

# MAX HD cellular router

Mission Critical 4G LTE/3G Bandwidth Bonding Router.

**PEPWAVE**  
Broadband Possibilities



MAX HD2

MAX HD2 IP67

MAX HD4

MAX HD2 mini

## Rugged Electronics & All-Weather Enclosure

Industrial IP67 Standard

## SpeedFusion™ Bonding Technology

Unbreakable VPN

## Fleet Tracking & Management

Powered by InControl 2

**InControl<sup>2</sup>**  
Setup. Manage. Report.  
InControl 2 Cloud Management

Works With



And worldwide 4G LTE/3G carriers

Offering an indoor metallic enclosure and dual built-in 4G LTE or 3G modems, the MAX HD combines rugged durability and blazing fast throughput to deliver performance you can count on in mission-critical deployments. The MAX HD2 IP67 adds an even tougher all-metal outdoor enclosure that stands up to anything and goes anywhere.

### Automatic WAN Failover. Uptime. All the Time.

Wherever you roam, the HD keeps you online without interruption by automatically sensing connection status and switching between Ethernet WAN and up to four 4G LTE/3G links as needed. It all happens so quickly and seamlessly that you probably won't even notice occasional link connectivity issues.

### Cap- and Cost-Aware Routing. Minimized Expenses. Maximized Performance.

The MAX HD's bandwidth usage monitor allows you to prioritize connections by cost and data allowance. It automatically switches between connections to give you the best performance at the lowest cost, and you'll never again have to worry about expensive data overages.

### SpeedFusion™-powered Dependability and Performance.

Designed to intelligently manage multiple Internet links, SpeedFusion technology continuously monitors all connections and switches between them as needed to create unbreakable VPN connections. In addition, SpeedFusion bonds all available bandwidth for uninterrupted and ultra-fast performance under even the heaviest loads, such as real-time POS, video, VoIP, and other data-intensive networking.

### Centralized Management. At Your Desk or From the Cloud.

Peppwave's intuitive local web administration interface and our InControl 2 management solution make it easy to take charge of your MAX HD from across the office or halfway around the world.

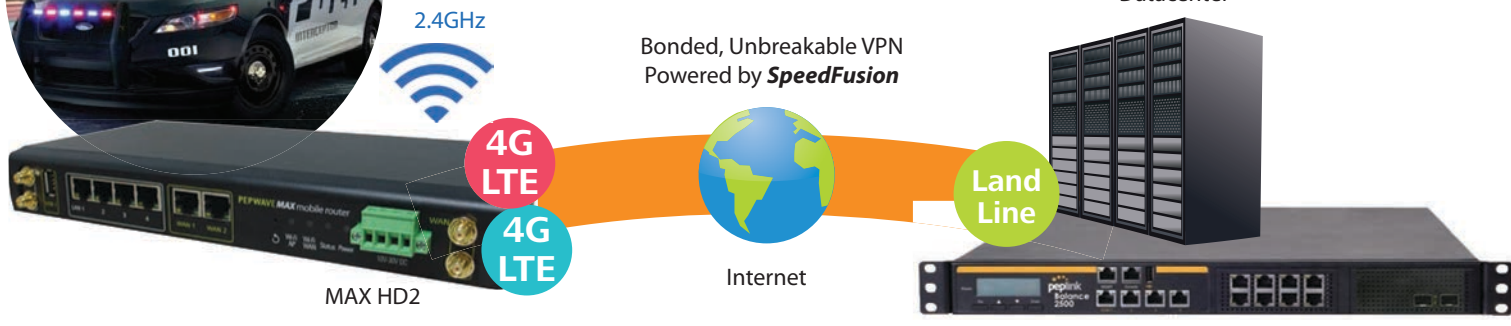
# Applications

## Public Safety – 24/7 Unbreakable CCTV and Radio over IP

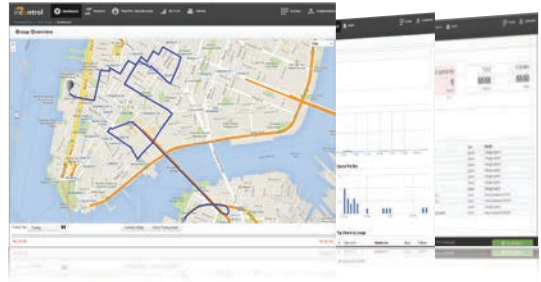
2 Unbreakable VPN powers uninterrupted communication and resource access

4 In case of a WAN failure, **SpeedFusion** instantly and seamlessly switches traffic to another connection; for always-on mobile networking

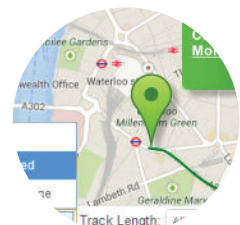
3 **SpeedFusion** allows you to communicate using combined bandwidth from all available connections



1 **SpeedFusion** creates an **unbreakable, high-bandwidth connection** using multiple 4G LTE/3G modems from different carriers



**InControl<sup>2</sup>**  
Setup. Manage. Report.



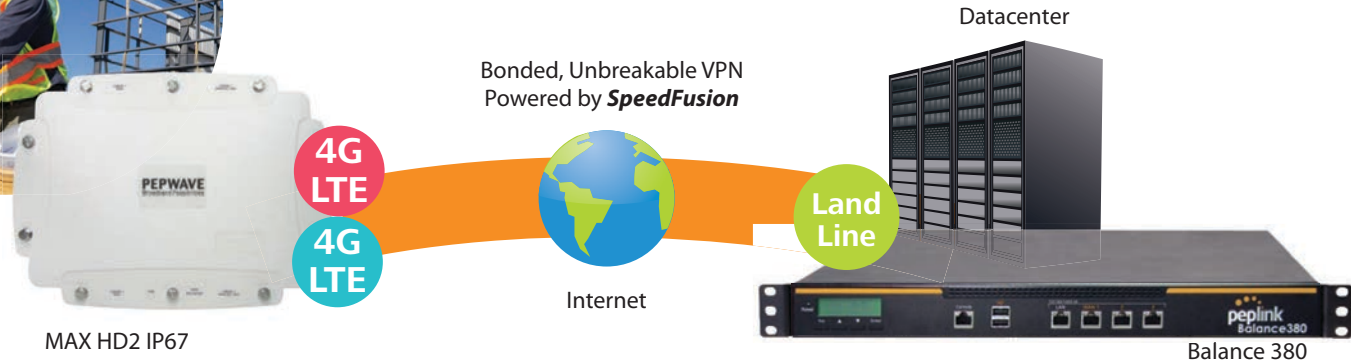
5 InControl 2 provides complete cloud-based device management, monitoring, and reporting and lets you check vehicle speed, view cellular coverage, and play back route histories in real-time

## Construction Site/Container Ports/Rapid Deployment – Fast and Reliable Mobile Networking

2 Unbreakable VPN powers uninterrupted communication and Internet access

4 In case of a WAN failure, **SpeedFusion** instantly switches traffic to another connection; for seamless and continuous communication

3 **SpeedFusion** allows you to communicate using combined bandwidth from all available connections

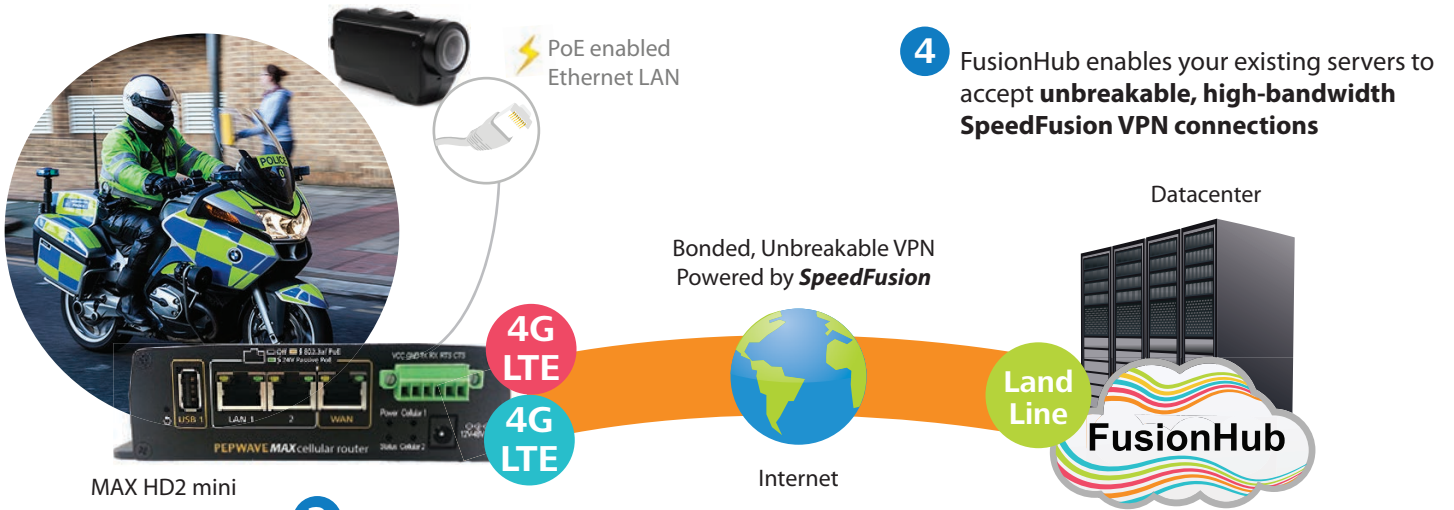


1 **SpeedFusion** creates an **unbreakable, high-bandwidth connection** using multiple 4G LTE/3G modems from different carriers



# Highway Patrol – Portable Video Streaming Solution

- 3 Mounted camera streams video from the HD2 mini to datacenter



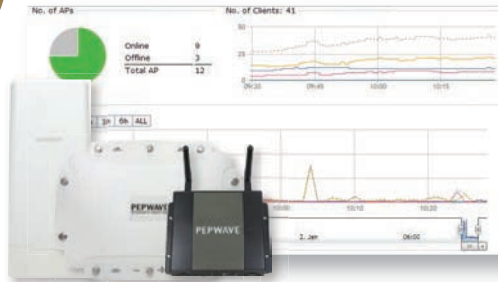
- 4 FusionHub enables your existing servers to accept **unbreakable, high-bandwidth SpeedFusion VPN connections**

- 2 Smaller form factor and passive PoE support reduces the total weight carried and the number of wires needed
- 1 *SpeedFusion* creates an **unbreakable, high-bandwidth connection** using multiple 4G LTE/3G modems from different carriers

# Maritime Connectivity Solution – Combine Cellular Connections with VSAT



- 4 The HD4's **integrated AP Controller** enables anytime, anywhere management of your Pepwave AP One devices



AP One Series



- 2 The HD4 supports both US and international carriers on the same device

- 3 The HD4 automatically switches to a VSAT connection when 4G LTE/3G connections are unavailable

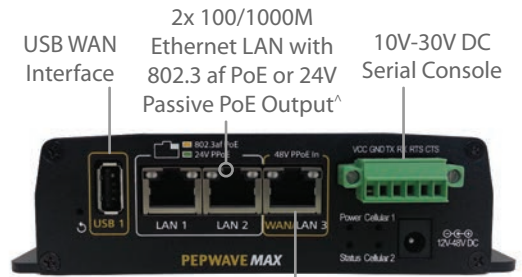
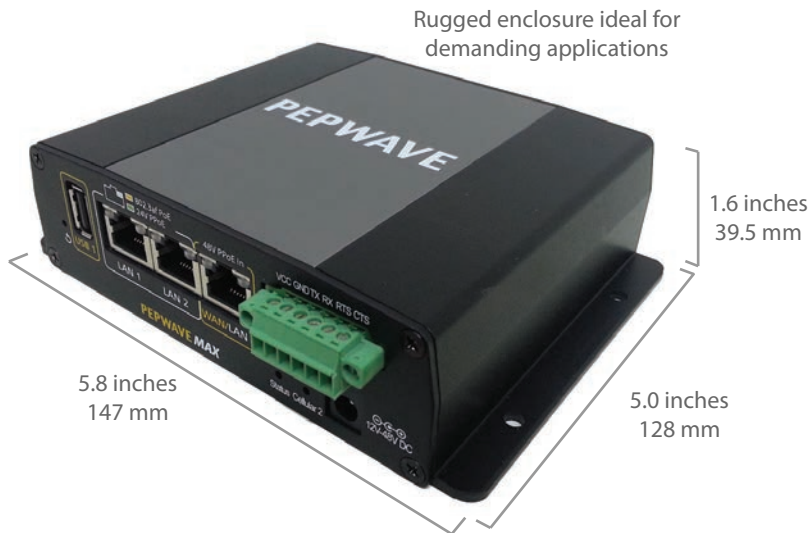
- 1 4x 4G LTE/3G modems reduce connectivity costs compared to connecting through VSAT



MAX HD4

# Product Ordering Information

## MAX HD2 mini



Product Code	Carrier	Description
MAX-HD2-LTE-VA-T	4G LTE (Band 13)/ AT&T/Telcel	Embedded 4G model supporting 4G LTE (Band 13)* and AT&T* 4G LTE network and providing automatic fallback to 4G LTE (Band 13) and AT&T 3G as needed. Technologies and frequency bands supported: 4G LTE (Band 4/13/17); WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+ (800/850/1900/2100 MHz).
MAX-HD2-LTE-A2-T	AT&T/Telcel	Embedded 4G model supporting AT&T* 4G LTE network and providing automatic fallback to AT&T* 3G as needed. Technologies and frequency bands supported: 4G LTE (Band 4/17); WCDMA/HSDPA/HSUPA/HSPA+/ DC-HSPA+ (800/850/1900/2100 MHz).
MAX-HD2-LTE-E-T	Worldwide	Embedded 4G model supporting 4G LTE for EU and worldwide GSM carriers. Both modems provide automatic fallback to 3G as needed. Technologies and frequency bands supported: 4G LTE (Band 1/3/7/8/20); WCDMA/HSDPA/HSUPA/ HSPA+/DC-HSPA+ (900/2100 MHz).

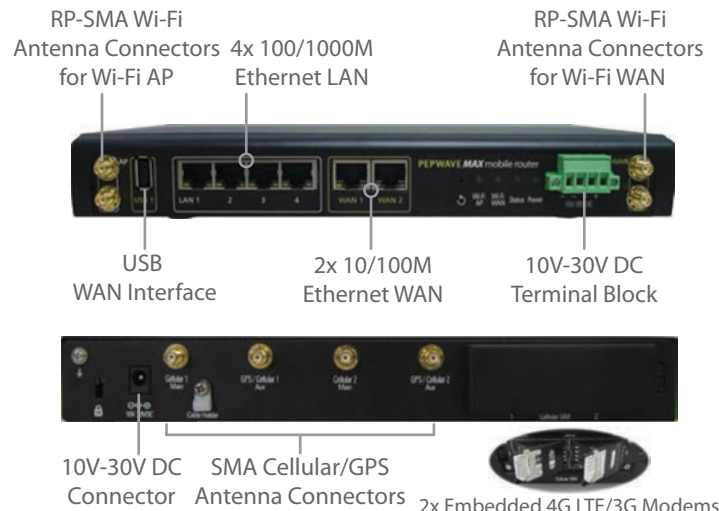
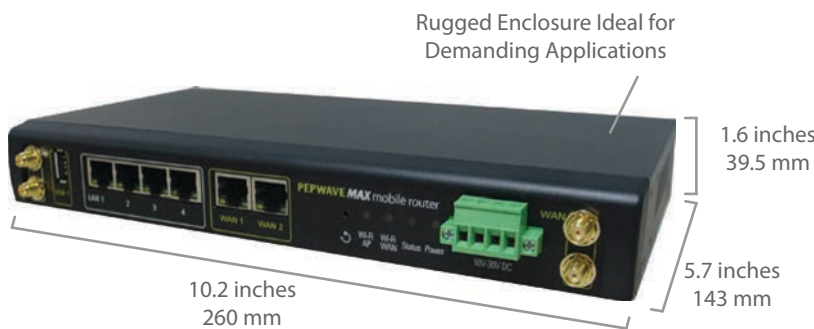
4G LTE

\*Requires a pre-activated SIM card.

### MAX HD2 mini - PoE Activation Kit

Product Code	Description
ACW-609	Includes 1x 48V Power Supply and PoE License Enables 3x 802.3af PoE Output Ports

## MAX HD2



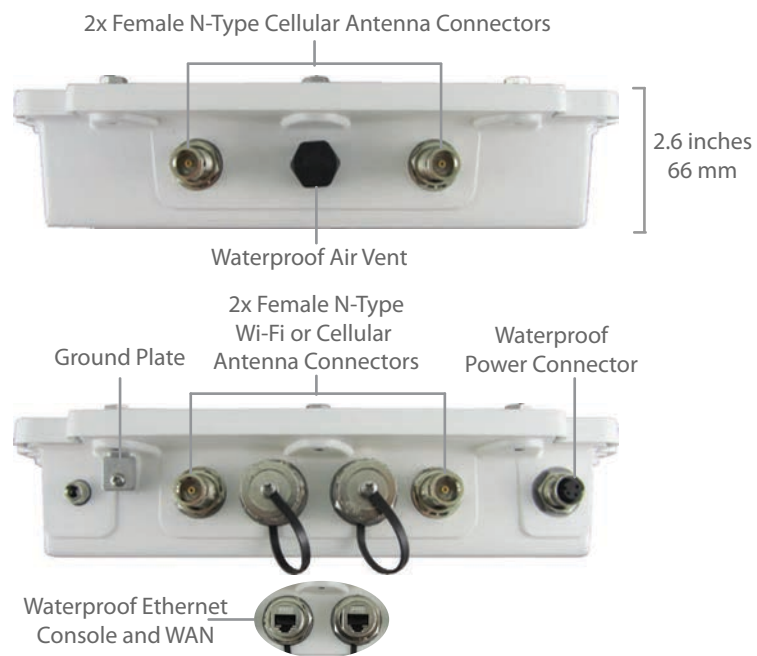
Product Code	Carrier	Description
MAX-HD2-LTE-VA-T	4G LTE (Band 13)/ AT&T/Telcel	Embedded 4G model supporting 4G LTE (Band 13)/ AT&T* 4G LTE network and providing automatic fallback to 4G LTE (Band 13)/ AT&T 3G as needed. Technologies and frequency bands supported: 4G LTE (Band 4/13/17); WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+ (800/850/1900/2100 MHz).
MAX-HD2-LTE-A2-T	AT&T/Telcel	Embedded 4G model supporting AT&T/T-Mobile* 4G LTE network and providing automatic fallback to AT&T 3G as needed. Technologies and frequency bands supported: 4G LTE (Band 4/17); WCDMA/HSDPA/HSUPA/HSPA+/ DC-HSPA+ (800/850/1900/2100 MHz).
MAX-HD2-LTE-E-T	Worldwide	Embedded 4G model supporting 4G LTE for EU and worldwide GSM carriers. Both modems provide automatic fallback to 3G as needed. Technologies and frequency bands supported: 4G LTE (Band 1/3/7/8/20); WCDMA/HSDPA/HSUPA/ HSPA+/DC-HSPA+ (900/2100 MHz).
MAS-GN2C2-R	Worldwide	Embedded 3G model supporting AT&T* and worldwide GSM carrier. Technologies and frequency bands supported: WCDMA/HSDPA/HSUPA/HSPA+ (800/850/900/1900/2100 MHz); GSM/GPRS/EDGE (850/900/1800/1900 MHz); CDMA 1xRTT/EV-DO (800/1900 MHz).

4G LTE

3G

\*Requires a pre-activated SIM card.

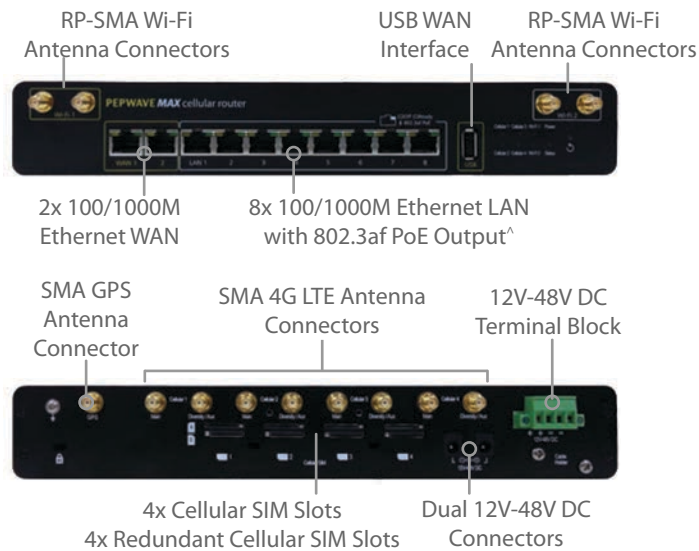
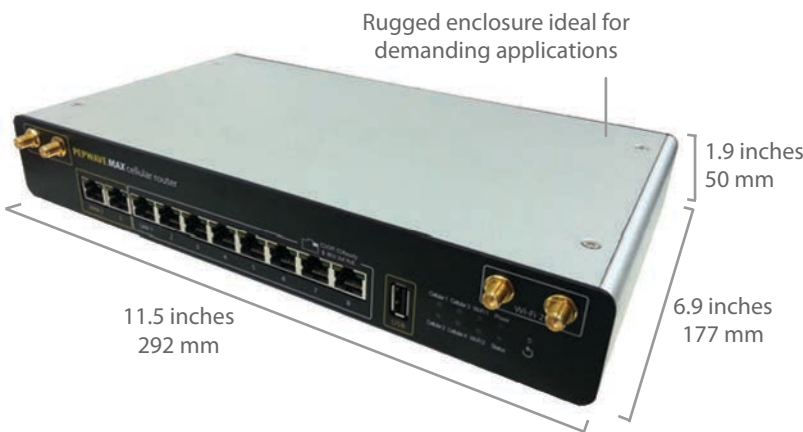
# MAX HD2 IP67



	Product Code	Carrier	Description
4G LTE	MAX-HD2-M-LTE-VA-IP67	4G LTE (Band 13)/ AT&T/Telcel	No Wi-Fi. Embedded 4G model with one embedded 4G LTE modem supporting 4G LTE (Band 13) network, and one embedded 4G LTE modem supporting AT&T* 4G LTE network. Both modems provide automatic fallback to 3G as needed. Technologies and frequency bands supported: 4G LTE (Band 4/13/17); WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+ (800/850/1900/2100 MHz).
	MAX-HD2-M-LTE-A2-IP67	AT&T/Telcel	No Wi-Fi. Embedded 4G model with two embedded 4G LTE modems supporting AT&T* 4G LTE network. Both modems provide automatic fallback to 3G as needed. Technologies and frequency bands supported: 4G LTE (Band 4/17); WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+ (800/850/1900/2100 MHz).
	MAX-HD2-M-LTE-E-IP67	Worldwide	No Wi-Fi. Embedded 4G model supporting 4G LTE for EU and worldwide GSM carriers. Both modems provide automatic fallback to 3G as needed. Technologies and frequency bands supported: 4G LTE (Band 1/3/7/8/20); WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+ (900/2100 MHz).
3G	MAX-HD2-MHP67	Worldwide	No Wi-Fi. Embedded 3G model supporting AT&T* and worldwide GSM carriers. Technologies and frequency bands supported: WCDMA/HSDPA/HSUPA/HSPA+ (800/850/900/1900/2100 MHz); EDGE/GPRS/GSM (850/900/1800/1900 MHz).
	MAX-HD2-IP67	Worldwide	Built-in 802.11n Wi-Fi as WAN and AP. Embedded 3G model supporting AT&T* and worldwide GSM carriers. Technologies and frequency bands supported: WCDMA/HSDPA/HSUPA/HSPA+ (800/850/900/1900/2100 MHz); EDGE/GPRS/GSM (850/900/1800/1900 MHz).

\*Requires a pre-activated SIM card.

# MAX HD4



	Product Code	Carrier	Description
4G LTE	MAX-HD4-LTE-A-T	AT&T/Telcel	Multi-cellular bonding router with 4 embedded LTE modems supporting AT&T* 4G LTE network and providing automatic fallback to AT&T* 3G as needed. Technologies and frequency bands supported: 4G LTE (Band 4/17); WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+ (800/850/1900/2100 MHz).
	MAX-HD4-LTE-V-T	4G LTE (Band 13)	Multi-cellular bonding router with 4 embedded LTE modems supporting 4G LTE (Band 13)* and providing automatic fallback to CDMA (800/1900 MHz) as needed. Technologies and frequency bands supported: 4G LTE* (Band 13); CDMA (800/1900 MHz).
	MAX-HD4-LTE-VA-T	4G LTE (Band 13)/ AT&T/Telcel	Multi-cellular bonding router with 4 embedded LTE modems supporting 4G LTE (Band 13)* and AT&T* 4G LTE network and providing automatic fallback to CDMA (800/1900 MHz) and AT&T* 3G as needed. Technologies and frequency bands supported: 4G LTE (Band 4/13/17); WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+ (800/850/1900/2100 MHz).
	MAX-HD4-LTE-E-T	Worldwide	Multi-cellular bonding router with 4 embedded LTE modems supporting LTE for EU and worldwide GSM carriers. Technologies and frequency bands supported: 4G LTE (800/900/1800/2100/2600 MHz); UMTS/WCDMA/HSPA+ (900/2100 MHz).

\*Requires a pre-activated SIM card.

## MAX HD4 - PoE Activation Kit

Product Code	Description
ACW-609	Includes 1x 48V Power Supply and PoE License Enables 4x 802.3af PoE Output Ports Requires 2x ACW-609 to enable all PoE ports in the MAX HD4



# Specifications

	MAX HD2 mini	MAX HD2	MAX HD2 IP67	MAX HD4
WAN Interface	2x Embedded 4G LTE with Redundant SIM Slots 1x USB Interface 1x 100/1000M Ethernet Port	2x Embedded 4G LTE/3G 1x USB Interface 2x 100/1000M Ethernet Ports	2x Embedded 4G LTE/3G with Redundant SIM Slots 1x 100/1000M Ethernet Port	4x Embedded 4G LTE with Redundant SIM Slots 1x USB Interface 2x 100/1000M Ethernet Ports
LAN Interface	2x 100/1000M Ethernet Ports with 802.3 af/24V Passive PoE Output <sup>#</sup>	4x 100/1000M Ethernet Ports	1x 100/1000M Ethernet Port	8x 100/1000M Ethernet Ports with 802.3 af/24V Passive PoE Output <sup>#</sup>
Wi-Fi Interface	○	1x 802.11b/g/n 300Mbps Wi-Fi WAN 1x 802.11b/g/n 300Mbps Wi-Fi AP	○*	1x 802.11a/b/g/n 300Mbps Wi-Fi WAN 1x 802.11a/b/g/n 300Mbps Wi-Fi AP
Wi-Fi AP Operating Frequency	○	2412 – 2472 MHz	○*	2412 – 2472 MHz 5180 – 5825 MHz
Router Throughput	200Mbps		100Mbps	300Mbps
PepVPN	●	●	●	●
SpeedFusion Hot Failover	●	●	●	●
SpeedFusion Bandwidth Bonding	●	●	●	●
Number of PepVPN/SpeedFusion Peers		2		
PepVPN/SpeedFusion Throughput (no encryption)	120Mbps		60Mbps	150Mbps
PepVPN/SpeedFusion Throughput (256-bit AES)	60Mbps		30Mbps	120Mbps
Cellular and GPS Antenna Connector	4x SMA Cellular Antenna Connectors 1x SMA GPS Antenna Connector	4x SMA Cellular Antenna Connectors (4G LTE) 1x SMA GPS Antenna Connector (4G LTE) 4x SMA Cellular/GPS Antenna Connectors (3G)	2x Female N-Type Cellular Antenna Connectors 2x Female N-Type Wi-Fi Antenna Connectors*	8x SMA Cellular Antenna Connectors 1x SMA GPS Antenna Connector
Wi-Fi Antenna	○	4x RP-SMA Wi-Fi Connectors	○	4x RP-SMA Wi-Fi Connectors
Enclosure	Indoor Metal	Indoor Metal	Outdoor IP67 All-Metal	Indoor Metal
Terminal Block Power Connector for Mobile/Vehicular Deployment	●	●	○	●
Dimension	5.8 x 5.0 x 1.6 inches 147 x 128 x 66 mm	1.6 x 10.2 x 5.7 inches 39.5 x 260 x 143 mm	9.0 x 12.2 x 2.6 inches 230 x 310 x 66 mm	11.5 x 6.9 x 1.9 inches 292 x 177 x 50 mm
Weight	0.96 pounds 435 grams	2.65 pounds 1.2 kg	5.84 pounds 2.65 kg	4.2 pounds 1.9 kg
Power Input	Device: 12V – 48V DC AC Adapter: AC Input 100V – 240V, DC Output 12V – 48V Terminal Block: 12V – 48V DC	Device: 10V – 24V DC AC Adapter: AC Input 100V – 240V, DC Output 12V	Device: 10V – 30V DC	Device: 12V – 48V DC AC Adapter: AC Input 100V – 240V, DC Output 12V – 48V Terminal Block: 12V – 48V DC
Power Consumption	15W (max.)		25W (max.)	38W (max.)
Operating Temperature			-40° – 149°F -40° – 65°C	
Humidity			15% – 95% (non-condensing)	
Certifications			FCC, CE, RoHS	
RF Port Lighting Immunity: ITU-T K.20 (+/- 1.5 kV)	●	●	●	●
Shock and Vibration Resistance: EN 61373:1999 IEC 61373:1999	○	●	●	○
Warranty		1-Year Limited Warranty		

\*802.11b/g/n W-Fi available on selected models. \* PoE Kit is available separately.

## Features

### WAN

Support for PPPoE, Static IP, DHCP  
WAN Link Health Check  
Bandwidth Allowance Monitor  
USB 4G/3G Modem Support  
IPv6 Support  
Support for Dynamic DNS services

### LAN

DHCP Server for LAN Clients  
Extended DHCP Options  
DHCP Reservation  
DNS Proxy for LAN Clients  
VLAN on LAN Support

### Load Balancing

Intelligent Failover  
Session Persistence  
Per-Service Load Distribution  
Multiple Algorithms

### Complete VPN Solution

PepVPN/SpeedFusion Hot Failover/  
SpeedFusion Bandwidth Bonding  
Site-to-Site VPN  
Bandwidth Aggregation  
Hot Failover  
256-bit AES Encryption  
Pre-shared Key Authentication  
Dynamic Routing  
X.509 Certificate Support  
IPsec VPN (Network-to-Network)  
X.509 Certificate Support

### Advanced QoS

User Groups  
Bandwidth Reservation  
Individual Bandwidth Limit  
Application Prioritization  
By User Groups  
SIP, HTTPS, VPN QoS  
Custom Application QoS

### AP Controller

AP Controller Support  
Wi-Fi Usage Statistics

### Captive Portal Support

Support for Wired and Wireless LAN Clients  
Support for RADIUS Authentication  
Support for LDAP Authentication  
Time and Usage Quotas on Open Access Mode  
Built-in Customizable Splash Page

### Networking

NAT and IP Forwarding  
Static Routes  
Port Forwarding  
Many to One, One to One NAT  
NAT Pool  
SIP ALG, H.323 ALG  
UPnP, NAT-PMP  
WINS Server  
VRRP HA support

### Security

Stateful Firewall  
DoS Prevention  
Web Blocking

### Device Management

Web Administrative Interface  
Command Line Interface  
InControl Cloud Management  
Email Notification  
Active Client & Session Lists  
Bandwidth Usage Statistics  
Syslog Service  
SNMP v1, v2c and v3

### Certification

FCC, CE, RoHS  
Shock and Vibration Resistance\*  
RF Port Lighting Immunity

\*Available on selected models.

**PEPWAVE**  
Broadband Possibilities

### United States

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