

# MAGEWELL

## Ultra Encode SDI Technical Specifications

Copyright (c) 2011–2021 [Magewell Electronics Co., Ltd.](#) All rights reserved.

Specifications are based on current hardware, firmware and software revisions, and are subject to change without notice.

NDI is trademark or registered trademark of NewTek Inc.

Revised 26/11/2021

### Input Features

- Max input & loop-through signal: 2048x1080 60fps
- Supported inputs include:
  - 2048x1080p/2048x1080i/1920x1080p/1920x1080i 23.98/24/25/29.97/30/47.95/48/50/59.94/60
  - 1280x720p 25/29.97/30/50/59.94/60
  - 720x576 25p/50i (PAL SD)
  - 720x480 29.97p/59.94i (NTSC SD)
- 8/10/12-bit color
- Input & loopthrough 16-Channel SDI embedded audio
- Input Audio from 3.5 mm LINE IN
- SD/HD/3G BNC input & loopthrough
- SD (ST 259)/HD (ST 292)/3Ga (ST 425)/3Gb (ST 425)/3Gb-DL(ST 425)/3Gb-DS(ST 425) standards

### Encoding Features

- Dual stream encoding: main stream and sub stream
- Max bitrates:
  - Main Stream - 16Mbps
  - Sub Stream - 2Mbps
- Supported resolutions:
  - HD: 1920x1080, 1600x1200, 1440x1080, 1440x900, 1280x1024, 1280x960, 1280x800, 1280x720, 1024x768
  - SD: 960x540, 800x600, 768x576, 720x576, 720x540, 640x480, 640x360, 480x360, 480x270
- Supported frame rates: 60/59.94/50/30/29.97/25/24/15/10/5fps
- H.264/H.265 (HEVC) SEI message supports system timecode or RP-188 timecode extracted from input
- H.264/H.265 (HEVC) SEI message supports native CEA-608/608 over 708 captions
- Encoding 2-channel AAC audio at 48kHz, 16-bit
- Supported audio bitrates: 256/192/128/96/64/48/32/16 kbps
- Extracting audio from SDI signal and output through LINE OUT
- Encoding videos after de-interlacing
- Encoding interlaced input signal as main and sub streams in the format of interlaced H.265 (HEVC)

### Streaming Features

- Natively support Facebook, Twitch and YouTube
- Supported streaming protocols: RTSP/RTMP/RTMPS/SRT Caller/SRT Listener/NDI|HX2/HLS (push)/TS over UDP/TS over RTP
- Allow simultaneous sessions over the same streaming protocol. Streaming protocols are as follows.
  - Up to 6 sessions of TS over RTP and TS over UDP simultaneously
  - Up to 6 sessions of SRT Caller and SRT Listener simultaneously, containing one SRT Listener session at most (max 8 clients simultaneously)
  - Up to 6 sessions of RTMP and RTMPS simultaneously
- Stream only 1 session of HLS (push), RTSP, or NDI|HX2
- Total bitrates for different network connection types:
  - 24Mbps for all streams is recommended for a wired network connection
  - 16Mbps for all streams is recommended for a wireless network connection
- Specify streaming main stream or sub stream for each session

### Configuration Management

- Register with Magewell Cloud
- Remote control via WebUI and Magewell Cloud
- Provide comprehensive information regarding the system information of device and working status in real-time

- Video thumbnail preview
- Configure parameters of volume and color, input and output signals, stream profiles, no signal image, the Ethernet and Wi-Fi connection, as well as date and time
- Update firmware
- Export configuration profiles of the device
- Support IE/Edge/Firefox/Chrome/Safari/Opera web browsers
- Provide HTTP APIs

## Network Interfaces

- Wired Ethernet network: 10/100/1000Mbps
- Wi-Fi 802.11 a/b/g/n/ac
- 3G/4G USB mobile broadband Modem (not included)

## Input/Output Interfaces

- SD/HD/3G BNC input and loop-through interfaces
- 3.5mm LINE IN
- 3.5mm LINE OUT

## LED Indicators

- LEDs indicating the status of power, input signal, streaming, Ethernet and Wi-Fi connection

## Power Supply and Consumption

- DC 5V/2A
- Max power consumption: ~7.6 W

## Form Factor

- 106.6mm x 106.2mm x 25mm

## Accessories

- AC adapter
- Wi-Fi antenna
- USB 2.0 Type B cable
- T-bracket

## Screw Mounting Hole

- 2 x M3 threaded hole
- A standard 1/4"-20 socket provided by T-bracket

## Working Environment

- Operating temperature: 0 to 40 deg C
- Storage temperature: -20 to 70 deg C
- Relative humidity: 5% to 90% non-condensing