Product Overview
The ST-6000 series high-performance multi-channel video processing platform supports MPEG-2 and MPEG-4 standard and high-definition transcoding for satellite, cable, and IPTV applications. The platform is available in 3-, 6-, or 12-channel configurations enabling a wide range of deployment scenarios. Dual AC or DC power supplies provide increased reliability for 24/7 delivery operations. Quad Gigabit Ethernet ports provide networking flexibility and further increase reliability through port redundancy.

The ST-6000 series processes up to 12 channels per rack unit with a maximum power consumption of only 200 watts, reducing total box count and wiring needs and lowering capital and operational costs. The platform offers software upgrades from standard definition to high definition and from MPEG-2 to MPEG-4 AVC, preserving capital investments as video delivery requirements evolve. All primary channels can be accompanied by an optional picture-in-picture channel, bringing the maximum channel count per unit to 12 primary plus 12 picture-in-picture channels. All channels utilize advanced compression algorithms and look-ahead driven rate control to deliver exceptional video quality.

Dual power supplies, quad Ethernet ports and picture-in-picture come standard on all ST-6000 series products.

Highlights Include:
- Compression Flexibility
- Support for MPEG-2 Main Profile @ Main Level
- Support for MPEG-2 Main Profile @ High Level
- Support for MPEG-4 AVC Main and High Profile @ Level 3.1
- Support for MPEG-4 AVC Main and High Profile @ Level 4.0
- Multi-pass CBR and CF-CBR encoding
- Integrated low-resolution proxy (PIP)
- Motion Compensated Temporal Filter video pre-processing
- Constrained Fidelity (CF-CBR) capped VBR mode
- Four independent GigE Ethernet ports
- Down conversion HD to SD (AFD per S2016-1- 2007)
- Web browser interface
DATA SHEET ST-6000 SERIES ADVANCED MULTI-CHANNEL MULTI-FORMAT VIDEO TRANSCODER

**Ordering Information**

<table>
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<tr>
<th>Product</th>
<th>Description</th>
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<tbody>
<tr>
<td>ST-6103</td>
<td>MPEG-2 3-channel SD Transcoder</td>
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<tr>
<td>ST-6106</td>
<td>MPEG-2 6-channel SD Transcoder</td>
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<tr>
<td>ST-6112</td>
<td>MPEG-2 12-channel SD Transcoder</td>
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<tr>
<td>ST-6203</td>
<td>MPEG-2 2-channel HD/SD Transcoder</td>
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<tr>
<td>ST-6206</td>
<td>MPEG-2 6-channel HD/SD Transcoder</td>
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<tr>
<td>ST-6212</td>
<td>MPEG-2 12-channel HD/SD Transcoder</td>
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<tr>
<td>ST-6303</td>
<td>AVC 3-channel SD Transcoder</td>
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<td>ST-6306</td>
<td>AVC 6-channel SD Transcoder</td>
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<td>ST-6312</td>
<td>AVC 12-channel SD Transcoder</td>
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<td>ST-6403</td>
<td>AVC 3-channel HD/SD Transcoder</td>
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<td>ST-6406</td>
<td>AVC 6-channel HD/SD Transcoder</td>
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<tr>
<td>ST-6412</td>
<td>AVC 12-channel HD/SD Transcoder</td>
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**Ordering Options – Software Licensed**

<table>
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<tr>
<th>Product</th>
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<tbody>
<tr>
<td>ST6K-SLK-HDU</td>
<td>6XXX-SLK-HDU, SD to HD Upgrade (per channel)</td>
</tr>
<tr>
<td>ST6K-SLK-AVC</td>
<td>6XXX-SLK-AVC, MPEG-2 to AVC Encoding Upgrade (per channel)</td>
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<tr>
<td>ST6K-SLK-HD2SD</td>
<td>6XXX-SLK-HD2SD, Downconversion HD to SD (per channel)</td>
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<tr>
<td>ST6K-SLK-xPULSE</td>
<td>6XXX-SLK-xPULSE, Audio Transcoding to PULSE/AAC (check for availability)</td>
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<tr>
<td>ST6K-SLK-xDD</td>
<td>6XXX-SLK-xDD, Audio Transcoding to AAC (check for availability)</td>
</tr>
<tr>
<td>ST6K-SLK-xDD-PLUS</td>
<td>6XXX-SLK-xDD-PLUS, Audio Transcoding to Dolby Digital+ (check for availability)</td>
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**Specifications**

**MPEG-2 FEATURES**

- **MPEG-2 Main Profile @ High Level**

**MBAFF and Frame picture coding, PAFF Field and Frame motion compensation**

- **Rate Control:** Look-ahead encoding with CF-CBR rate control, IBBP GOP structure (Open or Closed)

**MPEG-4 FEATURES**

- **MPEG-4 Profile:** Main and High Profile

**Motion Estimation:**

- Supports P, B & reference B frames; 16x16 and 8x8 block sizes; 1/4 pixel motion estimation; weighted prediction

**Rate Control:** Look-ahead encoding with CBR and CF-CBR rate control, Dynamic GOP, Selectable GOP structure

- **Coding:** CABAC entropy coding

- **Other:** De-blocking filter

**VIDEO PROCESSING**

- **Formats:**
  - 1080i/29.97; 720p/59.94
  - 1080i/25; 720p/50 (HD)
  - 625i/50; 525i/29.97 (SD)

- **Video Pre-Processing:** Motion Compensated Temporal Filter

- **UPD / IP INPUTS**
  - **MPEG-2:** Up to MP@HL
  - **MPEG-4:** Up to HP@L4

**AUDIO PROCESSING**

- Dolby® Digital pass-through

**ANCILLARY SIGNAL SUPPORT**

- **Signals:** L21 EIA 608, EIA 708 closed captioning, Teletext, WSS, AFD

**COMPRESSED STREAM OUTPUT**

- **Ethernet:** 4 Gigabit, RJ-45
- **IP:** Unicast or Multicast Main plus PIP on SPTS MPEG-2 / UDP / IP
- **MPEG-2 transport output:** MPEG-2 Transport Stream over UDP/IP

**PHYSICAL**

- **Width:** 18.9 in (48 cm)
- **Depth:** 15.5 in (39.4 cm)
- **Height:** 1RU, 1.75 in (5 cm)
- **Weight:** 20 lb (9.1 Kg)
- **Packaged Weight:** 33 lb (15 Kg)
- **Power:** 100–240V (continuous), 47–63Hz
- **Power Consumption:** Less than 200W
- **Cooling Air:** Front to rear
- **Temperature:** 0° C to 40° C

**OTHER**

- **Compliance:** FCC, CE, UL, RoHS, and TUV

Note: All features, functionality, and other product specifications are subject to change without notice or obligation.

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