



Envivio Mobile Series 4Caster M4

Multi-Channel Mobile TV Encoder for 3G Networks

Offering a High Quality, High-Density and Cost-Effective Headend Solution for 3GPP Mobile TV Applications

As users demand more video content, operators face the challenge of creating quality-conscious, yet cost-effective video headends for their mobile TV services.

The Envivio® 4Caster™ M4 is a telco-grade, quad-channel encoder that supports multiple-rates, multiple-resolutions and is capable of encoding in both H.263 and H.264. M4 allows operators to optimally distribute high quality video to mobile television subscribers. As an integral part of the Envivio Mobile Series, the 4Caster M4 complements the product range by offering affordable access to mobile TV encoding for 2.5G, 3G and 3.5G network operators.

The 4Caster M4 is a high-density product supporting four separate analog TV channel inputs in a space saving one rack unit (RU). Operators may select up to three different output profiles per input channel. M4 delivers the industry's leading video quality and provides mobile operators with advanced features such as live bit rate switching and advanced rate control.

In addition, the 4Caster M4 supports the widest range of 3G devices on the market today. The interoperability and extensibility of M4 assures its compatibility for the 3G networks of today and tomorrow

Features

- Quad-channel live mobile video encoder with up to four simultaneous output profiles per channel
- Support for 3G mobile networks including 3GPP v4,5,6 and 3GPP2
- Analog video and audio inputs
- Output profiles based on frame rate, resolution, video/audio codecs and network type
- Advanced rate control including constant bit rate (CBR), capped variable bit rate (VBR) and available bit rate (ABR) encoding modes
- Network-aware rate control
- Live multi-rate switching
- Embedded web-based user interface for control and monitoring
- SNMP MIB for monitoring by external system
- Remote management available with optional Envivio 4Manager system
- Optional hot-swappable dual power supply



Product Highlights

- High-density 3GPP mobile TV encoding
- Cost-effective approach for mobile TV rollouts
- Industry leading video quality
- Extensive device support, including all of the most popular video handsets currently deployed in mobile networks, as tested and verified by Envivio customers and partners
- Video to 2.5G, 3G, and 3.5G networks, as well as next-generation networks such as 4G, Wifi and Wimax
- Management and output of up to two simultaneous subscriber profiles per channel
- Powerful network-aware bit rate control capabilities
- Part of the Mobile Series of encoders from Envivio, which are deployed at over 100 Tier 1 and Tier 2 operators

Applications

- 3GPP live mobile TV
- Video-on-demand (VOD) content encoding



Envivio Mobile Series 4Caster M4

Input

Video

Composite (4 x BNC connectors)

Audio

Up to 4 stereo channels

Unbalanced audio input (8x RCA connectors)

Balanced audio input (8x XLR via HD26 connector)

Output Interface

IP Output

4 x Ethernet (10/100/1000 Base T) entirely configurable,

Network protocols: RTSP, RTP, RTCP, UDP, IPv4, IGMPv2.0

MPEG-4 over RTP/UDP/IP with configurable max packet size

Announcement: SAP, SDP

Control and system: HTTP, SNMP, NTP, FTP

File Output

3GPP/3GPP2 file output

Standards

3GPP2, 3GPPv4, 3GPPv5

3GPPv6 single rate, 3GPPv6 multi rate

Preprocessing and Encoding

Video Processing

Video adjustments (brightness, contrast)

Frame resizing (see below available resolutions)

Custom frame rate (from 2 fps to 30 fps)

WSS handling

Video Encoding

Adaptive GOP

Scene cut detection

Constant Bit Rate (CBR), Available Bit Rate (ABR) and Capped Variable Bit Rate (Capped VBR) modes available

Encoding resolutions:

- 80x64
- 128x96
- 144x80
- 144x140
- 160x90
- 160x120
- 176x120
- 176x128
- 176x144
- 220x176
- 240x176
- 320x180
- 320x240

H.263 Profile 0, Levels 10, 20 and 30

MPEG-4 Simple Profile, Levels 0, 0b, 1, 2, 3

H264 Baseline levels 1, 1b, 2, 3 with:

- Look-ahead
- Multiple reference frames

Data rate: 20 kbps to 768 kbps

Audio Processing

Level adjustment

Stereo to Mono conversion

Audio resampling

Audio Encoding

MPEG-4 AAC-LC, HE-AAC and HE-AAC v2 (with Parametric Stereo)

QCELP

AMR-NB and AMR-WB

Stereo, Mono, and Dual mono supported

Sampling rate: 8kHz to 48kHz

Data rate: 8 to 384kbps

Advanced Features

Local file recording

Files hinted for VOD streaming

Store and forward

Stream preview available in 3GPP players (e.g. QuickTime)

Interface

Local

Front-panel LCD control

Remote

Save/Restore configuration

Web-based interface for monitoring and control

Interface for 4Manager or third party NMS based on SNMP and SOAP

Upgradeable firmware and options

Hardware

Dimensions

483 mm (W) x 534 mm (D) x 45 mm (H)

19 in (W) x 21 in (D) x 1.75 in (H)

Weight

11 kg (24 lbs)

Power Supply

100-240 VAC auto-ranging, 260 W maximum

Optional dual power supply

Operating Conditions

Ambient Temperature

Operating temperature: 0 to 50° C (32 to 122° F)

Non-operating/storage: -40 to 70° C (-40 to 158° F)

Relative Humidity

Non-operating: 95% at 30° C (86° F) non-condensing

Available Configurations

4Caster M4-4: 4 single rate profiles

4Caster M4-8: 8 single rate profiles

4Caster M4-12: 12 single rate profiles

For more information, visit:

www.realnetworks.com



NORTH AMERICA

RealNetworks, Inc. — Corporate Headquarters

NA Sales: 1-800-444-8011

Sales & Support URL: <http://www.realnetworks.com/support>

LATIN AMERICA & CARIBBEAN

Contact: Tony Roca

Phone: 305-662-8435

Email: lamsales@real.com

NORTHERN EUROPE, BENELUX, SCANDINAVIA & MIDDLE EAST

Contact: Allen Dickson

Phone: +44 203 051 9057

Email: allendickson@real.com

SOUTHERN EUROPE, EGYPT, NORTH AFRICA & SOUTH AFRICA

Contact: Filippo Arletti

Phone: +39 348 5153715

Email: farletti@real.com

CENTRAL & EASTERN EUROPE

Contact: Oliver Funke

Phone: +49 2102 403914

Email: ofunke@real.com

FRANCE

Contact: Guillaume Gerard

Phone: +33 1 53 43 90 65

Email: ggerard@real.com

JAPAN

RealNetworks, Inc. Japan

Phone: +81 3 5371 9237

Email: japansales@real.com

GREATER CHINA (BEIJING)

RealNetworks, Inc. China

Contact: Echo Shen

Phone: +86 10 8565 6466 ext. 328

Email: asiasales@real.com