Nimbra 380

Flexible multiservice MSR and IP media gateway

The Nimbra 380 MSR makes your media network service aware

The Nimbra 380 MSR combines native video/audio service transport with carrier-class Metro Ethernet switching to provide a high-quality multi-service solution for demanding applications in the media and broadcast industry.

Nimbra 380 is a flexible access and edge MSR for true multiservice transport, targeting the increasing need for advanced Ethernet services and IP QoS transport.. Applications range from high-end video services such as studio production and contribution, to broadcast distribution in IPTV/Cable TV or DTT/Mobile networks.

True multiservice networking

With 8 built-in Gigabit Ethernet ports, 4 SFP trunk ports and two slots for Nimbra 300 series plug-in units, Nimbra 380 provides QoS transport over either SDH/Sonet/Optical or IP/MPLS/Ethernet networks for a large variety of video, audio and data applications. Available service interfaces include: Ethernet, ASI, SDI, AES/EBU, STM-1, E1/T1 and DS3/E3.

The integrated trunk ports can be configured as either 4 x OC-3/STM-1, 4 x OC-12/STM-4, 2 x OC-48/STM-16 or 2 x 10/100/1000 IP/Ethernet. This gives the Nimbra 380 an unprecedented flexibility and superior cost-efficiency. With support for IP/Ethernet trunks it can utilize cost effective Ethernet last mile connections for transport of multiple services, providing the same high quality of service as for last mile optical/SDH/Sonet connections.

Lossless routing

The Nimbra 380 is an MSR from Net Insight, and as such it performs lossless routing. Thanks to dedicated QoS allocation per service and Net Insight's unique time synchronization mechanisms, not a single packet is lost going through the Nimbra 380. What goes in to the MSR comes out of the MSR in perfect shape.

Synchronization

The Nimbra 380 can optionally be augmented by a unique Time Transfer functionality, to provide near-GPS quality timing via fiber for reliable and independent timing support. With support for any topology, QoS multicast and with Net Insight's Service-Centric Network Management, Nimbra 380 is ready to take on the task of nationwide DVB-T distribution and BMN contribution networks. With support for redundant power supplies, in-service hardware swap and various protection mechanisms, Nimbra 380 ensures reliable and trouble-free operation.

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KEY FEATURES

Service aware media networks.
A Nimbra MSR network is capable of looking at each individual media service within the core network without any grouping into service classes - to make the network truly aware of each individual service.

Lossless routing.
From ingress port to egress port, a Nimbra MSR never loses a single packet. Lossless routing is possible thanks to dedicated QoS allocation per service, together with Net Insight's unique time synchronization.

QoS enhanced links.
At each hop, the Nimbra MSR performs specific tasks to improve the QoS of the underlying IP network. This functionality consists of Forward Error Correction to reduce packet loss, traffic shaping to facilitate re-source allocation and resynchronization to reduce jitter and wander.

Service-centric network management.
In a Nimbra MSR network, each service can be provisioned, monitored and protected individually, on demand and on an end-to-end basis.

Advanced Ethernet functionality.
Nimbra 380 supports 8 GE/FE ports with built-in switching (optional) between the 8 external ports and up to 119 logical ports towards the backplane with a total up-link capacity of up to 2.4 Gbps. Supports Ethernet (Virtual) Private Line/LAN/Tree services to fit virtually all services carried over Ethernet.

Switching capability.
The Nimbra 380 supports switching and can thus be configured in any network topology, such as point-to-point, rings and mesh. They can be networked together with other Nimbra 380s or with the other switches in the Nimbra series.

Extensive management options.
The Nimbra 380 can easily be managed by CLI, Web GUI, Nimbra Vision™ or 3rd party network management systems.

Multiservice.
The Nimbra 380 supports a broad range of services, such as studio and broadcast video, data and voice, on the same platform.

TECHNICAL SPECIFICATIONS

Dimensions: (HxWxD)
88mm(3.5") x 445mm(17.5") x 240mm(9.4"), IEC 60297 (19"), ETSI EN 300 119 compatible

Number of slots:
2, can be fitted freely with Nimbra 300 series plug-in modules

Fixed Ethernet access:
8 x Gigabit Ethernet: 8 x 1000BASE-T, RJ45, 802.1Q/1p, Diffserv, Jumbo frames, bridged or transparent mode

Fixed trunk ports:
4 x OC-3/STM-1: (included) 4 SFP ports, STS-3c (ANSI T1.105)/STM-1 (ITU-T G.707) framing, SRS-3c SPE/VC-4 mapping.
4 x OC-12/STM-4: (firmware option) 4 SFP ports, STS-12c (ANSI T1.105)/STM-4 (ITU-T G.707) framing, SRS-12c SPE/VC-4-4c mapping.
2 x OC-48/STM-16: (firmware option) 2 SFP ports, STS-48c (ANSI T1.105)/STM-16 (ITU-T G.707) framing, SRS-48c SPE/VC-4-16c mapping.
2 x IP/Ethernet: (firmware option) 1000BASE-T (10/100/1000) or 1000BASE-SX/LX (optical) SFPs.

Switch capacity: 5 Gbps (inter-module)

Power:
Voltage: 2 x -48 VDC (-60 to -40 VDC) (115/230VAC with external converter)
Dissipation: <90W fully equipped

Synchronization:
Input: 2.048 MHz (1.544 Mhz), ITU-T G.703 §13
Output: 2.048 MHz, ITU-T G.703 §13
Internal osc: Stratum 3
Time Transfer: 2 x 1 PPS + 2 x 10 MHz, 50 Ohm BNC, in/out
(firmware option)

Performance Management:
Based on ITU-T G.826
Bins: 15min/24h bins
Parameters: ES/SES/UAS/BBE/SS

Alarm I/O: DSUB-9, 6 inputs / 1 output

Management:
SNMP: v1/v2c/v3
Element Manager: Web GUI, CLI
Network Manager: Nimbra Vision

Environmental conditions:
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)

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

Available plug-in units:
4 x SDI Video Access	8 x ASI transport Access
1 x Gigabit Ethernet	8 x Fast Ethernet
4 x OC-3/STM-1 Access	4 x DS3/E3 Access
8 x E1/T1 Access	8 x AES/EBU Access

Ordering information:
NPQ0015-DW01	Nimbra 380 Base Unit, including 4 x OC-3/STM-1 trunk firmware
NPM0016-3004	4 x OC-12/STM-4 trunk firmware license
NPM0016-3016	2 x OC-48/STM-16 trunk firmware license
NPM0016-3ET2	2 x IP/Ethernet trunk firmware license
NPM0020-3001	Ethernet switching feature license
NPM0017-36T1	Time Transfer firmware license
NPA0031-3401	AC/DC Converter

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