cnReach™ N550 450 MHz ETSI RED Radio

QUICK LOOK:

- **Licensed 450 MHz (406–470 MHz); ETSI RED Compliant w/ CE Mark (also available in an FCC model)**
- **Point-to-point, Point-to-multipoint and Back-to-back Relay configurations (dual radios)**
- **Adds higher performance with reduced headers, low overhead mode, QoS support and payload compression**
- **Secure communications with AES 128/256-bit encryption and password authentication**





cnMaestro READY

For outdoor critical infrastructure operations, cnReach transports process monitoring and control data from remote sensors or RTU/PLC's back to the operations center supporting real-time automated decision making and on-going analytics. Covering large geographic areas, hard to reach terrain and challenging spectrum environments, cnReach delivers reliable, secure connectivity to the petrochemical, electric utility, water/wastewater/stormwater and transportation industries. cnReach eases the migration to modern networks by combining legacy serial and analog/digital I/O with TCP/IP and Ethernet connectivity. Fully integrated into a 'single pane-of-glass' management platform (cnMaestro™), cnReach helps bridge the IT/OT sides of complex organizations. Combining cnReach's licensed and unlicensed narrow-band radios with Cambium Networks' broadband technologies, industrial organizations are delivering end-to-end Industrial Internet of Things solutions today.

- Highly reliable communications with access point synchronization and adaptive modulation.
- Single and dual radio configurations for advanced back-to-back relay topologies. See Cambium for optional board-only configurations.
- Extensive I/O capabilities easing the transition from serial to all-IP networks with two serial ports, two Ethernet ports and optional analog/digital I/O built-in.
- Sophisticated network planning with LINKPlanner, a no-charge planning tool enabling network designers to predict both capacity and availability of networks crossing all of Cambium's technologies.
- Supported by cnMaestro software for monitoring the status of entire networks.
- Fully compatible and interoperable with N500 450 MHz ETSI radios.

©2021 Cambium Networks, Inc.

Distribuito in Italia da Advantec Distribution · www.advantec.it - info@advantec.it

cnReach™ N550 450 MHz ETSI RED Radio

Radio Specifications

UL	Approved
EMC/Safety	CE Mark Safety: EN60950-1: 2006 + A11:2009:2010+A12:2011+A2:2013 EMC: EN 301 489-1 v2.1.1, EN 301 489-5 v2.1.1 Health EME: EN 50385:2002 Radio: EN 300 113 v2.2.1 RoHS: EN 50581:2012
Frequency Range	406–470 Mhz
Output TX Power	100mW to 8W (13 dBm to 39 dBm)
Step Size	10mW
Modulations	BPSK / MSK / QPSK / 8PSK / 16QAM / 32QAM
Capacity*	9.6 kbps to 44 kbps RF data rate; up to 26 kbps UDP throughput in 12.5 kHz channels
Channel Bandwidths	12.5 / 25 kHz (50 / 100 kHz available regulations permitting and by request)
Range	Up to 110 km / 70 miles
Packet Handling	Layer 2 bridge, Layer 3 static routes, VLAN support
Error Correction	Up to 32-bit CRC, Retransmit on error
Data Encryption	128/256-bit AES
I/O and Serial Data Access	Optional I/O allows seamless integration of Modbus RTU and Modbus TCP protocols

*Capacities are over-the-air signalling rates. Usable throughput varies based on payload size, uplink/downlink ratio and protocol. UDP traffic is typically 55-60% of the over-the-air signalling rate.

Receive Sensitivity - BER = 10E-4; (for 10E-6 reduce sensitivities by 2 dB)

	12.5 KHz Channel		25 KHz Channel	
	Rx Sensitivity (dBm)	**Capacity* (kbps)**	**Rx Sensitivity (dBm)**	**Capacity* (kbps)**
BPSK	-110	9	-107	18
MSK	-105	10	-102	20
QPSK	-106	17	-102	34
8PSK	-101	26	-98	52
16 QAM	-98	35	-95	70
32 QAM	-95	44	-92	88

Management

Web-based Interface via HTTP/HTTPS
LINKPlanner integration (capacity and availability planning)
Remote Management via SNMP
cnMaestro™ integration
Support for configuration files, remote software upgrades
Built-in diagnostic tools via web interface such as RF Ping and RF Throughput

©2021 Cambium Networks, Inc.

Distribuito in Italia da Advantec Distribution · www.advantec.it - info@advantec.it

cnReach™ N550 450 MHz ETSI RED Radio

Hardware Specifications

Ethernet Interfaces	2 x RJ-45 10/100BaseT, Full Duplex, rate auto negotiated (802.3 compliant)
Serial Interfaces	2 x RJ-45 RS-232/422/485, up to 230.4 kbps
Analog/Digital I/O (optional)	8 pins for analog input/output and digital input/output
RF / Antenna	TNC RF connectors (1 or 2 depending on single or dual-radio configuration)
Input Power	10–32VDC with reverse polarity protection

Power Consumption (12VDC average)	1W Output			8W Output		
	Transmit	Receive	Idle	Transmit	Receive	Idle
Single Radio Configuration (mA)	611	266	194	1145	430	345
Dual Radio Configuration (mA)	1200	380	215	2600	1108	387

Dimensions	168 mm x 876 mm x 466 mm (6.625 x 3.45 x 1.835in)
Weight	Single Radio Configuration: 0.70 kg (1.54 lbs) Dual Radio Configuration: 0.73 kg (1.61 lbs)
DIN Rail Mount	Optional
Operating Temperature	-40°C to 75°C (-40°F to 167°F)
Humidity	95% operating humidity @ 60°C non-condensing
HAZLOC	UL-Approved to Class 1 / Div 2
Deployment Topologies	Point-to-Point (PTP), Point-to-Multipoint (PMP), Repeater (REP) - Single or Dual Radio

Ordering Information

N550 450 MHz Single- ETSI RED	NB-N550430A-EU
N550 450 MHz Single with IO - ETSI RED	NB-N550431A-EU
N550 450 MHz Dual - ETSI RED	NB-N550440A-EU
N550 450 MHz Dual with IO - ETSI RED	NB-N550441A-EU

ABOUT CAMBIUM NETWORKS

Cambium Networks empowers millions of people with wireless connectivity worldwide. Its wireless portfolio is used by commercial and government network operators as well as broadband service providers to connect people, places and things. With a single network architecture spanning fixed wireless and Wi-Fi, Cambium Networks enables operators to achieve maximum performance with minimal spectrum. End-to-end cloud management transforms networks into dynamic environments that evolve to meet changing needs with minimal physical human intervention. Cambium Networks empowers a growing ecosystem of partners who design and deliver gigabit wireless solutions that just work.

cambiumnetworks.com

12162021

©2021 Cambium Networks, Inc.

3800 Golf Road Suite 360, Rolling Meadows, Illinois 60008 USA

Distribuito in Italia da Advantec Distribution · www.advantec.it - info@advantec.it