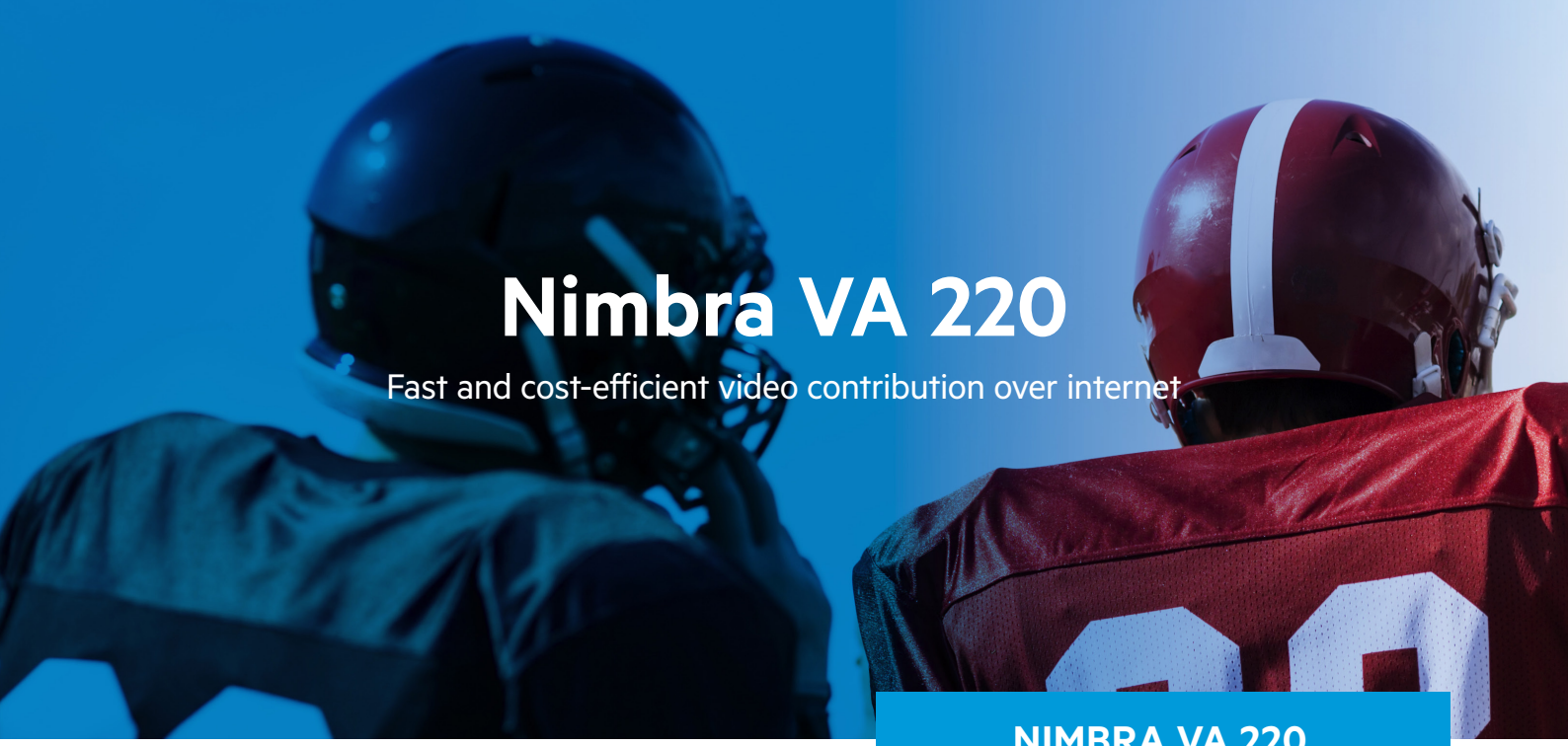

Nimbra VA 220

Fast and cost-efficient video contribution over internet

NIMBRA VA 220

Cost efficient live contribution enabling new revenue streams for media over Internet

With the Nimbra VA 220 niche media applications requiring a simplified approach and lowered operational costs can be offered, making it possible to reach new target customer segments.

By combining the award winning error protected transport mechnism from Nimbra VA 210 and adding MPEG encoding and decoding capabilities in the same platform the Nimbra VA 220 can offer a unique and cost-efficient solution for live media contribution and distribution.

Utilizing the Internet or other unmanaged networks for media transport, OPEX is drastically lowered compared to leased lines or satellite contribution links. Nimbra VA 220 has a built-in firewall, VPN and remote management, supporting centralized management of an entire network of Nimbra VA's deployed anywhere in the world. These capabilities make a scaled up operation of Nimbra VA's very affordable and easy to operate without extra equipment needed.

Nimbra VA 220 is especially well suited for live event contribution for broadcasters; contribution or distribution services for broadcast media service providers; live head-end contribution for Cable TV service providers, or live content acquisition for linear over-the-top, OTT service providers. Nimbra VA 220 also fits at the borders of a Nimbra MSR network converting baseband signals to MPEG transport stream over UDP, TSoIP and extending the reach of the network.
The Nimbra VA 220 supports parallel sending and receiving, MPEG encoding and decoding and can be deployed in a point-to-point, point-to-multipoint, or Daisy chain configuration.

Nimbra VA 220 provides media quality assurance end-to-end using monitoring of streams and a built in network path redundancy, providing automatic fail over functionality. Centralized monitoring using Nimbra Vision enables easy network monitoring per stream, measuring for example jitter, round-trip-time, RTT and packet loss. VA 220 supports AES encrypted media payload, providing secure transmission over public networks.

The media layer in the VA 220 provides a very low latency encoder and decoder combined with a transport layer providing fixed and predictable latency. Latency is configurable ranging from very low, utilizing FEC and re-transmission when network conditions allow, up to longer latency, using only re-transmission when the network conditions are harsh (up to approximately 30% of packet drops).
The flexible use of FEC and re-transmission ensures that the VA 220 always can offer the best possible trade off between quality and latency.

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KEY FEATURES

Robust live media transport over IP.

Nimbra VA significantly enhances the transport properties of the underlying IP infrastructure, enabling reliable live video transport over public IP networks, such as the Internet.

Reducing costs and deployment lead time.

Nimbra VA series dramatically reduces transport costs and deployment lead times compared to satellite or leased land lines. With Nimbra VA, broadcasters and media operators can reach more content and address a broader audience.

Integrated end-to-end management.

The Nimbra VA is integrated into Net Insight's comprehensive network management system, Nimbra Vision, for end-to-end management, monitoring and easy-to-use service provisioning. VPN functionality is included to allow for secure remote management over public IP networks.

Efficient service aggregation.

One Nimbra VA can receive feeds from many remote Nimbra VA units for efficient first-mile aggregation at a Nimbra PoP.

Integrity and quality monitoring.

Nimbra VA series includes func- tionality for continuous monitoring of service performance indicators according to TR 101.290 priority 1&2. Each video stream can be monitored individually both at the ingress and egress inter- face, for quality & SLA assurance and troubleshooting.

One-box encoder/decoder with robust IP transport.

Lowered operational cost by combining encoding functionality with robust media transport and unified end-to-end management over the Internet.

High density encode/decode.

Per port configurable encoder or decoder, with 4 parallel streams per node providing maximum flexibility.

Extends the Nimbra VA 210.

Includes all Nimbra VA 210 functionality with the extension of video and audio encode/decode.

The perfect Tier-2/tier-3 event product.

With a camera and a VA 220 at each end of two sites with Internet in-between is all that is needed for a low cost and fast deployable contribution.

TECHNICAL SPECIFICATIONS

Transport:

Encoder Input and Decoder Output Formats:
SD-SDI: SMPTE 259M, HD-SDI: SMPTE 292M

Encoder Output and Decoder Input Format:
- Video: AVC/H.264 up to High Profile, level 4.1
- Audio: AAC-LC, HE-AAC, MPEG-2 layer II and AC-3
- Container format: MPEG-TS
- Resolutions: SD 480 and 576. HD 720 and 1080
- Scan mode: Progressive and interlaced
- Frame rates: 25, 29.97, 30, 59.94, 50, 60 fps
- Chroma format: 4:2:0
- Sample bit depth: 8-bit

Error protected media transport:
Unicast UDP/IP

Unprotected media transport ingest or hand-off:
TSoIP (UDP/IP), unicast or IP-Multicast

Interfaces:

Nimbra VA 220:	Error protected media transport, Input/output: 4x Gigabit Ethernet, 1000BASE-T, RJ45
Native interfaces:	4x BNC, 75 ohm, 1x BNC, 75 ohm Genlock input
Light Out Management	1x Gigabit Ethernet, 1000BASE-T, RJ45
Performance Monitoring:	ETR 290, TR-101 290 Priority 1 & Priority 2
Management:	SNMP (v1/v2c/v3), Web GUI, Nimbra Vision
Storage:	120GB SSD
Power:	200W Low Noise AC-DC gold level power supply

Environmental Conditions:

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

Regulatory compliance:

Safety:	IEC/UL/EN 60 950-1
EMC:	FCC part 15, EN 55022, EN 55024, EN 55103-1, EN 55103-2
CE marking:	93/68/EEC

Dimensions:

Dimensions:	HxWxD: 43mm(1,7") x 437mm(17,2") x 287mm(11,3")
Weight:	4.99 kg (11 lbs)
Rack mount:	1RU, IEC 60297 (19")

Ordering information:

•NPK0030-FS01	Nimbra VA 220 SD
•NPK0030-FH01	Nimbra VA 220 HD
•NPM0043-SD01	Additional SD AVC/H.264 video encode or decode
•NPM0043-HD01	Additional HD AVC/H.264 video encode or decode
•NPM0043-DE01	AVC/H.264 video decode only
•NPM0043-AA01	AAC audio enc/dec license
•NPM0043-MP01	MPEG layer II audio enc/dec license
•NPM0039-TS01	Additional Error Protected Transport
•NPK0091-0010	Volume pack of 10 additional Error Protected Media Transports
•NPM0039-TR01	TS monitoring Feature License (TR 101 290)
•NPM0003-VA01	Nimbra Vision node license

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