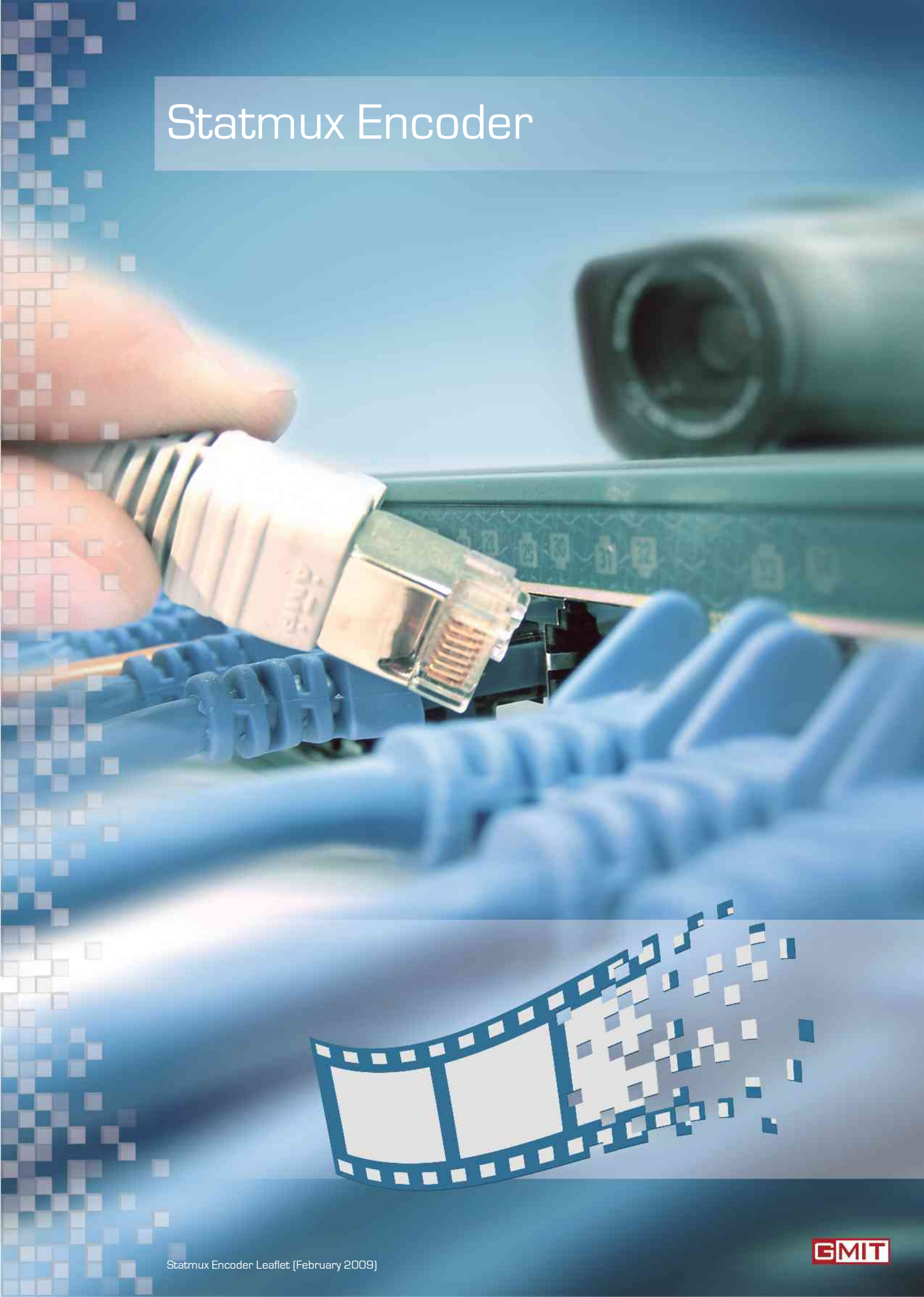


Statmux Encoder



Statmux Encoder

DESCRIPTION

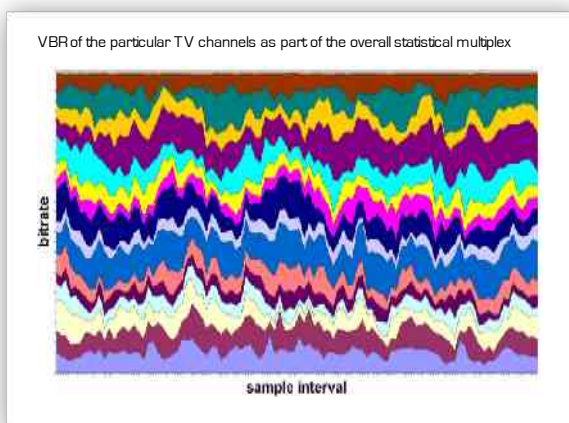
As most other modern broadcast standards, DVB-H is utilizing the high-efficient and state-of-the-art media codecs H.264/AVC and HE AAC. Providing strong compression algorithms, these codecs allows transmission of media streams with excellent picture and audio quality, even at low bit rates. Additionally scrambling the content provides protection of these media streams against unwanted and unauthorized access and ensures the success of the business model.

GMIT offers a cost and space-efficient encoding and scrambling solution. Designed for the use in mobile TV platforms, the solution offers highest service availability, outstanding picture quality and reliable content protection. Due to its standardised IP/RTP output and encryption methods, the GMIT encoding and scrambling solutions are fully DVB-H compliant and were successfully field-tested with handsets from multiple vendors.

STATMUX ENCODER FEATURES

The GMT Statmux Encoder produces fully DVB-H compliant media streams with stunning video and audio quality, even at lowest bit rates. It provides the following main features:

- Encoding of TV and Visual Radio services, including switchable slide show mode for perfect encoding of still pictures at very low bit rates
- Statistical Multiplexing: Using variable bit rate (VBR), statistical multiplex encoding reducing the total bit rate amount about 40 % in comparison to constant bit rate (CBR) encoders with identical picture quality
- IP-based input of MPEG-2 transport stream makes expensive grabber hardware obsolete
- Up to six Encoders on one single machine, which dramatically reduces hardware costs



SCRAMBLER FEATURES

The GMIT Scrambler component provides reliable content protection using the open standards ISMA-Cryp and Simulcrypt. Encryption based on open standards is a groundbreaking technology which will facilitate the adoption of mobile TV around the world. The following features are provided by the GMIT Scrambler component:

- Streaming of encrypted RTP packets
- Complete redundant setup in combination with GMIT X-BAR MCP (including keyword synchronisation)
- Standardised interfaces for communication with key management and encryption systems

FRAUNHOFER HEINRICH-HERTZ-INSTITUT

The GMIT Statmux Encoder and Scrambler are both resulting from a long-term partnership between GMIT and the well-known Fraunhofer Heinrich-Hertz-Institut (HHI). The leading edge and long-term research of video coding at Fraunhofer HHI, combined with GMIT's service management and unique redundancy functionality are resulting in an outstanding and highly reliable encoding and scrambling solution.

GMIT PRODUCTS

GMIT products provide highest service availability and are ready to run 24x7, proved in several commercial deployments. They are based on software-only components, which allow the use of regular PC-based server hardware. Even one server can host more than one GMIT product.

Due to its highly flexible software architecture and design, all GMIT products can easily be adapted. Customers are therefore flexible for future enhancements and upcoming standards and well prepared for individual integrations and customizations. This helps to reduce time-to-market and provides advantages compared to other vendors.



TECHNICAL SPECIFICATION (ENDCODER)

Input

INPUT FORMAT

- MPEG-2 Transport Stream (ISO/IEC 13818-1) over IPv4/UDP

Output

MEDIA STREAMS

- RTP Stream including H.264 Video Payload (RFC 3984)
- RTP Stream including AAC Audio Payload (RFC 3640)

ADDITIONAL DATA

- RTCP Sender Report Messages for video and audio stream (RFC 3550)
- Local SDP-File storage (RFC 4566)

Video Codecs

DVB-H CAPABILITY CLASSES

- Class A, Class B, Class C

SAMPLE RATES

- 25, 12.5, 6.25 fps (PAL) and 30, 15 7.5 fps (NTSC)
- PAL and NTSC also down to 1 - 0,5 fps for Visual Radio

VIDEO RESOLUTIONS

- 128x96 up to 400x224

BIT RATES (40.000 - 768.000 BPS)

- Constant or Variable Bit Rate (CBR/VBR)
- Statistical Multiplex (configurable VBR/CBR channels and different channel weighting)

Video Features

- Cropping and Scaling
- Letterbox support for 16:9 input material
- Scene Change Detection
- Dynamic Complexity Mode
- Channel grouping
- Adjustable dynamic channel weighting in StatMux mode

Audio Codecs

ADVANCED AUDIO CODING

(AAC ISO/IEC 14496-3)

- Low Complexity
- High Efficiency AAC v1 an v2
- (ISO/IEC 14496-3:2001/AMD.1 and 4)

CONSTANT BIT RATE

- 16 - 320 kbps

SAMPLE RATES (MONO/STEREO)

- 32.0 kHz / 44.1 kHz / 48.0 kHz

TECHNICAL SPECIFICATION (SCRAMBLER)

Input

INPUT FORMAT

- RTP Stream including H.264 Video Payload (RFC 3984)
- RTP Stream including AAC Audio Payload (RFC 3640)

Output

MEDIA STREAMS

- ISMACryp based RTP Stream over IP (RFC 3640)

ADDITIONAL DATA

- RTCP Sender Report Messages for video and audio stream (RFC 3550)
- Local SDP-File storage (RFC 4566)

Scrambling Functionality

DVB-H SCRAMBLING

- ISMACrypProxy (Scrambler)
- SimulCryptSynchronizer (SCS)
- SingleCAS and MultiCAS support
- SimulCrypt (v1.4.1 and v1.5.1) compliant
- Support of N+N redundancy concepts with automatic fail over switching using optional GMIT X-Bar technology

ADMINISTRATION AND REQUIREMENTS

Administration and Monitoring

LOCAL

- Control: Console-based UI

REMOTE

- Control: Web-based UI and SNMPv2 Control
- Monitoring: Web-based UI and SNMPv2

Hardware and System Requirements

HARDWARE REQUIREMENTS

- CPU: min. 1x INTEL XEON Quadcore depending on stream count
- RAM: 4 GByte
- USB: Port for license key (alternative network connection to dedicated license server)

OPERATING SYSTEM

- Ubuntu Linux LTS 8.04 (Hardy) 32 bit server edition

SUPPORT

- Internet connection (FTP) necessary for easy installation (alternative installation possible)
- SSH connection necessary for additional GMIT support

Contact

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GET MORE INFORMATION



MORE GMIT PRODUCTS



GMIT is a component supplier providing headend technology and interactivity for digital and mobile broadcast. Our software products for stationary and mobile TV are optimized to satisfy the essential needs for reliability, economy and flexibility.