

NOVA NODE-2



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
- » Dual linearly polarized omni antennas
- » Smart channel management minimizes interference and maximizes bandwidth.
- » Integrated 72-channel GPS receiver
- » Integrated Iridium SBD modem for easy remote management
- » Easy installation: compact all-outdoor single unit
- » ATEX version available on request

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 with dual-radio configuration

At the heart of each Nova Node is a high-performance network controller, equipped with two high-power radios. The standard radio module operates in the 5GHz ISM band, but the node can also be configured⁽¹⁾ with a 900 MHz ISM, 1370 MHz Military, 2.4 GHz ISM, 3.6 GHz lightly-licensed, 4.4 GHz NATO-Military or 4.9 GHz Public Safety.

Flexible antenna solutions for high range

To provide full coverage without sacrificing range and bandwidth nCentric delivers a vertically and horizontally polarize omni-directional or sectorial antenna with the Nova Node, that can be mounted directly on the unit. The dual polarization increases performance in RF-hostile environments

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 and high performance GPS

An LTE modem can be added instead of the secondary radio module to enable high-speed, low latency internet access near shore or in the harbour. The standard GPS module can be replaced by an industry-leading high-precision dual-antenna GPS module.

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

GENERAL

Unit type

All outdoor, rugged mesh node

Dual-radio with 2x2 MIMO per radio

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⁽²⁾

Maximal receive sensity -100 dBm

900 MHz MODULE (OPTIONAL)

Frequency band

902 ~ 928 MHz license free ISM band in ITU Region 2⁽¹⁾

Maximal radio output power 33 dBm⁽²⁾

Maximal receive sensity -98 dBm

1370 MHz MODULE (OPTIONAL)

Frequency band

1350 ~ 1390 MHz worldwide military band
(compliant with DoD form "DD 1494" requirements)

Maximal radio output power 33 dBm⁽²⁾

Maximal receive sensity -98 dBm

2.4 GHz MODULE (OPTIONAL)

Frequency band

2192 ~ 2732 MHz ISM unlicensed worldwide

Maximal radio output power 32dBm⁽²⁾

Maximal receive sensity -100 dBm

3.6 GHz MODULE (OPTIONAL)

Frequency band

3400 ~ 3800 MHz broadband access band (light licensed)

Maximal radio output power 36dBm⁽²⁾

Maximal receive sensity -98 dBm

4.4 GHz MODULE (OPTIONAL)

Frequency band

4400 ~ 5000 MHz NATO/Military band worldwide

Maximal radio output power 32dBm⁽²⁾

Maximal receive sensity -96 dBm

4.9 GHz MODULE (OPTIONAL)

Frequency band

4400 ~ 5000 MHz USA Public Safety Band

Maximal radio output power 32dBm⁽²⁾

Maximal receive sensity -97 dBm

⁽¹⁾ USA, Canada, South and Latin America, Israel, Australia, New Zealand

⁽²⁾ depending on country settings

Specifications are subject to change ©nCentric Inc.

ANTENNA

Collinear 5GHz (standard)

- » Gain 12dBi
- » Polarization Vertical or Horizontal
- » Coverage 360 deg
- » Elevation Beam width 7 deg
- » ETSI specification EN 302 326

Integrated GPS antenna

- » Frequency 1575.42 MHz
- » Average Gain 4 dBi
- » Polarization Right Hand Circular

Integrated Iridium antenna

- » Frequency 1616 MHz - 1626.5 MHz
- » Average gain at zenith 4 dBi

Other antennas can be delivered if optional radio module chosen

INTERFACES

Ethernet

one GbE interface

Antenna

four N-female connectors

Mobile interface

HSUPA / HSDPA / EDGE / GPRS / GSM (standard)
LTE option also available

PHYSICAL AND ELECTRICAL

Size

202 mm (7.9 in) diameter x 515 mm (20.3 in) height

Weight

7 kg (16lbs)

Typical power consumption

60 Watt

Power supply

90-264 VAC

Wall/pole mounting kits available

ENVIROMENTAL

Operating temperature

-25°C (-13F) to 65°C (149F)

Storage temperature

-30°C (-22) to 70°C (158F)

Operating humidity

5 to 95% non-condensing

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

MIL-STD-167A pending

MIL-STD-810G pending

IP66

CE mark

PATENTS

US 168706

EP 1936878

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