**Model D9846 Professional Decoder**

**Description**
The Model D9846 Professional Decoder is designed to receive broadcasts using MPEG-2 4:2:2 or 4:2:0 digital compression technology. It is ideally suited for contribution, broadcast and professional applications requiring 4:2:2 decoding. An optional IP interface is available for contribution networks.

**Digital Video and Audio Outputs**
SDI digital video with embedded audio and AES/EBU digital audio are provided for interfacing with studio quality equipment. Dolby® E pass-through is also available.

**Secured Broadcast Reception**
Availability of BISS modes 1 and E provides protected distribution of video, audio and/or data broadcasts to multiple locations. To further support interoperability, DVB-CI allows the receiver to be used in different broadcast networks with the most common conditional access (CA) systems.

**Key Features**
- MPEG-2/DVB 4:2:2/4:2:0 video decoding
- NTSC, PAL B/G/I/M/N/D, SECAM L/B/G/K1 video formats
- Video resolution interpolation (Pan-Scan, letter box or pass-through)
- Aspect ratio conversion (4:3, 16:9)
- ASI input
- Dual ASI outputs
- Configured and controlled via front panel LCD
- Supports Basic Interoperable Scrambling System (BISS) conditional access
- Two SDI outputs with embedded audio and VBI
- Two analog stereo outputs
- Two AES/EBU digital audio outputs
- VBI re-insertion of WST, WSS, VPS, VITC, AMOL I, AMOL II, CC, in composite and SDI
- Dolby® E pass-through (audio 1 & 2 on base unit, audio 2, 3 & 4 on 4-channel version)
- Dolby® Digital (AC-3) downmixing (left and right channels)
- EBU Teletext and DVB subtitling
- Genlock for frame synchronization
- Redundancy support via two General Purpose Indicator (GPI) contact closures
- Two broadcast video outputs
- SNMP control and monitoring
- Web-based management (10/100 Base-T)
- Two-slot, DVB-CI common interface

**Optional Features**
- DVB-S QPSK input
- MPEG over IP input
- Link and source redundancy for IP inputs
- 3rd and 4th audio outputs (analog and digital)
## Model D9846 Professional Decoder

### Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>System</strong></td>
<td>MPEG-2/DVB compatible</td>
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</table>
| **Transport Stream Inputs and Outputs** | **DVB Satellite – QPSK**  
  Frequency Range: 950 MHz to 2150 MHz  
  Symbol Rate Range: 1.0 to 45 Msymbols/s  
  L-band RF input with LNB control and loop-through output  

  **MPEG over IP Input**  
  TS bit rate: up to 44 Mbps |
| **ASI Input**               | Interface: copper BNC  
  TS bit rate: up to 100 Mbps (byte and burst mode)  

  **Dual ASI Outputs**  
  Interface: copper BNC  
  TS bit rates: up to 100 Mbps (byte mode)  
  Options: Input with selected program decrypted, loop-through of input stream |
| **Video and Audio Outputs** | **Video**  
  Analog video interfaces: 2 composite, 1 S-video  
  Digital video interfaces: 2 x SDI with embedded VBI and up to 2 stereo channels  
  Video formats: PAL-B/G/I/M/N/D, NTSC, SECAM L/B/G/K1  
  Decoding:  4:2:0 MP@ML (1.5 - 15 Mbps)  
  4:2:2 PP@ML (1.5 - 50 Mbps)  
  Video resolution interpolation: Pan-Scan, letter box or pass-through  
  Aspect ratio: 4:3, 16:9 (14:9 in future release)  
  Graphic processing: DVB subtitling, EBU (teletext) subtitling  
  Genlock input and loop-through output  

  **Audio**  
  Analog Audio: 2 balanced stereo pairs, 4 optional  
  Digital audio: 2 unbalanced outputs (BNC), 4 optional  
  Embedded in SDI: 2 stereo pairs, 4 optional  
  Mode: stereo, joint stereo, dual channel, single channel  
  Max output level: +18 dBu analog, 0 dbFs digital  
  Gain control: -64 dB to 0 dB / mute  
  Dolby E pass-through (audio 1 & 2 on base unit, audio 2, 3 & 4 on 4-channel version)  
  Dolby® Digital 2.0 decoding |
| **Conditional Access**      | **DVB Descrambling**  
  BISS Mode-1  
  BISS-E  

  **DVB-CI**  
  Interface: 2 CI slots – EN 50221  
  CA Method: Multicrypt, Simulcrypt  
  CAS: Irdeto, Viaccess, Cryptoworks, Conax, MediaGuard, Nagravision, OnDigital, CODICrypt, VideoGuard |
| **VBI Re-insertion**        | In composite video and embedded in SDI  
  WST teletext and inverted teletext  

  **Data Outputs**  
  IP data (EN 301 192) |
| **Environmental/Physical**  | **Operating Temperature:** 0°C to 50°C  
  (32°F to 122°F)  
  Humidity: 5% to 90% non-condensing  

  **Physical Dimensions:** 1.75 in. H x 19.0 in. W x 14.0 in. D (4.4 cm H x 48.3 cm W x 35.6 cm D)  
  **Weight:** 7.7 lbs (3.5 kg) |
| **Power**                   | **Voltage Range:** 100 V to 240 V AC  
  **Line Frequency:** 50/60 Hz  

  **Power Consumption:** 50 W max.  
  LNB Power on satellite input: +13 V/+18 V @ 350 mA max. |
Model D9846 Professional Decoder

Rear Panel Configurations

4012423 (example)

Ordering Information

Factory-configured units

<table>
<thead>
<tr>
<th>Part Number</th>
<th>ASI Input</th>
<th>MPEG over IP Input w/o FEC</th>
<th>DVB-S Input</th>
<th>3rd and 4th Audio Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>4012422</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
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<tr>
<td>4013692</td>
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</table>

Notes:

1. Lip-sync adjustment is available for audio channels 1 and 2 on p/n 4012421, 4012422, 4016650 and 401423.
2. Lip-sync adjustment is available for audio channels 3 and 4 on p/n 4013692, but not for audio channels 1 and 2.

Optional Software Licenses (for delivered D9846 decoders)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>License</th>
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<tbody>
<tr>
<td>4016676</td>
<td>Link and source redundancy for dual IP inputs</td>
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