

innovative non-line-of-sight radios



EagleEyes Net NLOS110-24 uses patented VINE technology as a networking solution that overcomes non-line-of-sight problems caused by challenging terrain. VINE implementation lowers the initial cost of deploying a network, using "Any point-to-Multipoint" architecture.

Networking features like CIR and MBR provide a Service Provider more flexibility to control bandwidth to users and maximize his revenue. ToS provides the ability to offer delay sensitive services such as VoIP and video.

Superior Throughput and Range

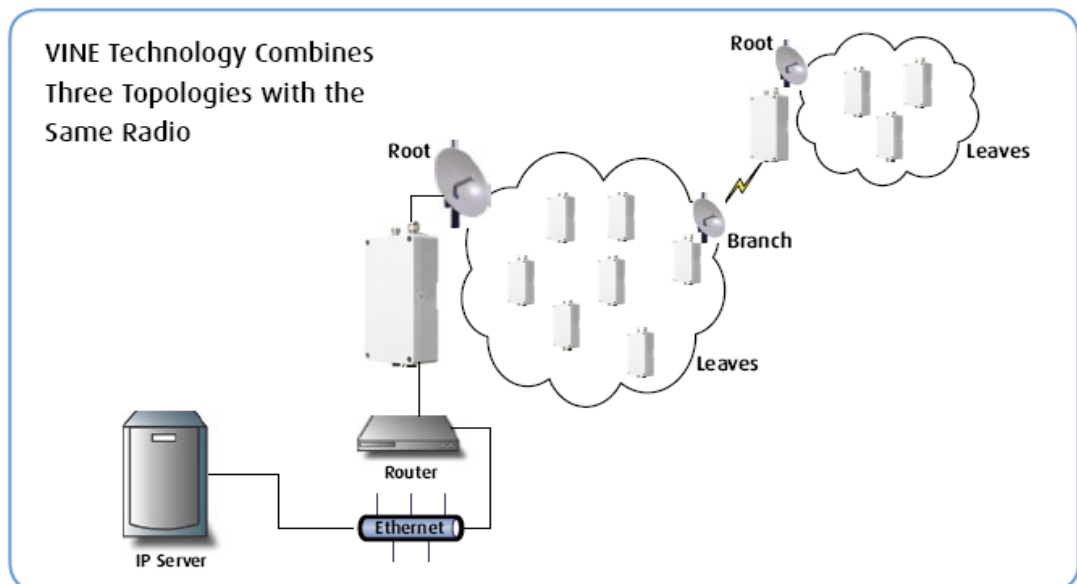
With the patented VINE technology the EagleEyes Net NLOS110-24 delivers an effective throughput 8 Mbps; double that of other 802.11b radios. The VINE technology mixes and matches three topologies in the same radio. Each unit operates as a VINE root, branch or leaf optimizing packet routing and non line-of-site performance and range.

Quick and Easy Deployment

A robust outdoor design with tools such as audible antenna alignment and self-configuration make for rapid and simple installation. Upon power up the EagleEyes Net NLOS110-24 radios self-configure, detecting other nodes and hosts in the network.

Intelligent Bandwidth Control

The EagleEyes Net NLOS110-24 offers a number of VLAN and QoS features that allow network operators to allocate network bandwidth intelligently, create varying service levels, and support delay sensitive applications. CIR and MBR can be set on each radio and adaptive bandwidth control means un-utilized bandwidth is shared among other radios





Basic Features



- Patented VINE technology operates in true NLOS environment
- Configurable as a base station, subscriber station or repeater
- Available in 2, 5.5 and 11 Mbps throughput configurations
- Dual antenna ports offer a cost-effective repeater solution.
- User Friendly Web-Based Graphical Interface.
- Designed to operate over long distances, up to 60 km
- Non-line-of-sight obstacles conquered with patented VINE technology
- Operating in the 2.4 GHz license exempt frequency band
- Specifically designed to operate over long distances
- Strength in point-to-multipoint networking
- Data rates from 1.5 to 11 Mbps
- Effortless installation
- Plug-and-Play, Auto-configuration and Auto-Acquire CIR and MBR
- Automatic Email Alarms on faults
- DHCP Client
- VLAN Support
- Web-Based graphical user interface
- Network management over the air and via Internet

Flexibility

Wireless networks based on the VIP 110-24 can be deployed one node at a time without an expensive upfront infrastructure expense. Each unit can be configured to operate as the VINE root, branch or a leaf. As the number of subscribers grows, a VINE network can be scaled up in one of the two ways:

1. Use multiple radios at the root location, each feeding a separate sector antenna. Each of these radios becomes the root of a separate VINE with full capacity.
2. Break a link between the root and the remote and reconfigure that remote as the root of a new VINE

Configurations

VIP leaves are available in 2 Mbps, 5.5 Mbps and 11 Mbps throughput configurations. Leaves are upgradeable to higher throughput speeds either locally or over the air.

Web-Based GUI

The intuitive Web-Based Graphical User Interface simplifies the process of installing and configuring and monitoring your VIP network. The GUI provides all the functionality as the Command Line Interface (CLI), but in a familiar point and click web environment.





RADIO SPECIFICATIONS

Output Power (Antenna Port)	0 to +23 dBm (FCC) Software Controllable in 1 dB
Frequency Range	2.400 to 2.483 GHz (FCC/ETSI/IC/Mexico)
Technology	DSSS
Coverage	Structured NLOS (VINE Technology)
Range	Up to 66 km (41 miles)
Cell Configuration	Omni, 1-4 sectors
Throughput (Raw/Effective)	11/8 Mbps; 5.5/4 Mbps; 2.0/1.5 Mbps
Receive Sensitivity (at 10E-6 BER)	-82 dBm at 11 Mbps -85 dBm at 5.5 Mbps -87 dBm at 2 Mbps -90 dBm at 1 Mbps
Channel Size/Separation	18 MHz / 20 MHz
Integrated Antenna	No
RF Connector	N Female (two ports)
Duplexing Format	Time Division Duplexing (TDD)
Certification	FCC, ETSI, IC, Mexico

NETWORK SUPPORT

Network Connection	10/100 Base T - Autonegotiate
VLAN (802.1q) Compliance	Yes
CIR/MBR	Yes - per leaf basis
Bridge functionality	Yes
DHCP Client	Built-in
NTP Support	Yes, via Ethernet and RF
Network Filtering	MAC address
QoS	Yes, via ToS and VLAN tagging

WIRELESS NETWORKING

Network Topologies	Anypoint-to-multipoint (VINE)
RF Protocol	Open standard (with patented dynamic polling)
No. of CPEs per AP	Up to 100 - based on subscriber requirements

SECURITY

Data Scrambling	Built-in
Data Security Password	Network attachment is password protected
Configuration Security	Two- Tier Password protected

PHYSICAL, ELECTRICAL AND ENVIRONMENTAL

Power Consumption	5 W average
Input Voltage	10 to 28 volts DC/110-220 VAC 50 - 60 Hz (external supply)
Dimensions	12 x 22 x 5.1 cm (4.72" x 8.66" x 2.0")
Weight	1.1 kg (2.4 lb)
Operating Temperature	-40° C to 50° C (-40° F to 130° F)
Relative Humidity	0-95% non-condensing
Enclosure	Cast aluminum, fully weather-proof





EagleEyes Net NLOS110-24: order checklist

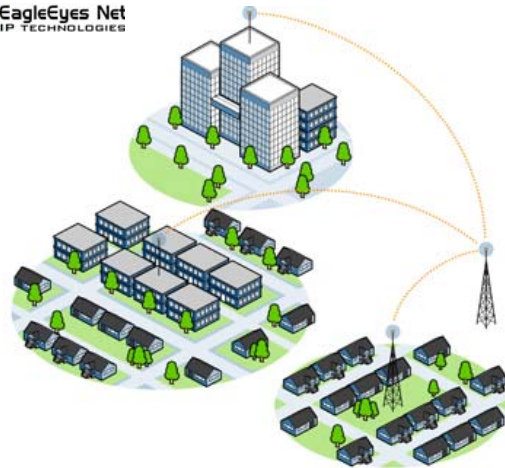
product code	product description
Radio Units	
EE130-0001	EEN110-24 FCC Full Vine
EE130-0004	EEN110-24 CE Full Vine
EE130-0005	EEN110-24 FCC Leaf 11Mbps
EE130-0006	EEN110-24 CE Leaf 11Mbps
EE130-0007	EEN110-24 FCC Leaf 5.5Mbps
EE130-0008	EEN110-24 CE Leaf 5.5Mbps
EE130-0009	EEN110-24 FCC Leaf 2.0Mbps
EE130-0010	EEN110-24 CE Leaf 2.0Mbps
Software	
EE412-0001	Extended Frequency Upgrade (Not available in all areas, consult Apps Eng)
EE412-0003	2.0 Mbps Leaf to full vine upgrade
EE412-0004	2.0 Mbps Leaf to 11 Mbps leaf upgrade
EE412-0005	2.0 Mbps Leaf to 5.5 Mbps leaf upgrade
EE412-0006	5.5 Mbps Leaf to full vine upgrade
EE412-0007	5.5 Mbps Leaf to 11 Mbps leaf upgrade
EE412-0008	11 Mbps Leaf to full vine upgrade
Antennas	
EE-0211	2.4 GHz 10 dBi 360deg Omni, 48" x 2 1/4"
EE-0304	2.4 GHz 13dBi 47° Flat Panel 11"x7.5"
EE-0308	2.4 GHz 17dBi 13° Grid
EE-0309	2.4 GHz 24dBi 7.5° Parabolic dish 24"x39"
EE-0310	2.4 GHz 19dBi 18° Parabolic dish 18"
EE-0311	2.4 GHz 21dBi 13.5° Parabolic dish 24"
EE-0314	2.4 GHz 17dBi 22° Flat Panel 12.75" x13.6"
EE-0330	2.4 GHz 11.5dBi 47° Shrouded Yagi, 10.5" x 3"
EE-0332	2.4 GHz FASect (60°/17.5,90°/15.5,120°/14.5°,160°/13)40"x 5"
EE-0408	2.4 GHz 13.5dBi 60° Sectoral Horizontal 20" x 5"
EE-0422	2.4 GHz 12dBi 90° Sectoral Horizontal 20" x 8"
EE-0425	2.4 GHz 14dBi 120° Sectoral Vertical 40" x 5"
EE-0426	2.4 GHz 13.5 dBi 60° Sectoral Vertical 20" x 5"
EE-0507	2.4 GHz 19dBi 18° Parabolic dish 18" w/ Radome
EE-0508	2.4 GHz 21dBi 13.5° Parabolic dish 24" w/ Radome
EE-0511	2.4 GHz 12dBi 90° Sectoral Vertical 20" x 5"
EE-0512	2.4 GHz 10dBi 180° Sectoral 20" x 5"
EE-0513	2.4 GHz FA Sectoral (60°/15,90°/13,120°/12,160°/10.5) 20"x 5"
EE-0520	2.4 GHz 17dBi 45° Sectoral Horizontal 40"x 5"
EE-0521	2.4 GHz 16 dBi 60° Sectoral Horizontal 40"x 5"

Cables & Connectors

EE-0026	Connector Kits- 8pin outdoor to RJ45 for Ethernet cable
EE-1420	10m Outdoor Shielded CAT5 power-over-ethernet cable w / weatherproof connector
EE-1421	30m Outdoor Shielded CAT5 power-over-ethernet cable w / weatherproof connector
EE-1422	100m Outdoor Shielded CAT5 power-over-ethernet cable w/weatherproof connector
EE-1435	65m Outdoor Shielded CAT5 power-over-ethernet cable w/weatherproof connector
EE50-0008	EEN110-24 3pin to stereo adapter cable for headset port
EE50-0009	EEN 3pin to 9pin female Com port adapter cable

Accessories

EE220-0029	Surge Suppressor @ 2.4GHz
EE220-0041	RS485 Ethernet Surge Suppressor
EE220-0042	Ethernet Surge Suppressor
EE440-0008	EEN Mounting Kit
EE000-0018	Universal Power Inserter (110-220V) - For use with <30m cable
EE000-0025	Universal Power Inserter (110-220V) - For use with <100m cable
EE700-0048	EEN 110-24 Manual - (Hard copy)
EE000-0053	EEN Bench Test Kit



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