

NOVA NODE EX



WIRELESS MESH NODE

- » Intelligent, robust platform enabling a wide variety of IP network services, such as VoIP, video streaming, file sharing, serial data broadcast, etc
- » Auto-configuring and self-healing 3rd generation mesh network
- » Modular dual-radio architecture allows combining multiple frequency bands in one device
- » Smart channel management minimizes interference and maximizes bandwidth.
- » Easy installation: delivered as a kit consisting of radio unit, antenna cables, dual omni or sector antennas and pre-made armoured ethernet cable (no mounting bracket included)
- » Certification: ATEX II 2 G Ex d IIC T5
ATEX II 2 D Ex tb IIIC T85 Db IP66

NOVA NODE (The nCentric Field Coverage node) has been designed specifically for offshore markets to provide state-of-the-art, reliable and flexible broadband communication between rigs, vessels and onshore personnel. By providing seamless mobility, critical applications like VoIP, video streaming, and data transmission are not interrupted as they move through the network.

Power and flexibility

At the heart of each Nova Node EX is a high-performance network controller, equipped with a high-power radios. The standard radio module operates in the 5GHz ISM band, but the node can also be configured⁽¹⁾ with a 2.4 GHz ISM radio.

Flexible antenna solutions for high range

To provide full coverage without sacrificing range and bandwidth nCentric can deliver a either omni-directional or sectorial antennas with the Nova Node, depending on the specific project needs. Due to the use of RF barriers no intrinsically safe antennas are required, and any custom type of antenna that might be beneficial for the project can be safely connected to the node.

Intelligent mesh platform

Powering this high-end hardware platform is an equally exceptional, fully distributed, wireless mesh operating system. Managing all radios so channels are selected as intelligently as possible, Nova Node maximizes throughput, even over multiple hops.

Instead of an ordinary ad hoc routing protocol, a mobile-optimized, proactive mesh routing algorithm is employed resulting in a robust, self-configuring, and auto-healing network.

Optional LTE modem

A 4G/LTE modem can be added to the Nove Node to enable high-speed, low latency internet access near shore or in the harbour.

⁽¹⁾ Ask your sales representative for lead times on non-standard radio modules.

GENERAL

Unit type

Flameproof radio enclosure with accompanying external antennas and antenna cabling

Single radio with 2x2 MIMO

Radio operation

OFDM / TDD with CSMA CA

Channel bandwidth

5/10/20/40 MHz

Modulations

CCK, BPSK, QPSK, 16 QAM, and 64 QAM

5 GHz MODULE

Frequency band

5.180 ~ 5.825 GHz ISM unlicensed worldwide

Maximal radio output power

32 dBm⁽¹⁾

Maximal receive sensity

-100 dBm

2.4 GHz MODULE (OPTIONAL)

Frequency band

2192 ~ 2732 MHz ISM unlicensed worldwide

Maximal radio output power

32dBm⁽¹⁾

Maximal receive sensity

-100 dBm

ANTENNA

Omni 5 GHz (standard)

- » **Gain** 12dBi
- » **Polarization** Dual linear
- » **Coverage** 360 deg
- » **Elevation Beam width** 7 deg
- » **ETSI specification** EN 302 326

Sector 5 GHz

- » **Gain** 17dBi per sector
- » **Polarization** Dual linear
- » **Coverage** 360 deg
- » **Hpol Beam width** 90 deg
- » **Vpol Beam width** 90 deg
- » **Elevation Beam width** 8 deg
- » **ETSI specification** EN 302 326
- » **Frequency** 1616 MHz - 1626.5 MHz
- » **Average gain at zenith** 4 dBi

NETWORKING

Multicast (emulated)

SNMP, ICMP, HTTP, ARP, TCP, UDP, TFTP, NAT, NTP

DHCP Server / Relay and DHCP Client

SECURITY

Wi-Fi Protected Access (WPA2)

Virtual Private Network (VPN)

Stateful firewall

MAC filtering

IP filtering

⁽¹⁾ depending on country settings

Specifications are subject to change ©nCentric Inc.

INTERFACES

Ethernet

one GbE interface with POE

Antenna

two SMA-female connectors

PHYSICAL AND ELECTRICAL

Size

200 mm (7.8 in) x 200 mm (7.8 in) x 178 mm (7 in)

Weight

7 kg (16lbs)

Typical power consumption

14 Watt

Power supply

90-264 VAC to POE injector

No mounting kit included

ENVIROMENTAL

Operating temperature

-20°C (-4F) to 60°C (140F)

Storage temperature

-30°C (-22) to 70°C (158F)

Operating humidity

5 to 95% non-condensing

Degree of protection

IP66

ATEX CERTIFICATION

ATEX II 2 G Ex d IIC T5

ATEX II 2 D Ex tb IIIC T85 Db

STANDARDS COMPLIANCE

Radio

FCC part 15

Class A Digital Device, intentional radiator

EMC

FCC 47 CFR part 15

Safety

IEC60950-1 CB report / UL60950-1 / TUV EN60950-1

RF safety

FCC OET Bulletin 65

CE mark

PATENTS

US 168706

EP 1936878

CONTACT

AMERICAS OFFICE

t. +1 (832) 390-4201

e. info@ncentric.com

nCentric Inc.

1652 West Sam Houston Pkwy North
Houston TX 77043 - USA

EMEA OFFICE

t. +32 50 95 02 01

e. info@ncentric.com

nCentric Europe

Pathoekweg 9B/006

8000 Brugge - Belgium