

Nimbra Media Gateway

Standards compliant JPEG2000 contribution gateway

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Standards based JPEG2000 contribution codec for professional live broadcast contribution and studio interconnect over IP

The Nimbra Media Gateway is a SMPTE2022 standards compliant JPEG2000 contribution gateway for live media exchange over IP in a multi-vendor environment.

By allowing seamless interchange of live video over IP between broadcasters, affiliates and media service providers, the Nimbra Media Gateway truly facilitates a global media ecosystem, where live video streams are sent over standard infrastructures in real-time and where vendor interoperability is key to drive efficiencies in live contribution and studio interconnect.

High-quality JPEG2000 Compression

High-quality JPEG2000 compression of live video lets broadcasters and media services providers lower their networking costs while still delivering quality customers want to pay for. The Nimbra Media Gateway offers visually lossless video quality using 4:2:2 10-bit JPEG2000 compression with up to 90% reduced bit rate compared to uncompressed video. That together with a very low compression delay makes the Nimbra Media Gateway the natural choice for live professional broadcast contribution and studio interconnect over IP.

Standards Based

The Nimbra Media Gateway supports the SMPTE2022 video over IP standards for seamless interoperability with third party codec's, to enable efficient live video transport across multiple vendor equipment.

Future Proof

A fully modular hardware and software design enables seamless capacity and functional expansion without hardware replacement. And with support for both native SDI as well as SMPTE2022-6 IP interfaces, the Nimbra Media Gateway offers cost efficient transition from native SDI to

IP in studios and broadcast facilities. Configure it according to your needs today and expand it when you need, without compromising on quality and operational efficiency.

Efficient Operation

With central management through Nimbra Vision and Touch&Switch, The Nimbra Media Gateway enables broadcasters to scale up their media transport to support their growing business needs, without having to worry about their OPEX costs sky-rocketing.

KEY FEATURES

High-quality JPEG2000 contribution codec

ISO/IEC 15444-1 JPEG2000 (4:2:2 10-bit) encoding/decoding of full frames for best image quality. Support for compression of 3G-SDI, HD-SDI and SD-SDI with very low encoding/decoding latency makes a perfect fit for live contribution and remote production.

Standards-based for interoperability

SMPTE2022 profiles enable interoperability & efficient operation over IP in a multi-vendor environment. And with support for both SDI and SMPTE2022-6 IP interfaces, the Nimbra Media Gateway offers a seamless transition from SDI to IP in studios and broadcast facilities.

Future proof

With powerful modular hardware and a pay-as-you-grow pricing model, the Nimbra Media Gateway comes with an attractive entry-level price point for low density applications with the option to scale-up capacity and functionality when needed. Up to 12 JPEG2000 codecs can be hosted in one unit.

Cost-efficient operation

With central management and service provisioning through Nimbra Vision and Touch&Switch, broadcasters and media service providers can scale up their media transport to support their growing business needs without having to worry about skyrocketing operational costs.

TECHNICAL SPECIFICATIONS

Interface, Video: 8 x SFP, configurable 3G/HD/SD-SDI, SMPTE2022-6 IP, In/Out/Monitor/Sync

Video Formats:

3G-SDI 1080p (50Hz, 59.94Hz, 60Hz) SMPTE 424M
 HD-SDI 1080i (50Hz, 59.94Hz, 60Hz)
 1080p (23.98Hz, 24Hz, 25Hz, 29.97Hz, 30Hz)
 1080psf (23.98Hz, 24Hz, 25Hz, 29.97Hz, 30Hz)
 720p (23.98Hz, 24Hz, 25Hz, 29.97Hz, 30Hz, 50Hz, 59.94Hz, 60Hz), SMPTE 292M
 SD-SDI 625i (25Hz), 525i (29.97Hz), SMPTE 259M

Frame

Alignment: To external sync reference or node clock

Sync Input: 3G/HD/SD-SDI, analog bi-level

Interface, Ethernet:

Network 2x SFP+ 1G/10GBASE SR/LR/ER
 2x RJ45 10/100/1000BASE-T
Aux 1x RJ45 10/100/1000BASE-T

Protocols: IP/UDP/RTP, IGMPv2/v3, ARP, Diffserv/TOS, 802.1Q (VLAN), 802.1p (PCP)

JPEG2000:

Standard ISO/IEC 15444-1
Nr of ports max 12x 3G/HD/SD-SDI
Formats: SD-SDI: 10 – 125 Mbps
 HD-SDI: 10 – 250 Mbps
 3G-SDI: 10 – 500 Mbps
Audio Transparent, 4x AES groups (16 AES channels), 20-bit, user selectable, transparent
ANC Data AFD, Time code, SCTE104, Audio metadata, Closed Captioning (CEA-708, CEA-608), Teletext & Subtitling (OP-47), DVB/SCTE VBI Data, VPID, WSS, user selectable, transparent

Encapsulation: Transport Stream over IP, VSF TR-01

Management: SNMP (v1/v2c/v3), Web GUI, Nimbra Vision

Maintenance: Hardware & power hot-swap
 Remote software and firmware download

Dimensions: 110mm(4.3") x 445mm(17.5") x 335mm(13.2") (HxWxD), incl. power supplies.

Environmental:

Operating Temp: 5 to 40°C (41 to 104°F)
 (short term): -5 to 55°C (23 to 131°F)
Storage Temp: -40 to 70°C (-40 to 156°F)
Relative Humid: 10% to 90% (non-condensing)

Power:

Voltage: 100/260VAC or -48VDC
Dissipation: <400W fully equipped

Regulatory compliance:

Safety: UL60950-1
 EN60950-1
Laser safety: CFR 21 1040.10/11
EMC: FCC 15 Class A
 EN 300 386
CE marking: 93/68/EE

Ordering Information:

NPK0020-GW01 Nimbra Media Gateway
 NPA0099-6401 AC Power supply, (ordered separately)
 NPA0101-6412 DC Power supply, (ordered separately)

Hardware Expansion options:

NPS0054-6F01 IF624 - SFP Video Access Module J2K
 NPS0074-6F01 IF623 - Video Access Module J2K

Software options:

NPM0037-64VF Video Port feature license
 NPK0026-VPF4 Video Port feature license, 4-pack
 NPM0031-6H1F J2K Processing feature license
 NPK0026-JHP4 J2K Processing feature license, 4-pack
 NPM0021-6FSF Frame Synchronizer feature license
 NPM0036-10FI 10GE interface option feature license

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