

# MAX BR1/BR2 cellular router

## Industrial-Grade M2M 4G LTE/3G Router

**PEPWAVE**  
Broadband Possibilities



MAX BR1

MAX BR2 IP55

### Rugged Electronics & All-Weather Enclosure

Industrial IP55 Standard

### SpeedFusion™ Hot Failover Technology

Unbreakable VPN

### Cloud Based Device Management

With InControl 2

**InControl<sup>2</sup>**

Setup. Manage. Report.

InControl 2 Cloud Management

Works With



Sprint



And worldwide 4G LTE/3G carriers

### Built to Last. First in Mobile Uptime.

The MAX BR1 features an indoor metallic enclosure and a built-in 4G LTE or 3G cellular modem that delivers high-speed connectivity anywhere, without extra equipment. Protected by an all-weather outdoor enclosure, the MAX BR1 IP55 includes a built-in 4G LTE or 3G cellular modem, while the MAX BR2 IP55 offers two embedded cellular modems for even more speed and reliability.

#### Automatic WAN Failover.

MAX BR automatically switches between Ethernet WAN, Wi-Fi as WAN, and 4G LTE/3G links to keep your WAN up and running at all times.

#### IPsec VPN Failover.

MAX BR automatically re-establishes your IPsec VPN connection on lower priority link when your primary WAN fails. Your VPN stays up, and you stay seamlessly connected.

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

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

#### SpeedFusion™ Hot Failover.

Thanks to hot failover powered by SpeedFusion technology, failover between fixed and mobile links is completely seamless. With other technologies, fixed/mobile failover terminates existing connections, creating costly downtime. With SpeedFusion hot failover, you won't miss a beat when your MAX BR switches between connections.

#### Embedded 4G LTE or World-Mode 3G Modem.

Cut complexity and cost with a built-in 4G LTE modem that supports Verizon or AT&T 4G LTE network. The BR is also available with embedded world-mode 3G modem that supports both CDMA and GSM for all U.S. carriers.

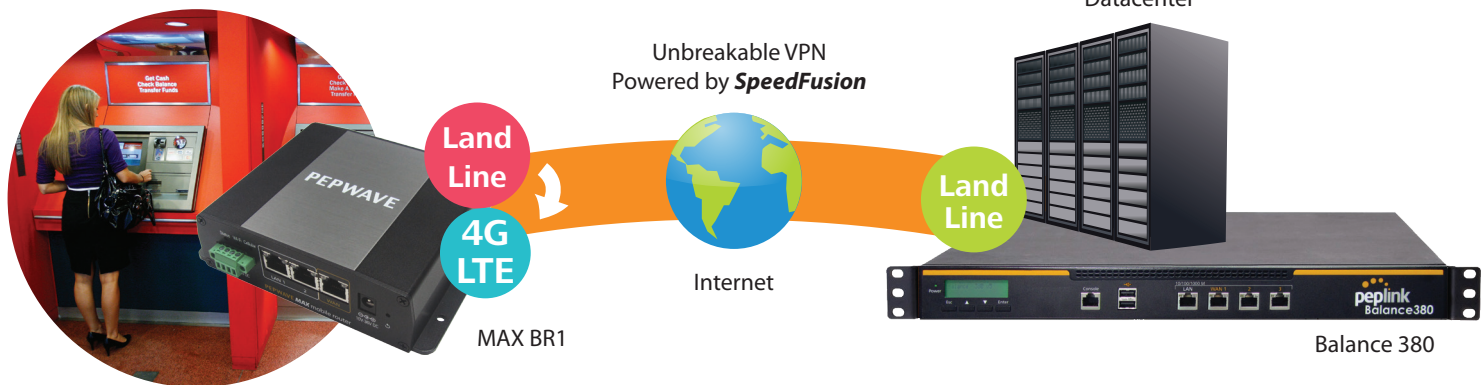
#### Bridge/IP Pass-Through Mode.

Bridge/IP pass-through mode transparently passes your cellular public IP to your Ethernet LAN, simplifying your deployments alongside existing equipment.

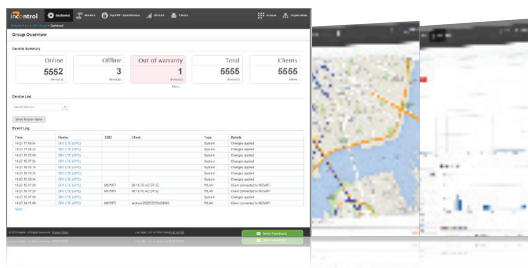
## Applications

### ATMs – Unbreakable VPN for M2M Communication

- 2 Unbreakable VPN delivers ultra-reliable and secure ATM transactions
- 3 In case of a WAN failure, **SpeedFusion** instantly and seamlessly switches traffic to another connection; for continuous data sessions



- 1 **SpeedFusion** creates an **unbreakable, high-bandwidth connection** to the datacenter

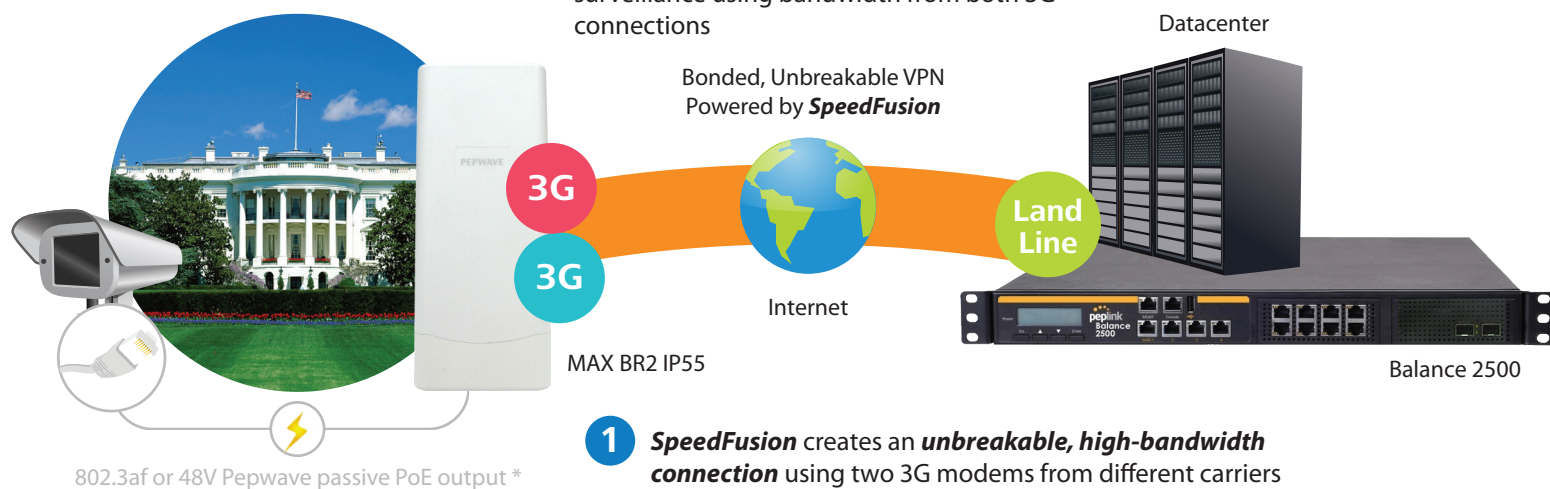


**InControl<sup>2</sup>**  
Setup. Manage. Report.

- 4 InControl 2 enables complete cloud-based device management, monitoring and reporting all sites and ATMs

### Video Surveillance – 24/7 Unbreakable CCTV

- 3 Unbreakable VPN ensures constant video surveillance
- 4 **SpeedFusion** enables high definition video surveillance using bandwidth from both 3G connections
- 5 If one 3G link fails, **SpeedFusion** instantly and seamlessly switches traffic to another connection; for uninterrupted video surveillance



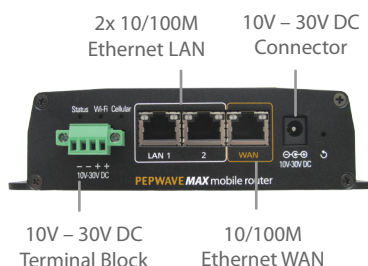
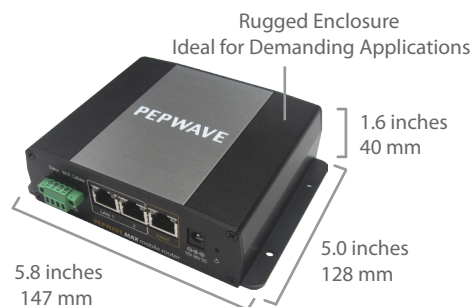
- 2 The MAX BR2 IP55 powers an IP camera with 802.3af-/48V Pepwave passive PoE

- 1 **SpeedFusion** creates an **unbreakable, high-bandwidth connection** using two 3G modems from different carriers



# Product Ordering Information

## MAX BR1



4G  
LTE

3G

	Product Code	Carrier	Description
4G LTE	MAX-BR1-LTE-V-T	Verizon	Embedded 4G model supporting Verizon 4G LTE network and providing automatic fallback to Verizon 3G as needed. Technologies and frequency bands supported: 4G LTE (Band 13); CDMA (800/1900 MHz).
	MAX-BR1-LTE-A-T	AT&T/Telcel	Embedded 4G model supporting AT&T/T-Mobile 4G LTE network and providing automatic fallback to AT&T/T-Mobile 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-BR1-LTE-E-T	4G LTE/HSPA+ (EU)	Embedded 4G model supporting 4G LTE for EU and worldwide GSM carriers and providing 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-BR1-T	Worldwide	Embedded 3G model supporting the global networks of all mobile carriers, including Verizon, AT&T*, Sprint, T-Mobile* and worldwide GSM carriers. Technologies and frequency bands supported: UMTS/HSDPA/HSUPA (800/850/900/1900/2100 MHz); EDGE/GPRS/GSM (850/900/1800/1900 MHz); Verizon & Sprint CDMA EV-DO (800/1900 MHz).
	MAX-BR1-AE-T	Worldwide	Embedded 3G model supporting AT&T*, T-Mobile* 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).

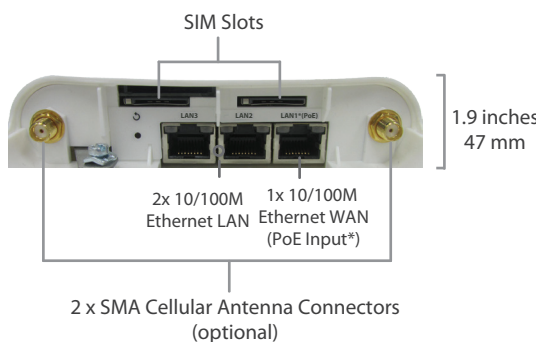
\* Requires a pre-activated SIM card.

## MAX BR1 IP55/BR2 IP55

Built-In, Software-Selectable 10dBi MIMO Directional and 4dBi Omni Wi-Fi Antennas

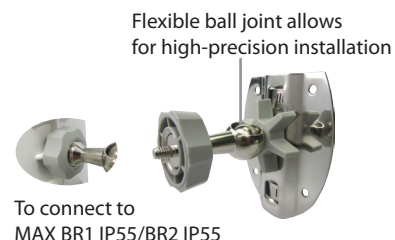


Screw-Holes for Wall Mounting (screws not included)



\* Requires 48V Pepwave Passive PoE input. Available separately. ^ Available separately.

### Accessory – Wall/Pole Mount with Ball Joint for IP55 Outdoor Products ^



	Product Code	Carrier	Description
4G LTE	MAX-BR1-LTE-V-IP55	Verizon	Embedded 4G model supporting Verizon* 4G LTE network and providing automatic fallback to Verizon* 3G as needed. Technologies and frequency bands supported: 4G LTE (Band 13); CDMA (800/1900 MHz).
	MAX-BR1-LTE-A-IP55	AT&T/Telcel	Embedded 4G model supporting AT&T*/T-Mobile* 4G LTE network and providing automatic fallback to AT&T*/T-Mobile* 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-BR1-LTE-E-IP55	4G LTE/HSPA+ (EU)	Embedded 4G model supporting 4G LTE for EU and worldwide GSM carriers and providing 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-BR1-AE-IP55	Worldwide	Embedded 3G model supporting the global networks of all mobile carriers, including Verizon, AT&T*, Sprint, T-Mobile* and worldwide GSM carriers. Technologies and frequency bands supported: UMTS/HSDPA/HSUPA (800/850/900/1900/2100 MHz); EDGE/GPRS/GSM (850/900/1800/1900 MHz); Verizon & Sprint CDMA EV-DO (800/1900 MHz).
	MAX-BR2-AE-IP55	Worldwide	Dual embedded 3G model supporting AT&T*, T-Mobile* 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-BR2-AE-SF-IP55	Worldwide	Dual embedded 3G model supporting AT&T*, T-Mobile* 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). Supports load balancing & failover. Supports SpeedFusion Hot Failover and SpeedFusion Bandwidth Bonding.

\* Requires a pre-activated SIM card.

### Add-on Feature

Product Code	Product Name	Description
ACW-109	PoE Kit for IP55 Outdoor Products	Include 48V Pepwave Passive PoE Injector and PoE license. Enable 802.3af/48V Pepwave Passive PoE output.
ACW-510	Ball Joint Mount for IP55 Outdoor Products	Wall/pole mount with flexible ball-joint for high-precision installation.

## Specifications

	MAX BR1	MAX BR1 IP55	MAX BR2 IP55
WAN Interface	1x Embedded 4G LTE/3G Modem with Redundant SIM Slots 1x 10/100M Ethernet Port ^		2x Embedded 3G Modems 1x 10/100M Ethernet Port ^
LAN Interface	2x 10/100M Ethernet Ports		
Wi-Fi Interface	1x 802.11b/g/n 150 Mbps Wi-Fi WAN and/or AP	1x 802.11b/g/n 300 Mbps Wi-Fi WAN and/or AP	
Wi-Fi AP Operating Frequency	2412 – 2472 MHz		
Router Throughput	100Mbps		
PepVPN	●	●	●
SpeedFusion Hot Failover	●	●	●*
SpeedFusion Bandwidth Bonding	○	○	●*
Number of PepVPN/SpeedFusion Peers	2		
PepVPN/SpeedFusion Throughput (no encryption)	40Mbps		
PepVPN/SpeedFusion Throughput (256-bit AES)	20Mbps		
Cellular and GPS Antenna	2x SMA Cellular Antenna Connectors (4G LTE) 1x SMA Cellular Antenna Connector (3G) 1x SMA GPS Antenna Connector	Built-In, Switchable 2dBi Cellular Antenna and 2x SMA Cellular Antenna Connectors (4G LTE) or 1x SMA Cellular Antenna Connector (3G)	
Wi-Fi Antenna	1x RP-SMA Wi-Fi Connector	Built-In, Switchable 10dBi MIMO Directional (75° Horizontal x 35° Vertical Beamwidths) and 4dBi MIMO Omni Antennas	
Enclosure	Indoor Metal	Outdoor IP55 All-Weather	
PoE Output	○	Up To Two 802.3af or 48V Pepwave Passive PoE Outputs #	
Terminal Block Power Connector for Mobile/Vehicular Deployment	●	○	○
Dimension	5.8 x 5.0 x 1.6 inches 147 x 128 x 40 mm	11.8 x 4.9 x 1.9 inches 300 x 124 x 47 mm	
Weight	0.96 pounds 435 grams	1.15 pounds 520 grams	
Power Input	Device: 10V – 30V DC AC Adapter: AC Input 100V – 240V, DC Output 12V Terminal Block: 10V – 30V DC	Pepwave Passive PoE: 12V – 48V DC (48V Pepwave Passive PoE Input is Needed for 802.3af or Pepwave Passive PoE Output)#	
Power Consumption	Max.: 16W, Typical: 11W, Min.: 8W		
Operating Temperature	-40° – 149°F -40° – 65°C		
Humidity	15% – 95% (non-condensing)		
Certifications	FCC, CE, RoHS		
E-Mark	●	○	○
Shock and Vibration Resistance: EN 61373:1999 IEC 61373:1999	●	○	○
EN 50155: Railway applications - Electronic Equipment used on Rolling Stock	●	○	○
EN 61000: Electromagnetic Compatibility	●	○	○
Warranty	1-Year Limited Warranty		

^ Convertable into LAN Port. \* SpeedFusion is available as an optional feature. # 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  
Support for Dynamic DNS services  
WAN Port Convertible into LAN Port

### 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

\*Available on selected models.

### 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\*

### 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

### Captive Portal Support\*

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

### Advanced QoS

Individual Bandwidth Limit  
Application Prioritization  
SIP, HTTPS, VPN QoS  
Custom Application QoS

### 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  
E-Mark\*  
Shock and Vibration Resistance\*  
RF Port Lighting Immunity\*  
EN 50155: Railway Applications\*  
EN 61000: Electromagnetic Compatibility\*

**PEP WAVE**  
Broadband Possibilities

www.4Gon.co.uk info@4gon.co.uk Tel: +44 (0)1245 808295 Fax: +44 (0)1245 808299