



in the  
**BLINK**  
of an **EYE**

**ADTEC**  
Digital

**TONER**  
cable equipment, inc.

*"The robust, reliable, low-latency architecture coupled with a high level of product support have made the units a valuable resource for our operation."*

*-- Mike Meehan, Senior Vice President  
Operations NBC Sports, USA*

# EN-91

## MPEG 4 High Definition Ultra Low Delay Encoder



### EN-91 Applications:

- DSNG (ultra-low, low and normal delay)
- Tier One Contribution
- 3D Discrete Contribution
- High Efficiency Trunking (JPEG replacement)
- Distribution

### EN-91 Features

- Automatic SD and HD detection
- AVC 422 Video encoding
- Sixteen (16) channels of phase aligned audio encoding
- Time Code, Captions, Teletext and other VBI support
- Redundant Power Supplies
- Front Panel, Web UI, SNMP control and monitoring
- DVBS/S2 modulation with IF or L-Band
- Modulation modes from QPSK to 32APSK
- ASI and IP Transport (IP supports SMPTE 2022 FEC)

The EN91 is a ultra-low delay MPEG 4 AVC/H.264 high definition encoder. The ultra-low delay mode requires the use of Adtec's RD60 IRD and delivers picture-to-picture services in 100 milliseconds; The EN91 standard delay mode is fully interoperable with other IRDs making it ideal for mission critical trunking and ad-hock applications. MPEG 4 AVC/H.264 is significantly more efficient than JPEG making it the CODEC of choice for multiplexed and bandwidth sensitive applications; AVCs inherent interoperability significantly adds to the value of solutions based on this industry standard.

# EN-81

## DSNG Multi-CODEC Encoder/Modulator



### EN-81 Applications:

- DSNG (low and normal delay)
- Tier One Contribution
- 3D Discrete Contribution
- Fiber and IP Transport
- Ad-Hock Services

### EN-81 Features

- Comprehensive Video/Audio Options
- Low Latency
- Multiple Concurrent IP streams w/ FEC
- Advanced VBI support
- Video/Audio Signal Generation
- Robust/Light Weight design
- SNMP Monitoring

The EN81 is a multi-CODEC low delay MPEG 2 and MPEG 4 AVC/H.264 high definition encoder. Since its introduction in 2010, the EN81 has set the standard for multipurpose, multi-CODEC compression platforms. It is deployed in very large numbers globally providing high performance, reliability and value for sensitive broadcast and services contribution that do not get a second chance. Its proven interoperability, usability, and units in service are simply unmatched. The EN81 is the global benchmark for DSNG, Tier One Contribution and trunking for Teleports, OB Vans and fiber operators globally.

# RD-60

## Multi-CODEC IRD



### RD-60 Applications:

- DSNG (ultra-low, low and normal delay)
- Tier One Contribution
- 3D Discrete Contribution
- Fiber and IP Transport
- Ad-Hock services
- High Efficiency Trunking (JPEG replacement)

### RD-60 Features

- Automatic SD and HD detection
- AVC 422 Video decoding
- Sixteen (16) channels of phase aligned audio encoding
- Time Code, Captions and other VBI support
- Redundant Power Supplies
- Front Panel, Web UI, SNMP control and monitoring
- DVBS/S2 demodulation
- Demodulation modes from QPSK to 32APSK

The RD60 is a multi-CODEC ultra-low, low and normal delay MPEG 2 and MPEG 4 AVC/H.264 high definition IRD. The ultra-low delay mode requires the use of Adtec's EN91 and delivers picture-to-picture services in 100 milliseconds; the low and normal delay modes are supported by both the EN91 and EN81. The RD60 is interoperable with other encoders making it ideal for mission critical trunking, ad-hock OB, DSNG and teleport applications.

# DTA-3050

## 10 Port ASI Multiplexer



### DTA-3050 Applications:

- Service Multiplexing
- Transport Service and PID Processing
- DSNG MCPC Aggregation
- Tier One Contribution
- 3D Discrete Contribution
- Fiber and IP Transport
- High Efficiency Trunking and Service Aggregation

### DTA-3050 Features

- Conditional Access
- Aggregation of ASI, or IP based SPTS or MPTS services
- IPTV
- 3 port mirrored ASI
- Optional 2 port mirrored SMPTE-310 output interface
- Flexible Conguration & Control
- DTV Electronic Program Guide

Adtec's field proven and hardened DTA offers tremendous transport stream processing, multiplexing, and scrambling capabilities for digital transport applications. The DTA supports up to 10 ASI inputs with three mirrored ASI and Gige outputs. The dense IO configuration and ease of use makes the DTA ideal for mission critical contribution, trunking, ad-hock OB, DSNG, teleport and distribution applications.

In the blink of an eye, contribution quality high definition content can be transported around the globe using Adtec's new ultra-low delay EN-91 compression platform.

Unlike bandwidth consuming JPEG transport, the EN-91 uses the high-efficiency AVC 422 CODEC coupled with our amazingly fast transport processing to delivery video, audio and robust VBI services for time sensitive and bandwidth-limited applications.

Paired with Adtec's RD-60 IRD, the EN-91 can deliver HD services with an end-to-end latency under 100 milliseconds. Normal delay modes are standard and enable the EN-91 to seamlessly interoperate with existing infrastructure.

## **CONTRIBUTION SOLUTIONS**

Adtec's industry-leading, end-to-end contribution solutions are used daily around the globe by Tier One operators. Our contribution solutions offer field proven interoperability. Adtec's contribution solutions are feature rich, easy to use, reliable and offer the best fair market value in the industry. Several national and international organizations have performed their own testing, all gleaning similar results. The Interoperability Report from the World Broadcasting Union (WBU)" and Germany's Institut für Rundfunktechnik, both conclude - Adtec has taken a leading role in quality and interoperability.

## **HIGHLIGHTS**

- ASI, Gige and DVBS/S2 Transport
- Sixteen channels of phase aligned audio encoding and decoding (no need for external audio gear)
- Industry leading interoperability
- End-to-end Tier One contribution
- Discrete full resolution synchronous 3D transmission (accurate to one millisecond)
- Intuitive Web UI, Front Panel, and SNMP command and control
- 3D interoperability with other IRD brands
- Excellent support
- Best fair market value in the industry

