VIVACE – Live Encoder Platform

igolgi's VIVACE encoding platform series is a very versatile, compact, high quality and reliable encoding platform with a variety of configurations for standards based encoding..

Using SD/HD-SDI input, a baseband signal with embedded audio can be encoded into MPEG2/H.264/HEVC streams at very high quality over a variety of supported resolutions and bit rates. CVBS or compressed ASI input options can also be supported.

The output over IP can have a variety of formats. Optional output ASI support is also available.

In addition, the VIVACE platform can optionally support the CALM act and also offers Emergency Alert System (EAS) integration through a CVBS input interface. Static PSIP and input interface (over IP) to support an external dynamic PSIP generator is also available as standard features.

A convenient Web interface with a very rich and easy to navigate graphical user interface together with diagnostic and maintenance tools makes the VIVACE platform easy to set up and manage.

The product series supports both SD and HD encoding for MPEG2/H.264/HEVC video and AC3, AAC-HE v2 audio, over a wide variety of profiles. The product is available in a variety of configurations for SD and HD applications.

The product also supports a high quality low-latency mode targeting specific applications. The low delay feature targets specific two-way applications and can have encoder latency of under 70*ms* for specific configurations

Key Features:

- Innovative and very high quality algorithms for MPEG2/H.264/HEVC video compression that are optimized to run efficiently on multi-core CPUs
- RTP/UDP/IP and MPEG2-TS transport outputs supported
- CBR, VBR and capped VBR rate output rates supported
- True Multi-pass for maximum compression efficiency and high video quality
- Statistical Multiplexing supported (for multichannel configurations)
- CALM Act Support (SW option)
- EAS support (optional - through CVBS interface)
- Logo Insertion
- Text scrolling feature (based on input into Web interface)
- Flexible , in-depth, Web based management and control interfaces
- Customizable software platform for easy integration of many optional functions
- NTP clock synchronization
- External clock sync. available for HD-SDI input
- Automatic redundancy management
- SNMP for monitoring and control
- Optional ASI output also available
- Different Form Factors for various configurations

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SPECIFICATIONS

Compression Standards

Video

MPEG-2

Simple, Main, and 422P Profile up to High Level

MPEG-4 AVC/H.264

Baseline, Main, and High Profile Up to Level 4.2 HD

HEVC – Main up to Level 4 HD

Audio

Multiple programs per channel

MPEG-1 layer 2

MPEG-2 layer 3 (mp3)

MPEG2/MPEG-4, AAC-LC, AAC-HE

AC-3 stereo and 5.1 encode, AC-3 pass through

Sampling Freq 32, 44.1, 48 KHz

Resolutions and Frame rates

Flexible – Mobile to HD 1080p60

Mix and match resolutions

Example Common Resolutions :

576i and 480i x 720, 544 and 352 pixels @ 25, 29.97 and 30 Hz

1080i x 1920, 1440, 1280 and 960 pixels @ 25, 29.97 and 30 Hz

720p x 1280, 960 and 640 pixels @ 23.976, 50, 59.94 and 60 Hz

1080p x 1920,1440,1280, and 960 pixels @ 23.976, 50, 59.94, and 60 Hz

(1080p60 is feature upgrade option)

Audio/Video/Transport Processing

Cropping/Scaling

Single in – multi-out (option)(e.g. PIP)

Noise Filtering (option)

COPv3 FEC Encode(option)

Audio Level Control (option)

Other Encoding Features

Fixed and Dynamic GOP Structures

Single and multi-pass modes

Low Latency mode (option)

Rate Control

CBR

VBR with stat mux support

Capped VBR

Input Interfaces

SD/HD-SDI

Analog/Component input (option)

ASI or IP interface for compressed inputs (option)

Output Interfaces

IP

ASI (option) with SPTS or MPTS(option) output

Output Bitstream Formats

MPEG2-TS

IP/UDP/RTP

IP/UDP/RTP/MPEG-TS

COP v3 FEC encoding (option)

Additional Features

Logo insertion

CALM Act Support (option)

EAS Support (option)

Scheduled Text Scrolling Support (option)

Configuration and Management

Embedded web-server interface

SNMP MIB (customizable option)

Remote service and upgrade

Xeon Platform

Haswell based 1U/2U form factor(depending on configuration) with dual power supply

Power Supply:

AC-DC power supply w/ PFC

AC : 100-240V, 50-60 Hz, 3-6 Amp

Redundant Power supply (option)

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VIVACE ENCODER - PRODUCT CONFIGURATIONS

Part Number	Size	Description
Standard Definition Encoders		
VIVACE-ENC-2SD-IP	1RU	Multi-channel MPEG-2/H.264/HEVC Encoder/Multiplexer, 2 SD, with IP output
VIVACE-ENC-2SD-AS	1RU	Multi-channel MPEG-2/H.264/HEVC Encoder/Multiplexer 2SD with ASI output
VIVACE-ENC-4SD-IP	1RU	Multi-channel MPEG-2/H.264/HEVC Encoder/Multiplexer, 4 SD, with IP output
VIVACE-ENC-4SD-AS	1RU	Multi-channel MPEG-2/H.264/HEVC Encoder/Multiplexer 4SD with ASI output
VIVACE-ENC-6SD-IP	2RU	Multi-channel MPEG-2/H.264/HEVC Encoder/Multiplexer 6SD with IP output
VIVACE-ENC-6SD-AS	2RU	Multi-channel MPEG-2/H.264/HEVC Encoder/Multiplexer 6SD with ASI output
VIVACE-ENC-8SD-IP	2RU	Multi-channel MPEG-2/H.264/HEVC Encoder/Multiplexer 8SD with IP output
VIVACE-ENC-8SD-AS	2RU	Multi-channel MPEG-2/H.264/HEVC Encoder/Multiplexer 8SD with ASI output
VIVACE-ENC-16SD-IP	2RU	Multi-channel MPEG-2/H.264/HEVC Encoder/Multiplexer 16SD with IP output
VIVACE-ENC-16SD-AS	2RU	Multi-channel MPEG-2/H.264/HEVC Encoder/Multiplexer 16SD with ASI output
High and Standard Definition Encoders		
VIVACE-ENC-1HD_3SD-IP	2RU	Multi-channel MPEG-2/H.264 Encoder 1HD + 3SD with IP output
VIVACE-ENC-1HD_3SD-AS	2RU	Multi-channel MPEG-2/H.264 Encoder 1HD + 3SD with ASI output
VIVACE-ENC-2HD-IP	2RU	Multi-channel MPEG-2/H.264 Encoder 2HD with IP output
VIVACE-ENC-2HD-AS	2RU	Multi-channel MPEG-2/H.264 Encoder 2HD with ASI output
VIVACE-ENC-4HD-IP	2RU	Multi-channel MPEG-2/H.264/HEVC Encoder 4HD with IP output
VIVACE-ENC-4HD-AS	2RU	Multi-channel MPEG-2/H.264/HEVC Encoder 4HD with ASI output
OPTIONS		
VIVACE-OPT-TRNSC		Transcoder option for any encoder
VIVACE-OPT-RF2		RF (2) Inputs for Any Encoder
VIVACE-OPT-CC		Closed Caption Generation
VIVACE-OPT-SM		Statistical Multiplexer
VIVACE-OPT-SD_SDI		Optional SDI port instead of CVBS Port
VIVACE-OPT-RED-POWER		Optional Redudant Power Supply
VIVACE-OPT-SD2HD-UP		Hardware that is capable of Upgrading from 4SD to 1HD+3SD channels
		All encoders include:
		- PSIP generation
		- EAS switching
		- CC608 and CC70 Pass thru'
		- Dolby AC3 Audio encoding

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