



Mediaplex-20™ Video Headend Platform

TANDBERG Television's Mediaplex-20™ video headend "speaks telco". The Mediaplex-20 is a multi-functional, carrier-grade and NEBS-certified IPTV headend in a chassis. It holds 48 professional-quality MPEG-2, MPEG-4 AVC or PIP encoders in 19.6 rack units of height. This includes fan and power modules, therefore making it one of the densest switched digital video platforms in the industry. A broad array of video functions is combined in a blade-based chassis, which makes the headend extremely versatile and simple to configure. The video functions include pre-processing, real-time video encoding, transcoding, transrating, VBR-to-CBR conversion, switching, routing, and MPEG encapsulation into ATM or IP. Due to the large number of channels supported, the Mediaplex-20 is ideally suited for large to medium-sized headends.

The Mediaplex-20 video headend supports industry-leading quality and offers telco operators the latest in video and audio compression technology available today. The Mediaplex-20 is part of TANDBERG Television's Plex family of products, consisting of the Mediaplex-20 and the iPlex video headends.

PRODUCT OVERVIEW

Market Leading Performance

Extensive video pre-processing features and an array of tools to fine-tune picture quality are standard with the Mediaplex-20 video headend and help service providers display the best picture, even with challenging feeds. A proven history of providing customers with in-field performance improvement upgrades over time keeps TANDBERG Television's customers ahead of the market.

High-Density Encoding and Powerful Video Processing

The Mediaplex-20 video headend features very high-density encoding, among the highest of any video headend platform in the industry. Its unmatched density and video processing features offer significant cost benefits, including decreased operational expenditures, lower power requirements and less rack space.

Tracks Future Business and Technology Developments

The modular design of the Mediaplex-20 video headend allows it to incrementally adapt to business and technology developments. As subscriber demand grows and changes, the Mediaplex-20 can be reconfigured quickly and economically, with no system downtime, by replacing video processing and interface modules. A complete selection of functional submodules allows service providers to add new revenue-generating services like HD or PIP, migrate from MPEG-2 to MPEG-4 AVC, or build out the channel line-up.

Adapts to Any Network

With its expanded set of video interfaces, the Mediaplex-20 video headend accepts video from any standard source, processes it and routes the output video to any last-mile technology, including xDSL, Ethernet, FTTH, and DVB/ASI. Unlike many competitive offerings, the Mediaplex-20 video headend can output both ATM and Gigabit Ethernet simultaneously, enabling operators with mixed networks to deliver video with minimal integration issues.

Complete Solutions for Real-Time and On-Demand Content

The Mediaplex-20 video headend can be deployed as a stand-alone unit or as part of a comprehensive end-to-end solution that helps establish a competitive advantage. The Mediaplex-20 video headend can be

deployed in combination with the iPlex™ video headend, the zBand™ content delivery platform, TANDBERG's AdPoint® on-demand advertising platform, and OpenStream®, Xport®, and Mediapoint as part of an on-demand solution. For additional information on these products, please consult the our website at www.tandbergtv.com.

OPTIONS

Mediaplex [N011001]

- Support of multiple applications, such as MPEG-2 and MPEG-4 encoding, transcoding, transrating, IP encapsulation, and Quality of Service tagging.
- NEBS Level 3 compliance
- Powerful video preprocessing functions, with full support of MPEG-4 AVC main profile
- Chassis and blade level redundancy: 1+1 (chassis or blade), n+1 (blade), and n+m (blade)

Platform Processing Capacities

- Up to 48 MPEG-2 or MPEG-4 AVC encoders
- Up to 64 ASI interfaces (input or output)
- Up to 144 transrated streams (bit rate dependent)
- Up to 48 MPEG-2 to MPEG-4 AVC transcoded streams
- 4 GigE interfaces (standard with SCM modules)
- Up to 2 SCM cards and 12 TRM cards or 8 MCM cards
- 3 fans and up to 3 AC or DC power supplies per chassis

APPLICATIONS

The Mediaplex-20 video headend is a blade-based system that supports modules and submodules that provide specific functionality and additional processing support. The chassis features 20 system slots connected to a high-performance 16-Gigabit/sec backplane. Three different blades are currently available, with each supporting a different set of submodules.

Switch Control Module (SCM): This module provides backplane connectivity and module management; it comes standard with 4 GigE interfaces. [N011004]

Media Control Module (MCM): The MCM supports video and data connectivity, and supports up to 4 interface submodules [N011005]

Transrating Module (TRM): The TRM supports video and audio processing functions, with up to 4 submodules [N011010]

Below are a list of submodule options. For details on supported audio interfaces, video processing options, supported resolutions and other features, please refer to the datasheet pertaining to the particular submodule. Please note that all submodules can be used in the Mediaplex-20 or the iPlex video headends.

- ATM/OC-3c/STM-1 In/Out [N011014 (single mode), N011031 (multi mode)]
- ATM/DS-3/E-3 In/Out [N011045 (DS-3), N011046 (E-3)]
- ASI In [N011006]
- ASI Out [N011007]

- Quad ASI with Scrambling capability* [TBD]
- Transrating (also referred to as bit rate control, BRC) [N011050 (HW), N011051-8 (SW)]
- MPEG-2 SD Encoder [N011032]
- MPEG-4 SD Compression Encoder [N011048 (HW), N011049 (SW)]
- MPEG-4 SD Ultracompression Encoder* [TBD]
- MPEG-4 HD Compression Encoder* [TBD]
- MPEG-4 HD Ultracompression Encoder* [TBD]
- MPEG-2 SD to MPEG-4 SD Transcoder [N011050 (HW), N011052 (SW)]
- MPEG-2 HD to MPEG-4 HD Transcoder* [TBD]

* Future

SPECIFICATIONS

Physical and Power

Dimensions (H x W x D) 34.10 x 17.20 x 14.5 inches (86.61 x 43.7 x 36.8 cm)
Rack Mount 19.5 Rack Units; Standard 19 inch EIA rack
Weight Chassis with three fans and AC PSU 65 lbs (29.48kg)
Weight Chassis fully configured 128 lbs. (58.1kg)
Shipping Weight 160 lbs. (72.6 kg) fully configured
Input Power Requirement 1800 W max. DC, 2100 W max. AC
Power Dissipation 1800 W maximum, 900 W typical
Heat Dissipation 1800 W (6147 BTU/hr) DC, 2100 W (7172 BTU/hr) AC
DC Input Voltage Range -39 to -72 VDC
DC Current Rating (input) 60/30 A
Maximum Power Budget 37.5 A at -48 VDC
AC Input Voltage Range 90 to 247 VAC
AC Current Rating (input) 24 A at 100 VAC, 12 A at 240 VAC

Environmental Conditions

Airflow 180 CFM normal operation, 240 CFM maximum
Operating Temperature Range 0° C to +40° C (+32° F to +104° F)
Short-term Operating Temperature Range -5° C to +55° C (+23° F to 131° F)
Non-operating Temperature Range -40° C to +70° C (-40° F to +158° F)
Operating Humidity 7% to 85% Non-condensing
Non-Operating Humidity 5% to 95% Non-condensing
Operating Altitude Up to 13,123 ft (4000 meters)

Compliance

Safety UL 60950 Third Edition, CSA-C22.2 No. 950-95, EN60950, IEC 60950, CB Certificate, AS/NZ 3260, TS 001, Laser Safety: 21CRF1040
Emissions FCC Part 15 Class A, CISPR 22 Class A, EN55022 Class A, AS/NZ 3548
Immunity EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-11, EN61000-3-2, EN61000-3-3, EN55024, EN300-386-2 Telcordia: GR-63-CORE, GR-1089-CORE, SR-3580 NEBS Level 3 ETSI: EN300-019-1-1, EN300-019-1-2, EN300-019-1-3, EN300-132, EN300-386-2
Transportation ISTA-2A