MAX BR1/BR2 cellular router

Industrial-Grade M2M 4G LTE/3G Router

PEPWAVE
Broadband Possibilities

MAX BR1

MAX BR2 IP55

SpeedFusion™
Bonding Technology

Unbreakable VPN

Fleet Tracking & Management

Powered by InControl 2

XLTE Ready

Improved band and frequency support

InControl²
Setup. Manage. Report.
InControl 2 Cloud Management

Works With

verizon **XLTE**   at&t   T··Mobile·

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

Datacenter

Unbreakable VPN
Powered by *SpeedFusion*

Land Line

4G LTE

Internet

Land Line

MAX BR1

Balance 380
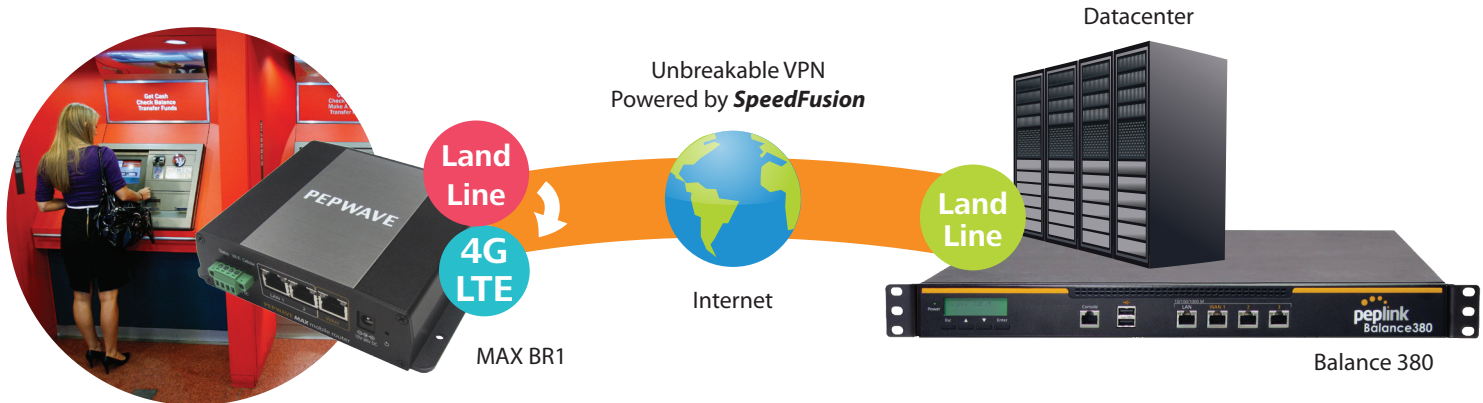
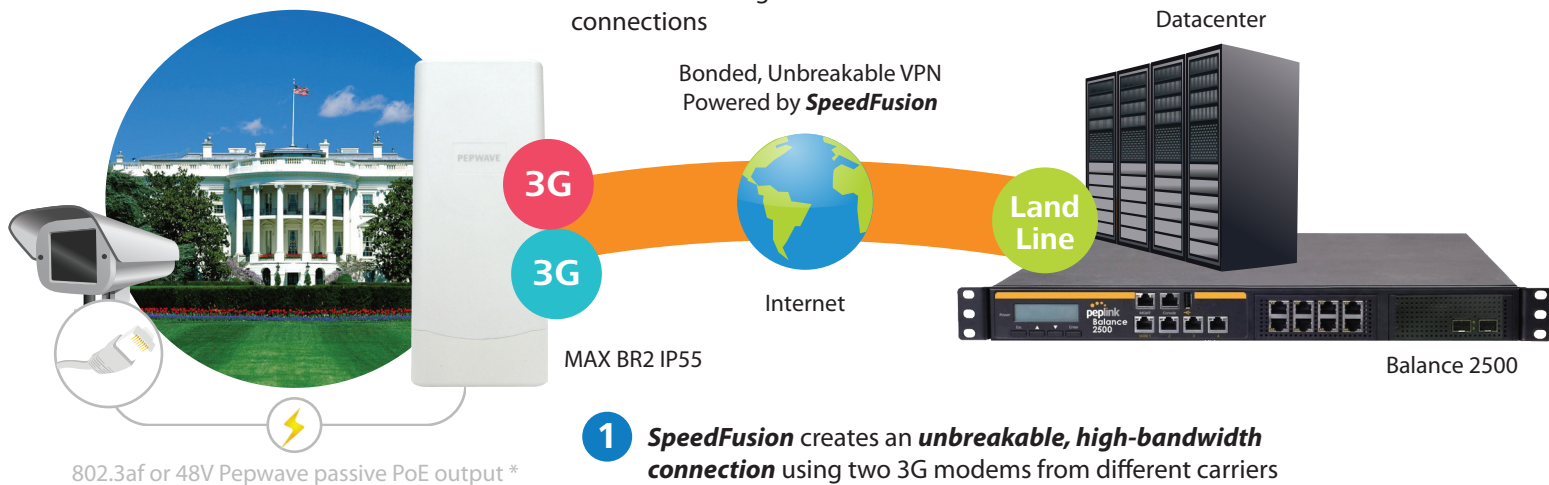**1** *SpeedFusion* creates an *unbreakable, high-bandwidth connection* to the datacenter
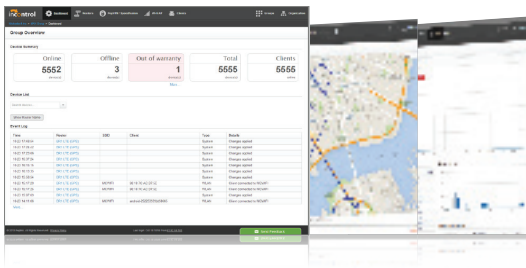
InControl²
Setup. Manage. Report.

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

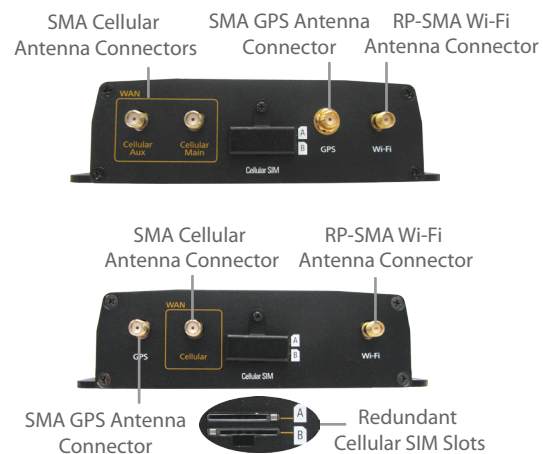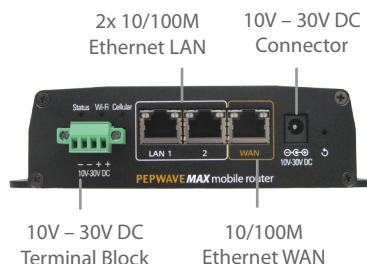## Video Surveillance – 24/7 Unbreakable CCTV

5 If one 3G link fails, *SpeedFusion* instantly and seamlessly switches traffic to another connection; for uninterrupted video surveillance

3 Unbreakable VPN ensures constant video surveillance

4 *SpeedFusion* enables high definition video surveillance using bandwidth from both 3G connections

Datacenter

Bonded, Unbreakable VPN
Powered by *SpeedFusion*

3G

3G

Internet

Land Line

MAX BR2 IP55

Balance 2500

802.3af or 48V Pepwave passive PoE output *

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

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

Product Ordering Information

MAX BR1 XLTE
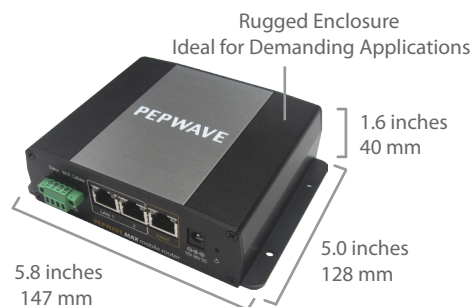
Rugged Enclosure
Ideal for Demanding Applications

1.6 inches
40 mm

5.0 inches
128 mm

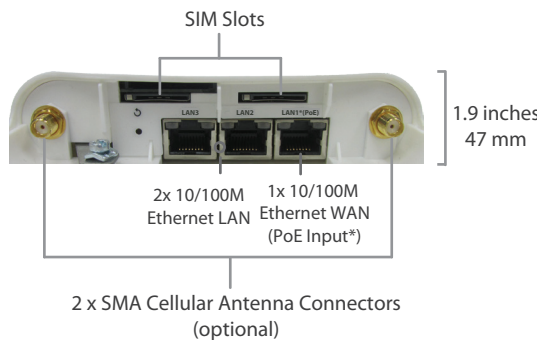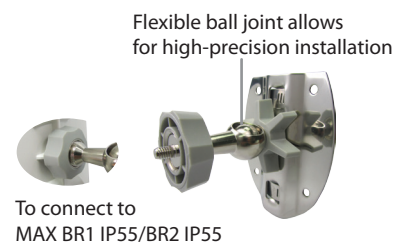5.8 inches
147 mm

2x 10/100M
Ethernet LAN

10V – 30V DC
Connector

10V – 30V DC
Terminal Block

10/100M
Ethernet WAN

SMA Cellular
Antenna Connectors

SMA GPS Antenna
Connector

RP-SMA Wi-Fi
Antenna Connector

4G LTE

SMA Cellular
Antenna Connector

RP-SMA Wi-Fi
Antenna Connector

3G

SMA GPS Antenna
Connector

Redundant
Cellular SIM Slots

	Product Code	Carrier	Embedded Modem	4G Bands/Frequencies (MHz)	3G Bands/Frequencies (MHz)
4G LTE	MAX-BR1-LTE-US-T	Verizon/AT&T/T-Mobile	1	4G LTE: B2/1900, B4/AWS (XLTE), B5/850, B13/700, B17/700, B25/1900	WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+: B1/2100, B2/1900, B4/AWS, B5/850, B8/900 EV-DO Rev.A: BC0/800, BC1/1900, BC10/800
	MAX-BR1-LTE-E-T	Europe/International	1	4G LTE: B1/2100, B3/1800, B7/2600, B8/900, B20/800	WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+: B1/2100, B2/1900, B5/850, B6/800, B8/900
3G	MAX-BR1-T	Worldwide	1	-	WCDMA/HSDPA/HSUPA/HSPA+: B1/2100, B2/1900, B5/850, B6/800, B8/900 EDGE/GPRS/GSM: B2/1900, B3/1800, B5/850, B8/900 EV-DO Rev. A: BC0/800, BC1/1900
	MAX-BR1-AE-T	Worldwide	1	-	WCDMA/HSDPA/HSUPA/HSPA+: B1/2100, B2/1900, B5/850, B6/800, B8/900 EDGE/GPRS/GSM: B2/1900, B3/1800, B5/850, B8/900

MAX BR1 IP55/BR2 IP55

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

11.8 inches
300 mm

4.9 inches
124 mm

Screw-Holes
for Wall Mounting
(screws not included)

SIM Slots

2x 10/100M
Ethernet LAN

1x 10/100M
Ethernet WAN
(PoE Input*)

1.9 inches
47 mm

2 x SMA Cellular Antenna Connectors
(optional)

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

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

Flexible ball joint allows
for high-precision installation

To connect to
MAX BR1 IP55/BR2 IP55

^ Available separately.

	Product Code	Carrier	Embedded Modem	4G Bands/Frequencies (MHz)	3G Bands/Frequencies (MHz)	VPN Functionality
4G LTE	MAX-BR1-LTE-US-IP55	AT&T/T-Mobile	1	4G LTE: B2/1900, B4/AWS, B5/850, B13/700, B17/700, B25/1900	WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+: B1/2100, B2/1900, B4/AWS, B5/850, B8/900 EV-DO Rev.A: BC0/800, BC1/1900, BC10/800	PepVPN
	MAX-BR1-LTE-E-IP55	Europe/International	1	4G LTE: B1/2100, B3/1800, B7/2600, B8/900, B20/800	WCDMA/HSDPA/HSUPA/HSPA+/DC-HSPA+: B1/2100, B2/1900, B5/850, B6/800, B8/900	PepVPN
3G	MAX-BR1-AE-IP55	Worldwide	1	-	WCDMA/HSDPA/HSUPA/HSPA+: B1/2100, B2/1900, B5/850, B6/800, B8/900 EDGE/GPRS/GSM: B2/1900, B3/1800, B5/850, B8/900	PepVPN
	MAX-BR2-AE-IP55	Worldwide	2	-	WCDMA/HSDPA/HSUPA/HSPA+: B1/2100, B2/1900, B5/850, B6/800, B8/900 EDGE/GPRS/GSM: B2/1900, B3/1800, B5/850, B8/900	PepVPN, and optional SpeedFusion Bonding
	MAX-BR2-AE-SF-IP55	Worldwide	2	-	WCDMA/HSDPA/HSUPA/HSPA+: B1/2100, B2/1900, B5/850, B6/800, B8/900 EDGE/GPRS/GSM: B2/1900, B3/1800, B5/850, B8/900	SpeedFusion Bonding

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 Lightning Immunity*
EN 50155: Railway Applications*
EN 61000: Electromagnetic Compatibility*

PEPWAVE
Broadband Possibilities