

Nimbra 400

High Quality, Multi-Channel Contribution and Distribution



In an evolving media landscape, content owners and network providers are increasingly seeking innovative and cost-effective ways to expand their reach and monetize new events. The ability to seamlessly transport multi-channel video and bridge between ground and cloud connectivity is now a critical component of modern broadcast infrastructure. Enter the Net Insight Nimbra 400 series, a cutting-edge solution designed to meet these demands with unparalleled efficiency.

The Nimbra 400 media network devices offer broadcasters the flexibility to deliver multi-channel bi-directional video over both managed and unmanaged IP networks. With built-in support for MPEG-4 and HEVC compression up to 4:2:2 10-bit profiles, these devices ensure the highest quality, low-latency media connectivity, enabling broadcasters to reach almost any global location. Whether enhancing content delivery or extending network reach, the Nimbra 400 is an essential tool for modern broadcasting needs.

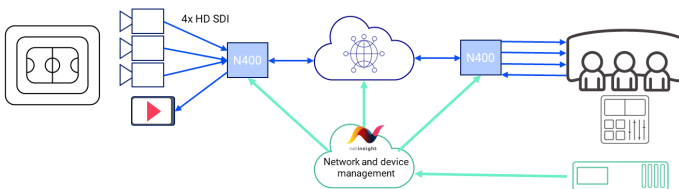
Typical Applications

- Event Contribution
- Remote Production
- Primary Distribution

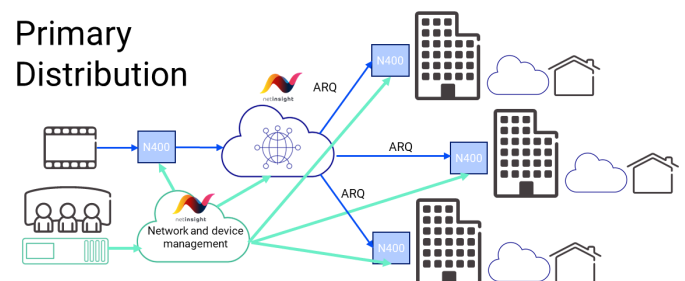
Key Features

- HEVC and MPEG-4 compression
- 4:2:0 8-bit and 4:2:2 10-bit video profiles
- Multi-service, simultaneous encode and decode
- Video Resolutions up to 4k
- Managed IP network video transport
- Stream processing and network adaptation
- SRT, RIST and Zixi video streaming
- IP VPN/data channel to carry private IP connectivity to the edge
- Full integration into Net Insight Nimbra Edge

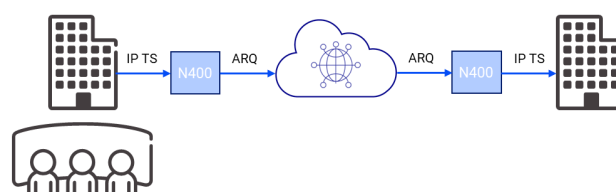
Contribution/Remote Production



Primary Distribution



Ground to Cloud



Technical Specifications

Interfaces

Coaxial
4x ASI/SDI input/output interfaces (3x 3G-SDI, plus 1x 12G-SDI) - HD BNC
1x Frame Sync: Analogue SD Hsync (black & burst) - HD BNC

Ethernet
2x 10 Gb plus 2x 2.5 Gb RJ-45 IP streaming, control and IP data

Video Compression

Video Encode or Decode
MPEG-4 8-bit 4:2:0
HEVC 8-bit 4:2:0
HEVC 10-bit 4:2:2**
Any combination of encode/decode

Max number of services	Encode	Decode
MPEG-4 4:2:0 HD	4	4
MPEG-4 4:2:0 4k	1	1
HEVC 4:2:0 HD	2	4

Video Resolutions

SD 480i 29.97 fps
SD 576i 25 fps
HD 720p 50/59.94 fps
HD 1080i 29.97/25 fps
HD 1080p 50/59.94 fps
UHD 4k 50/59.94 fps

Video Processing

Multi-stream alignment

Audio Processing

8x Stereo pairs per video service
Embedded audio
MPEG-1 Layer II
AAC-LC
HE AAC
Dolby Digital Passthrough

Ancillary Data

SMPTE 2038
Closed Captions, OP47, AFD, WSS, SMPTE 12M time code

Splicing

SCTE 104 to SCTE 35

IP Media Trust Boundary

Monitoring
ETR 101 290 QoS per-flow metrics
Alarms of QoS metrics failure
Protection
SMPTE 2022-1 FEC
IT Firewall on UDP/TCP ports
Remote VPN
Stream redundancy switching: ARQ Link bonding, Adaptive Link Protection, Adaptive Source Protection
Stream Adaptation
Unicast <> Multicast translation
Network address translation
VLAN translation
Port mapping
Flow replication

Stream Processing

ASI to IP Transport Stream conversion
ASI to IP ARQ stream conversion
IP Transport Stream to IP ARQ stream conversion

Compressed Video Streaming

SRT (Including bonding)
Up to 50x 100Mbit/s SRT streams
RIST
Zixi
RTP
UDP

Data Carriage

IP data channel with encrypted L3 tunnelling for TCP traffic

Control and Management

Web Browser
Net Insight Edge/Connect iT
Net Insight Nimbra Vision
SNMP (v1, v2c, v3)

Environmental

Operating temp: 5 to 35 °C (41 to 95 °F)
Storage temp: -40 to 70°C (-40 to 158°F)
Relative humidity: 8% to 90% (non-condensing)

Dimensions

HxWxD: 43mm (1.7") x 437mm (17.2") x 429mm (16.9")
Rack mount: 1RU, IEC 60297 (19")
Weight: 8.16 kg (18 lbs)

** Check availability



Nimbra 400 Models

Model	Capabilities
Nimbra 414	4x HD, 1x 4k MPEG-4 and HEVC 4:2:0 encode/decode IP network and stream adaptation
Nimbra 424**	4x HD, 1x 4k MPEG-4 and HEVC 4:2:0 / 4:2:2 encode/decode IP network and stream adaptation

Power and Compliance Specifications

Power

Nimbra 414

Single or dual 750/800W hot-swappable AC/DC Platinum level power supply

Nimbra 424**

Single or dual 750/800W hot-swappable AC/DC Platinum level power supply

Regulatory Compliance

Nimbra 414

Safety: IEC/UL/EN 62 368-1
EMC: FCC class A, EN 55024, EN 55103-2, EN 55032, EN 61000-3-2, EN 61000-3-3
CE Marking: 768/2008

Nimbra 424**

Safety: IEC/UL/EN 62 368-1
EMC: FCC class A, EN 55024, EN 55103-2, EN 55032, EN 61000-3-2, EN 61000-3-3
CE Marking: 768/2008

** Check availability

Net Insight AB (publ)

Phone +46 (0)8 685 04 00, info@netinsight.net, www.netinsight.net

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