**Business Benefits**

**Cost Effective**
With its modular and scalable architecture, the NOVUS-AT provides an adaptive bit rate transcoding solution with unmatched CAPEX / OPEX advantages.

**Future Proof**
With real time ‘any-to-any’ multistandard codec support, the transcoder is able to seamlessly adapt services from MPEG-2 and MPEG-4 AVC systems.

**Flexible Networking**
The NOVUS-AT supports adaptive rate streaming technologies including TS, RTMP and HTTP Live Streaming permitting reliable video delivery to virtually any device and over any network.

**Control & Monitoring**
The DashBoard™ Network Control & Monitoring software is a free application designed for remote control & monitoring of the open architecture, openGear™ platform.
For larger deployments where multiple units are deployed, the DashBoard™ application or SNMP may be used for firmware updates and monitoring.

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**Application**
The NOVUS-AT Adaptive Bit Rate Transcoder is a powerful real time transcoding solution designed to meet rapidly evolving demands of adaptive rate streaming video delivery applications. The product meets the challenge by providing high quality video to a wide variety of viewing devices over a wide variety of networks and network conditions and meets the demanding requirements of Broadcast, Web, and Mobile video services delivery.

As sports, movies, and other programming is more commonly viewed on PCs, tablet computers, smart phones, and IP enabled set-top boxes, dynamic adaptive rate streaming technology enables a new paradigm in video service delivery. Employing cutting edge adaptive rate streaming protocols, the NOVUS-AT permits video services to be delivered to any device, anywhere, and over any IP network.

The scalable and cost effective modular design is capable of simultaneously transcoding and formatting video services into multiple segmented adaptive profiles ranging from full HD down to sub-SD resolutions. An elegant streaming protocol permits a video decoder to seamlessly and dynamically adapt to the profile best suited to it capabilities and current network conditions.

NOVUS-AT Adaptive Bit Rate Transcoder is equipped with the latest advances in video compression technology. State of the art video processing combined with our unique encoding technology enables a new paradigm in video service delivery. Employing cutting edge adaptive rate streaming protocols, the NOVUS-AT permits video services to be delivered to any device, anywhere, and over any IP network.

Up to three NOVUS-AT units can be installed in a 1RU rack mount tray. Using NOVUS-AT's unique transcoding architecture, multiple adaptive rate streaming profiles can be supported in a compact modular unit.

**Features**
The NOVUS-AT ABR Transcoder is able to transcode a single program received from IP or ASI. The program can be output using multiple resolution and rate profiles over IP interfaces using the adaptive rate streaming protocol of choice. A flexible licensing model allows for easy addition of feature options expanding the capabilities of each module.

- Single multi-standard (MPEG-2 or MPEG-4 AVC) HD/SD transcoder
- RTP/UDP, UDP, RTMP and HTTP Live Streaming (HLS) protocol support
- Up to 8 adaptive rate streaming resolution/rate profiles
- Downconversion, adaptive de-interlacer, bit rate reduction, frame rate reduction
- MPEG-1 Layer II, AAC, and Dolby AC-3 input audio
- Management and control via openGear™ Dashboard software or SNMP
- IP unicast/multicast input, ASI Inputs

**ORDERING INFORMATION**

NOVUS-AT - Adaptive Bit Rate Transcoder with 4 streaming resolution/rate profiles

Available Options

OPT-4PR - 4 additional adaptive streaming resolution/rate profiles
OPT-Dolby - Dolby Audio Conversion

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NOVUS-AT - Adaptive Bit Rate Transcoder

Rear panel:

Inputs and Outputs
- 2x 100/1000Base-T RJ-45 ports, auto-negotiate or fixed speed
- 2x ASI Inputs

Network Transport Protocols
- UDP/IP (Unicast and Multicast)
- RTP/IP (Unicast and Multicast)
- RTMP (Flash)
- HTTP Live Streaming (HLS): populates an external web server through FTP or SFTP
- Up to 8 resolution/rate profiles per unit

Transcode Modes
- Multi-codec capable
- MPEG-2 to MPEG-4 AVC (H.264)
- MPEG-4 AVC (H.264) to MPEG-4 AVC (H.264)

Video Processing
- Integrated down conversion
- HD to SD
- Sub-SD resolutions
- Adaptive de-interlacer
- Frame rate reduction
- AFD handling
- Closed captions and VBI pass-through

Video Transcoding
- Input
  - MPEG-4 AVC HP@L4.0, HP@L4.2 (HD)
  - MPEG-4 AVC MP@L3.0 (SD)
  - MPEG-2 HP@HL (HD)
  - MPEG-2 MP@ML (SD)
- Output
  - MPEG-4 AVC HP@L4.0, HP@L4.2 (HD)
  - MPEG-4 AVC MP@L3.0 (SD)
  - CBR & VBR
  - 1.5Mbps to 10 Mbps (profile dependent)

Video Formats
- Input
  - 1080 x 1920p 60/50
  - 1080 x 1920/1440 25 29.97/30
  - 720 x 1280/960 50/59.94
  - 960 x 540 25/29.97
  - 480 x 720/704/640/528 29.97
  - 640x480, 480x270, 320x240, 320x180 29.97, 25, 15, 12.5, 7.5, 6.25 frames/second
- Output
  - 1080 x 1920p 60/50
  - 1080 x 1920/1440 25 29.97/30
  - 720 x 1280/960 50/59.94
  - 960 x 540 25/29.97
  - 480 x 720/704/640/528 29.97
  - 576 x 720/704/640/528 25
  - 640x480/360, 480x270, 320x240, 320x180 29.97, 25, 15, 12.5, 7.5, 6.25 frames/second

Audio Transcoding
- Input
  - MPEG-1 Layer II stereo
  - MPEG-4 AAC-LC stereo and 5.1
  - MPEG-4 HE-AAC 5.1
  - Dolby AC-3 stereo, 5.1, 7.1
- Output
  - MPEG-1 Layer II
  - MPEG-4 AAC-LC
  - Pass through
  - Conversion
    - 5.1 -> 5.1, 2.0

Management
- 100/1000Base-T Ethernet (RJ-45)
- Configuration import/export
- Visual fault indicator
- SNMP v1,v2

Physical
- Dimensions:
  - (W x D x H) 146 x 356 x 44mm
- Desktop or 1RU rack mountable
- Tray available—3 modules per tray
- Power:
  - 16 Watts total power consumption
  - AC input 100-240 VAC 47-63Hz
  - Convection cooling

Environmental
- Operating Temperature:
  - 0°C to 50°C (32°F to 122°F)
- Operating Humidity:
  - 5% to 95% (non-condensing)

Compliance
- EMC: EN55022, EN55024, EN61000-3-2, FCC Part 15
- SAFETY: IEC 60950
- ROHAS: 2011/65/EU
- WEEE: 2012/19/EU

Note: NOVUS-AT specifications are subject to change.