NBMesh Series of Wireless Narrowband MESH

NBmesh series narrowband mesh radio/module is suitable for distributed network scenarios where the service rate is not high, the transmission distance is long, and the transmission range is based on multi-hop relay.The topology is a multi-hop network, which is composed of several distribution nodes.The structure is compact, light, single board design, convenient for users to integrate into various types of terminal equipment, to realize stable and reliable long-distance network data transmission.

Multi-hop relay, Efficient networking

Low speed,High sensitivity

UHF/L/S Band frequency

2/4/10/20 Watts RF power

Serial port / Network port,Voice/location

Intelligence frequency hopping

NBMesh-2Watts Module/Enclosed/Handheld(Single Antenna)
(RS232/485/422)

NBMesh-2Watts Vehicle（Single Antenna）
(RS232/485/422)

NBMesh series narrowband mesh radio/module, support point-to-point, point-to-multipoint and multi-point-to-multipoint dynamic routing, multi-hop relay wireless data transmission, used in UAV clusters, unmanned vehicles, and unmanned ships , industrial data acquisition and other self-organizing network communication.

Performance

- Long transmission distance,Strong anti-jamming ability
- Adaptability to mobile environment
- The application layer supports all kinds of Serial port/Network port application terminals
- Support rapid deployment, network topology dynamic change, self-organization without center networking and multi-hop forwarding
- Receiving sensitivity up to -117dBm@250KHz BW
- Adaptive data transmission capability, which can adaptively select modulation mode and coding mode according toenvironmental changes, and carry out adaptive data rate transmission
- Flexible and efficient networking capabilities, support dynamic time slot TDMA protocol, CSMA protocol, centralized measurement and control service scenarios with more than 6 hops and voice services
- No need to configure IP address and driver, seamless compatibility with upper-level TCP, UDP protocol, can achieve voice, file and other data transparent interaction

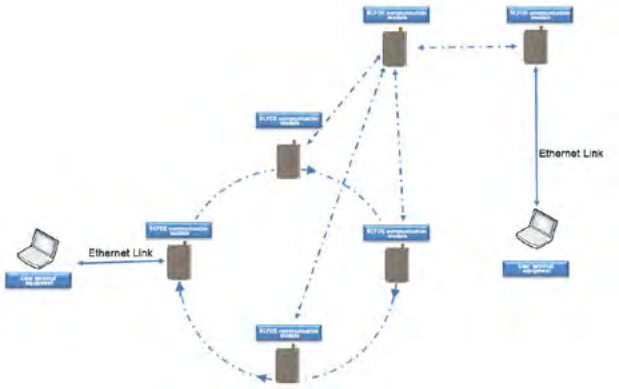
NBMesh-4Watts Module/Airborne /Handheld(Double Antenna)
(Digital microphone, location/electronic map、RJ232/485/422,RJ45)

NBMesh-20Watts Vehicle/Backpack(Double Antenna)
(RJ232/485/422,RJ45)

NBMesh Series of Wireless Narrowband MESH Specifications

Frequency	UHF(225-400/570-700MHz)/L Band/S Band/C Band
Channel Bandwidth	250k/500k/1MHz
Modulation Mode	BPSK/QPSK/16QAM (Adaptive), SCFDE (Single Antenna) /OFDM(Dual Antenna)
Multi-access Mode	CSMA/TDMA
RF Channel	1Tx+1Rx,2Tx+2Rx,TDD
Transmit Power	2/10 Watts (Single Antenna), 4/20 Watts (Dual Antenna)
Sensitivity	-117dBm@250KHz
Airborne Data Rate (Single Antenna/ Dual Antenna)	20-75/100-500kbps@250kHz 40-150/250-1000kbps@500kHz 80-300/500-2000kbps@1MHz
Single Hop Communication Distance	30-100 km (Visible), 1-30 km (Urban Area)
Work Mode	Point-to-point/Point-to-multipoint/Multipoint-to-multipoint,Dynamic routing/Multi-hop relay, Star/Line/Network/Hybrid
Connectors	Serial port (point-to-point bidirectional, point-to-multiple unidirectional)/ Network Port (unicast, multicast, broadcast)/ Voice, Location (broadcast)
Network Size/ Multi-hop Capability	Single Network More Than 128 Nodes/6 Hops
Network Construction Time	Less than 1s
Route Switching Time	Less than 1s
Single Hop Delay	10~ 20ms
Voltage/ Power Consumption	9-20V/0.5-1A(2Watts Handheld/Enclosed/Module) 12-20V/2-4A(10Watts Vehicle) 9-20V/1-2A(4Watts Handheld/Airborne/Module) 12-20V/3-5A(20Watts Backpack/Vehicle)
Environmental	-40℃ to+85℃
Dimensions/Weight	8.7x4.3x2.0cm/75g(2Watts Single Antenna Module) 9.9x2.8x6.1cm/172.5g(2Watts Single AntennaEnclosed) 23.5x6.8x3.9cm/786g(2Watts Single AntennaHandheld) 13.9x12.3x4.4cm/750g(10Watts Single AntennaVehicle) 8.6×5.4×1.0cm/40g(4Watts Dual Antenna Module) 11.7×6.2×1.9cm/149g(4Watts Dual Antenna Airborne) 23.5x6.8x3.9cm/786g(4Watts Dual Antenna Handheld) 18.9x12.2x4.3cm/900g(20Watts Dual Antenna Vehicle) 31.4x18.9x6.2cm/4.95kg(20Watts Dual Antenna Backpack)

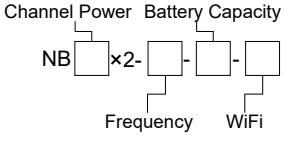
Star Network Topology I



Star Network Topology II

Star Network Topology III

Specifications:



Channel Power (W)	Frequency (MHz)	Battery Capacity (AH)	WiFi AP (Y/N)
0.5	600	0(N)	0(N)
2	1400	6.8	1(Y)
10	2300	10	
20	5800	38	

NB2×2-1400-6.8-0，Express：2W×2 L band handheld radio with 6.8AH battery without WiFi AP.

NB10×2-600-38-1，Express：10W×2 UHF backpack radio with 38AH battery with WiFi AP.

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