

# Nimbra Media Gateway

Premium video-over-IP contribution

The Nimbra Media Gateway offers industry-leading compression performance and video quality in a modular and compact design. This standard-based solution provides flexibility for any broadcast application, while inheriting the highly advanced management and scheduling power of Net Insight leading technology.

By allowing seamless video-over-IP contribution between broadcasters, affiliates and media service providers, the Nimbra Media Gateway allows scaling-up premium live production with lower cost of operations. Where live video streams are sent over standard IP infrastructures in real-time and where vendor interoperability is key to drive efficiencies the Nimbra Media Gateway offers a future-solution on standard interfaces..

## Standards Based & Future-proof

Enabling long-term lifecycle benefits the high-density Nimbra Media Gateway offers all the standards of today and is prepared for the standards of tomorrow. Its fully modular hardware and software design enables seamless capacity and functional expansion without hardware replacement. SMPTE2022 enable interoperability & efficient operation over IP in a second or multi-vendor environment. With support for both SDI and SMPTE2022-6 IP interfaces, the Nimbra Media Gateway offers full stream protection with SMPTE 2022-7 and SMPTE 2022-1 enabling a fully vendor compliant solution and seamless transition from SDI to IP in studios and broadcast facilities. Configure it per your needs today and expand it when you need, without compromising on quality and operational efficiency.

## Best in class picture quality for an immersive end-customer experience

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

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

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.

## Operational efficiency with Software Defined Orchestration

Nimbra Management & Orchestration product family enables broadcasters to scale up their media transport to support their growing business needs allowing up to 30% reduction of operational costs and 75% faster service deployment compared to competing IP solutions. The Automation & Orchestration software packages increase resource utilization with up to 300% and enable workflow through customer and application self-provisioning. Set-up, monitoring and fine-grained configuration of equipment as well as services through an intuitive Web UI.

## Network function virtualization

Enabling customized functionality that is adapted to the needs of each production the integrated Virtualized Media Platform allows adding on-demand services directly on the node. Enabling 75% faster service deployment and by-the-minute business models allows to tailor services to each customer, including value added network



# 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.

## High density

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.

## Virtualized Network Functions enabled

Integrated x86 general processing platform for hosting and enabling Virtual Network & Media Functions in a standard-based Linux environment.

## Standards-based for interoperability & second vendor strategy

The world's first entirely standards-based compression encapsulation of J2K in SMPTE-2022-2 (VSF TR-01) with a ccess through SMPTE 2022-6 or SDI and protected with SMPTE 2022-7 and SMPTE 2022-1 allows interoperability and strategic second vendor expansions

## Cost-efficient operation

Touch-screen application Touch & switch and central management and service provisioning through Nimbra Vision allow operators to easily configure, monitor and trouble-shoot their services. The Element manager allows quick web-based access on every node.

## On-demand service provisioning

Nimbra Connect allows self-provisioned of services with a user interface designed from ground up for simplicity - services are booked or scheduled in just seconds. Empowering new price models where customers pay only for what they use and an automated order-to-bill process re-

# TECHNICAL SPECIFICATIONS

|                             |   |                                    |  |
|-----------------------------|---|------------------------------------|--|
| <b>Interface, Video:</b>    | 12 x SFP, configurable 3G/HD/SD-SDI, SMPTE2022-6 In/Out/Monitor/Sync  |                                    | WSS, user selectable, transparent  |
| <b>Video Formats:</b>       |   | <b>Encapsulation Management:</b>   | Transport Stream over IP, VSF TR-01<br>SNMP (v1/v2c/v3), Web GUI, Nimbra Vision  |
| 3G-SDI                      | 1080p (50Hz, 59.94Hz, 60Hz) SMPTE 424M  | <b>Maintenance:</b>                | Hardware & power hot-swap<br>Remote software and firmware download   |
| HD-SDI                      | 1080i (50Hz, 59.94Hz, 60Hz)<br>1080p (23.98Hz, 24Hz, 25Hz, 29.97Hz, 30Hz)<br>1080psf (23.98Hz, 24Hz, 25Hz, 29.97Hz, 30Hz)<br>720p (23.98Hz, 24Hz, 25Hz, 29.97Hz, 30Hz, 50Hz, 59.94Hz, 60Hz), SMPTE 292M | <b>Dimensions:</b>                 | 110mm(4.3") x 445mm(17.5") x 335mm(13.2") (HxWxD), incl. power supplies.   |
| SD-SDI                      | 625i (25Hz), 525i (29.97Hz), SMPTE 259M   | <b>Environmental:</b>              | Operating Temp: 5 to 40°C (41 to 104°F)<br>(short term): -5 to 55°C (23 to 131°F)<br>Storage Temp: -40 to 70°C (-40 to 156°F)<br>Relative Humid: 10% to 90% (non-condensing) |
| <b>Protection:</b>          | Forward Error Correction (SMPTE 2022-1) and Hitless 1+1 protection (SMPTE 2022-7)   | <b>Power:</b>                      | Voltage: 100/260VAC or -48VDC<br>Dissipation: <400W fully equipped   |
| <b>Frame Alignment:</b>     | To external sync reference or node clock  | <b>Regulatory compliance:</b>      | Safety: UL60950-1<br>EN60950-1<br>Laser safety: CFR 21 1040.10/11<br>EMC: FCC 15 Class A, EN 300 386<br>CE marking: 93/68/EE   |
| <b>Sync Input:</b>          | 3G/HD/SD-SDI, analogue bi- and tri-level  | <b>Ordering Information:</b>       | NPK0020-GW01 Nimbra Media Gateway<br>NPA0099-6401 AC Power supply, (ordered separately)<br>NPA0101-6412 DC Power supply, (ordered separately)                                |
| <b>Interface, Ethernet:</b> |   | <b>Hardware Expansion options:</b> | NPS0054-6F01 IF624 - SFP Video Access Module J2K<br>NPS0074-6F01 IF623 - Video Access Module J2K   |
| Network                     | 2x SFP+ 1G/10GBASE SR/LR/ER<br>2x RJ45 10/100/1000BASE-T  | <b>Software options:</b>           | NPM0037-64VF Video Port feature license<br>NPK0026-VPF4 Video Port feature license, 4-pack   |
| Aux                         | 1x RJ45 10/100/1000BASE-T   |                                    |  |
| <b>Protocols:</b>           | IP/UDP/RTP, IGMPv2/v3, ARP, Diffserv/TOS, 802.1Q (VLAN), 802.1p (PCP)   |                                    |  |
| <b>JPEG2000:</b>            |   |                                    |  |
| Standard                    | ISO/IEC 15444-1   |                                    |  |
| Nr of ports                 | 12x 3G/HD/SD-SDI (extendable to 60)   |                                    |  |
| Formats:                    | SD-SDI: 25 – 200 Mbps<br>HD-SDI: 75 – 200 Mbps<br>3G-SDI: 100 – 400 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,  |                                    |  |

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