



## dicas2022 MULTI ENCODER

### Multi-Format Encoder



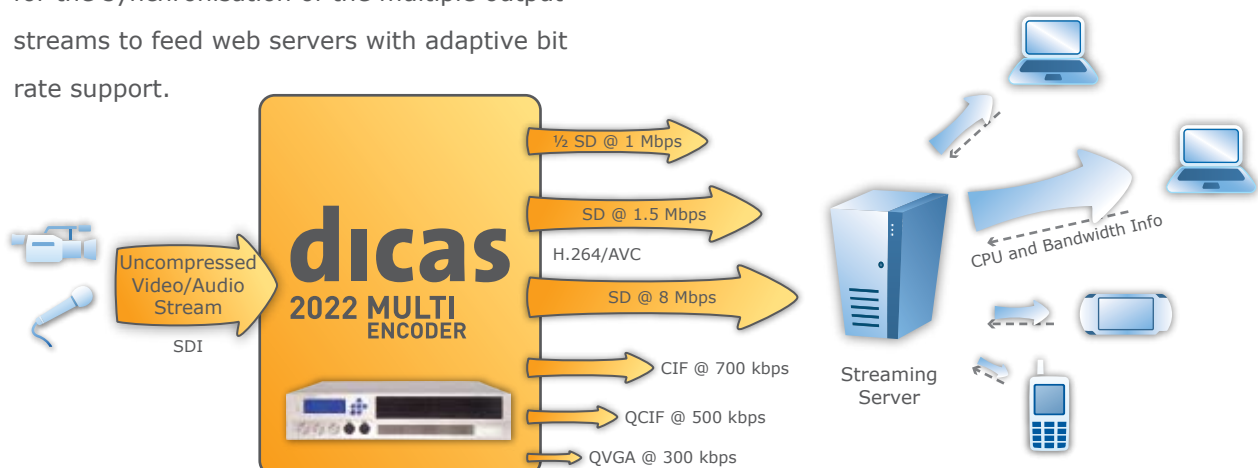
The dicas2022 is a professional multi-format encoder designed for outside broadcast (OB) and direct streaming from live events. This sophisticated, high performance 2-RU machine enables IPTV, WebTV and MobileTV operators to encode a single input channel into various output formats in parallel.

For each output stream the data rate, resolution, frame rate and transport protocol can be selected completely independently and played out in H.264, MPEG-4 or H.263/ 3GPP. With a single encoder broadcast-quality content can be delivered simultaneously to TV set-top boxes, PC software players and mobile phones. On the other hand the dicas2022 Multi Encoder allows for the synchronisation of the multiple output streams to feed web servers with adaptive bit rate support.

### ADAPTIVE LIVE STREAMING SUPPORT

Companies and institutions streaming video over the internet often have to cope with fluctuating bandwidth capacities leading to bad picture quality, long buffering times or jerky streams. With Adobe Flash, Microsoft Silverlight or Apple's Adaptive Bitrate Streaming there are various approaches to deliver the best possible picture quality at any time by adapting the bit rate of a video stream to the client's available bandwidth. dicas supports them all.

The dicas2022 Multi Encoder produces up to 8 parallel output streams from a single input channel. This is the perfect feed for web and streaming servers which simply have to switch to the most appropriate video stream according to the client's feed back.





## dicas2022 MULTI ENCODER

### Connectors

#### Video In

- Analog Composite BNC (SMPTE 259M)
- Digital SD-SDI, BNC (SMPTE 259M)
- Digital HD-SDI, BNC (SMPTE 259M)
- HDMI (without HDCP) (optional)

#### Audio In

- analog balanced (XLR)
- embedded SDI

#### Video/Audio Out

- Ethernet (10/ 100/1000 BaseT) half/full duplex

### Video Input

- Number of channels: 1
- SDTV: NTSC (M), PAL (B, D, G, H, I, K, M and N)
- HDTV: 720p/60/59.94/50, 1080i/30/29.97/25 and 1080p/24

### Video Output

- Number of streams: 8
- SDTV: NTSC (M), PAL (B, D, G, H, I, K, M and N)

### MPEG-4 and H.263

- MPEG-4 Simple Profile (SP) levels 0 (SVPL0), 0b, 1–3
- MPEG-4 Advanced Simple Profile (ASP) levels 1–5
- I/P/B-VOP
- AC/DC Prediction
- 4-Motion Vector
- ¼ pixel estimation/compensation
- Error resilience tools (data partitioning, video packets)
- Interlaced coding

### MPEG-4 AVC/H.264

- Baseline, Main and High Profile Levels 1, 1b, 2, 3, 4
- I-, P- and B-slices
- Intra Prediction all modes,
- Inter prediction all block sizes
- ¼ pixel motion estimation/compensation
- Progressive and interlaced coding (PAFF, MBAFF)
- CABAC/CAVLC
- 4x4 and 8x8 transform

### Resolution Conversions

- QCIF (176x112/144)
- QVGA (320x240)
- ½ D1 (352x480/576)
- CIF (352x288/240)
- 2CIF (704x288)
- 4CIF (704x576)
- 480 x 576/480
- D1 (704x576/480)
- SD (720x576/480)

### Video Processing

- De-Interlacing prefilter
- De-blocking filter
- Scene-cut detection
- Logo insertion
- Adaptive I-frame and B-frame insertion
- Adjustable key-frame period including I-frame only
- Adjustable or fixed GOP size
- Rate Control: capped variable bit rate
- Rate Control: variable bit rate (VBR)
- Rate Control: average bit rate (ABR)
- Adjustable video buffer size (VBV mode)
- Frame accurate time stamps

### Coding Parameters

- Adjustable video bit rate 48 kbps - 6 Mbps
- Adjustable frame rate 5 - 30 fps
- Adjustable audio bit rate 16 - 384 kbps
- Adjustable audio sample rate 8 - 48 kHz
- Audio signal amplifying

### Transport

- MPEG Transport Stream over UDP (pure IP)
- MPEG Transport Stream over RTP
- Direct Media over RTP/UDP
- RTP with configurable packet size
- RTMP (Flash) Sender
- Session management over RTSP or HTTP
- SDP file
- 2D forward error correction (Pro-MPEG CoP3v2)
- Multicast and Unicast over IP
- IPv4 support
- SAP

### Dimensions & Power

- Dimension: 436mm (19") x 411mm (16.2") x 90mm (2RU) (WxDxH)
- Weight: 10.10 kg (22.27 lbs)
- Power Supply: 110-240 V
- Power Consumption: 200 W
- Air flow: Front to back

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