Nimbra 230 Metro Acess Switch

Extending Media Access Networks over Ethernet

Nimbra 230 enables media network owners to expand their Ethernet access network with maintained QoS, enhanced performance monitoring and end-to-end service provisioning.

The Nimbra 230 is the first all Ethernet switch solution from Net Insight. It enables network operators to further expand their network into the Ethernet access segment, in a very cost efficient way, and with access to a large toolbox of advanced Ethernet functionality.

With Nimbra 230, Net Insight continues to deliver environmentally friendly and cost effective solutions to further bring down OPEX and CAPEX for network owners.

Product Overview
The Net Insight Nimbra 230 is a Carrier Ethernet access switch ideal for Ethernet service demarcation, extension and aggregation. Nimbra 230 allows service providers to deliver managed converged services such as voice, video and data over virtual Ethernet, MPLS/VPLS and IP networks. With flexible combo ports, advanced features for QoS and OAM, and support for ITU-T Synchronous Ethernet (Sync-E), the Nimbra 230 enables differentiated services over Carrier Ethernet networks to allow for new applications and business opportunities.

Carrier-Class Design
The Nimbra 230 is a carrier grade aggregation switch and provides 12 Combo Gigabit Ethernet ports. Each port can be flexibly assigned as either 1000BaseX fiber or 10/100/1000BaseT copper access port for connecting to either the subscriber side (service interface) or the network side (uplink interface).

Nimbra 230 is an ideal edge solution for aggregating services from broadband access networks.

All interfaces of the Nimbra 230 are located in the same panel, including console and out-band management ports, external alarm input/output interface and power inlets.

The Nimbra 230 provides dual power input with AC and DC that can be operated in redundant mode. Together with the low-power fan-less design, Nimbra 230 ensures noiseless operation and carrier class reliability.

With support for dying gasp, the Nimbra 230 system can be configured to alert network administrators in case of power loss to provide for efficient fault management.

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KEY FEATURES

Comprehensive QoS.
The Nimbra 230 supports an extensive feature set for enhanced QoS transport, such as IEEE 802.1p CoS, DSCP, Color marking, and Class/Policy maps. Traffic policing enables drop or re-prioritization of packets that exceeds its burst size.

Virtual Private Networks.
Nimbra 230 supports L2 VPN using QinQ functions in which an 802.1Q tag from a customer VLAN is encapsulated in a second 802.1Q tag from a service-provider network. Layer 2 PDU filtering allows a service provider to specify which Layer 2 PDUs are to be dropped at an ingress interface on a provider edge switch.

Advanced Synchronization.
The Nimbra 230 provides synchronization options optimized for cellular operators looking to backhaul their data and voice traffic from the BST to their core network over Ethernet transport ("Synchronous Ethernet").

Carrier-class design.
The Fan-less design of the Nimbra 230 ensures noiseless operation and increase the reliability of the system. Dual power input with AC and DC provides for resilience against power outages. The fan-less design and ultra low power consumption makes the Nimbra 230 a "green" alternative that saves on energy costs.

Service Monitoring and Management.
Nimbra 230 supports IEEE 802.1ag Connectivity Fault Management (CFM) and ITU-T Y.1731, allowing service providers to monitor end to end services, identify connectivity and performance issues and do remote root cause analysis in case of failure, without dispatching engineers on site.

SLA monitoring.
Nimbra 230 provides the capability to monitor service availability, delay, jitter and dropped packets for verifying SLA conformance and for providing advance indication of performance degradation before a service outage occurs.

TECHNICAL SPECIFICATIONS

Dimensions	44mm x 440mm x 252mm, (HxWxD)
Physical Ports	12 Gigabit Combo (RJ45/SFP) ports Dual power input (1 AC + 1 DC) 1 Out of band management port (RJ45) 1 Console Port (RJ45) 1 DB15 Alarm I/O Port
Performance	12 Gbps switching capacity 16K Mac address table

QoS Features

Priority Queues:	8 hardware queues per port
Traffic classification:	IEEE 802.1p CoS IP Precedence DSCP
Traffic Scheduling:	Strict Priority Weighted Round Robin Strict + WRR traffic scheduling

Layer2 Features

Spanning Tree Protocols:	IEEE 802.1D Spanning Tree Protocol (STP) IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) IEEE 802.1s Multiple Spanning Tree Protocol (MSTP)
Supported VLANs:	4K VLAN Port-based VLAN IEEE 802.1Q VLAN Virtual Private VLAN QinQ
Link Aggregation:	Static Trunk IEEE 802.3ad Link Aggregation Control Protocol Trunk groups: 12, up to 8 ports per group
IGMP Snooping:	IGMP v1/v2/v3 snooping IGMP Proxy reporting IGMP Filtering IGMP Throttling

	IGMP Immediate Leave IGMP Querier
Port Mirroring	
Jumbo frames:	Up to 10KB

Security features

Access Control List:	MAC access control list IP standard access control list IP extended access control list
Management:	SSH (v1.5/v2.0) SSL for HTTPS SNMPv3

Environmental Conditions

Operating Temp:	-25C to 65C
Storage Temp:	-40C to 70C
Humidity:	10% to 90% (Non-condensing)

Power

AC input:	100-240 VAC, 50-60Hz
DC input:	-42V -- 56V
Power Consumption:	< 20W, Dying Gasp support

Regulatory

Safety:	UL(CSA 22.2. NO 60950-1 & UL60950-1) CB(IEC60950-1)
EMC:	CE Mark, FCC Class A, CISPR Class A

Management:

SNMP:	v1/v2c/v3
Element Manager:	Web GUI, CLI
Network Manager:	Nimbra Vision (Optional)

Ordering information:

NPQ0016-XW01	Nimbra 230 Metro Access Switch

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