

# Xnet Viper

## 2.4/5GHz standard multi-radio mesh nodes (ETSI)

indoor version



### Mesh Routing

The Xnet Viper multi-radio nodes are capable of handling 4 radio's in a balanced mix of 2.4-5GHz bands, based on the **HopWARE Mesh Architecture (HMA)**, which incorporates today:

#### Hopling Mesh Protocol (HMP)

- Hopling Mode - Network meshing (layer 2) / Bridging
- Hotspot Mode - Hotspot meshing

#### Hopling Discovery Protocol (HDP)

- Automatic Mesh Discovery
- Automatic Mesh Configuration

### Standards

IEEE 802.11a	IEEE 802.11g
IEEE 802.11b	IEEE 802.11h
IEEE 802.11d	IEEE 802.11i
IEEE 802.11e	IEEE 802.11j
IEEE 802.11	IEEE 802.1q
IEEE 802.3	IEEE 802.3af
IEEE 802.3u	IEEE 802.3x

### Device Management

Web-Based - Internet Explorer v6 or later; Netscape Navigator v7 or later; or other Java-enabled browsers.  
SSH command line interface  
Call Home Facility (CHF), XML interface  
SNMP v1 or v2

### Data Rates

#### IEEE 802.11a:

6, 9, 12, 18, 24, 36, 48, 54Mbps

#### IEEE 802.11g:

6, 9, 12, 18, 24, 36, 48, 54Mbps

#### IEEE 802.11b:

1, 2, 5.5, 11Mbps

### Security

64-, 128-bit WEP  
WPA - Enterprise/Personal  
WPA2 - Enterprise/Personal  
MAC Address Access Control List  
IEEE 802.1x (optional)

### Wireless Frequency Range

#### IEEE 802.11a:

5.15~5.35GHz  
5.47~5.725GHz  
5.725~5.825GHz

The available 5GHz frequencies may vary according to country and regulatory requirements. Please contact your local sales representative for more details.

#### IEEE 802.11b/g:

U.S., Europe and Japan covering 2.4 to 2.484 GHz  
Programmable for different country regulations

### Modulation Technology

#### IEEE 802.11a/g:

OFDM (64-QAM, 16-QAM, QPSK, BPSK)

#### IEEE 802.11b:

DSSS (DBPSK, DQPSK, CCK)

### LED

Power (Green)

### Receiver Sensitivity

#### IEEE 802.11a:

-88dBm @ 6Mbps  
-71dBm @ 54Mbps

#### IEEE 802.11g:

-90 dBm @ 6Mbps  
-73 dBm @ 54Mbps

#### IEEE 802.11b:

-95 dBm @ 1Mbps  
-89 dBm @ 11Mbps

### Additional Radio cards

2.4/5GHz 100mW	HR.01.100	2.4GHz 400mW	HR.06.400
2.4/5GHz 400mW	HR.02.400	2.4GHz 600mW	HR.07.600
3.5GHz 630mW	HR.03.630	5GHz 600 mW	HR.08.600
4.9GHz 400mW	HR.04.400	900MHz 630mW	HR.09.630
5GHz 400mW	HR.05.400		

### Operating Voltages

36 to 56VDC for Power over Ethernet. The nominal Voltage is 48VDC.

### Transmit Power

#### 5.18~5.32 & 5.5~5.6 GHz

18 dBm @6~24Mbps  
16 dBm @36Mbps  
14 dBm @48Mbps  
13 dBm @54Mbps

#### 5.5~5.7 GHz

16 dBm @6~24Mbps  
15 dBm @36Mbps  
13 dBm @48Mbps  
12 dBm @54Mbps

#### 5.745~5.825 GHz

16 dBm @6~24Mbps  
15 dBm @36Mbps  
13 dBm @48Mbps  
12 dBm @54Mbps

#### 2.412~2.472 GHz (IEEE 802.11g)

20 dBm @6~36Mbps  
19 dBm @48Mbps  
18 dBm @54Mbps

#### 2.412~2.472 GHz (IEEE 802.11b)

20 dBm @1~11Mbps

### Wireless Operating Range

Depending on the type and output of the connected antenna(s). Hopling Technologies has a variety of omni, grid, array's and panel antennas available.

### Dimensions

L = 277mm  
W = 155mm  
H = 50mm

### Warranty

Standard 1-Year

### Certification

Complies with FCC rules part 15  
CE (!)

### Ordering information Xnet Viper nodes

Please check your local sales representative for more details about packages and a la carte configurations.



### For more information:



#### Hopling Technologies B.V.

Camerastraat 10  
1322 BC Almere  
The Netherlands

Tel.: + 31 36 548 6868  
Fax: +31 36 548 6869  
Email: info@hopling.com  
Website: www.hopling.com