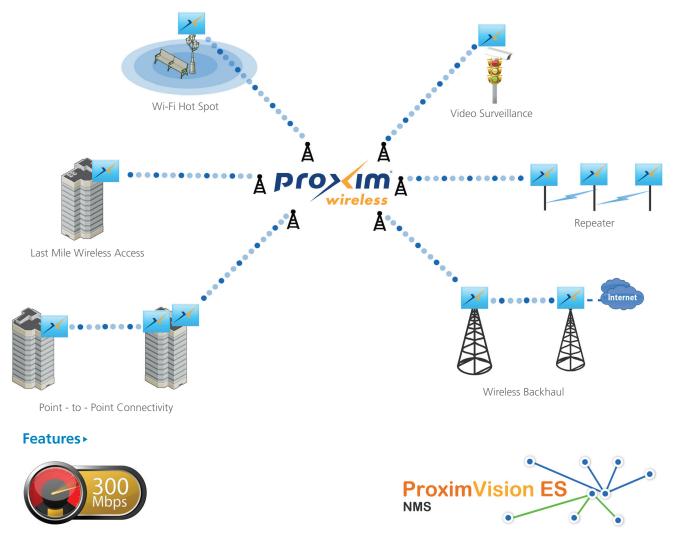


Tsunami[®] 8100/8200 Series

World Class Performance Centralized Management NLoS and Advanced Features Carrier Grade Advanced Security The Tsunami® 8100/8200 Series delivers high performance (throughput in excess of 4G requirement) along with excellent channel capacity, incredible spectrum flexibility and a prioritization platform for delivering voice, video and data applications, while providing Non-Line-Of-Sight functionality.

By combining Proxim's proprietary Wireless Outdoor Routing Protocol (WORP), cutting edge technology of OFDM and (MIMO) Multiple Input Multiple Output radio innovations the Tsunami[®] series is an ideal choice for enterprises and offers a secure, scalable and cost-effective solution for organizations of all kind: ISP's, carriers, businesses, medical facilities spreading over multiple campuses in various geographical locations with requirements ranging from last mile Broadband Wireless Access (BWA) to wireless video surveillance and more.



World Class Performance

With 300 Mbps Plus data rates, Tsunami[®] Series delivers wireless performance in excess of 4G products on the market today



Carrier Grade Advanced Security

Advanced AES encryption for military-grade over-the-air communications, and radio mutual authentication to eliminate rogue units/man-inthe-middle attacks



ProximVision ES centralized network management system now supports Tsunami[®] products, providing rapid network deployment and mobile configuration



nLoS and Advanced Features

Non-line-of-sight capable, utilizing OFDM and enhanced MIMO techniques to offer better RF interference mitigation and better non-line-of-sight (nLoS) support



MATERIAL INFORMATION

Material used for Metal Enclosure: ADC12 Finish: Anodization + Powder Coating

Benefits:

- ADC12 Die Cast material provides superior quality casting surface and longer lasting metallic luster
- Features Anti Corrosion rugged Enclosure.
- IP67 Ingress Protection Rating.
- Approved after stringent screening involving Vehicular move ment Transport Vibration (ISTA-2A), Drop, Shock, Salt Spray, Thermal, and Reliability tests.
- Operating Temperature Range -40°C to 60°C.



Products

- MP-8100-BSU
- MP-8100-SUA
- QB-8100-LNK

Interface

Surge Protected N-Type Connectors (3) (with metal caps)



Products

- MP-8200-BSU
- MP-8200-SUA
- QB-8200-LNK

Interface

Surge Protected N-Type Connectors (2) (with Rubber Covers)



Products

MP-8150-SUR
MP-8250-BS9
MP-8250-SUR
QB-8150-LNK
QB-8250-LNK



Products

- MP-8160-BSU
- MP-8160-SUA

Interface

Normal N-Type Connector (2) (with rubber covers)



MATERIAL INFORMATION

Material used for Plastic Enclosure: Lexan 943

Benefits:

- Environmental conformance flame retardancy.
- IP65 Ingress Protection Rating
- Supports various features: Heat Resistant, Good Weather condition proper ties, UV stabilization
- Approved after stringent screening involving Vibration, Shock, Drop, Reli ability, Wind load & Solar Test
- Operating Temperature Range -35°C to 55°C



Products

- MP-8150-CPE
- QB-8150-LNK-12 / 50 Mbps



MATERIAL INFORMATION

Material used for Metal Enclosure: ADC12 Finish: Surtec 650 + Powder Coating Material used for Antenna Radome Cover: BASF 778T Finish: MT11010

Benefits:

- ADC12 Die Casting material provides enclosure high quality casting surface and longer lasting metallic luster.
- Features Anti Corrosion robust frame.
- IP67Ingress Protection Rating
- Supports various features: Heat Resistance, UV stabilization.
- Approved after stringent screening Vibration as per MIL-STD-202A (Method 201A), Drop, and Wind Load 200 Kmph, Thermal, and Reliability tests.
- Operating Temperature Range -40°C to 55°C.



ProductsMP-8160-CPE

Point-to-Multipoint ►

Series			MP-8100		MP-8200			
Products	MP-8100-BSU/ SUA	MP-8150-SUR	MP8150-CPE	MP-8160-BSU/ SUA	MP-8160-CPE	MP-8200-BSU/ SUA	MP-8250-BS9	MP-8250-SUR
Antenna	Connectorized	Integrated 23dBi	Integrated 16dBi	Connectorized	Integrated 15dBi	Connectorized	Integrated 90° sector 16 dBi	Integrated 23 dBi
МіМО	3x3	2x2	2x2	2x2	2x2	2x2	2x2	2x2
Frequency	2.3 – 2.5 GHz 4.9 – 6.0 GHz	4.9 – 6.0 GHz	5.3 – 6.0 GHz	5.9 – 6.425 GHz	5.9 – 6.425 GHz	4.9 – 5.925 GHz	4.9 – 5.925 GHz	4.9 – 5.925 GHz
Protocol	WORP	WORP	WORP	WORP	WORP	WORP	WORP	WORP
Data Rate	300Mbps	300Mbps	300Mbps	300Mbps	300Mbps	300Mbps	300Mbps	300Mbps
QoS	WIMAX based	WIMAX based	WIMAX based	WIMAX based	WIMAX based	WIMAX based	WIMAX based	WIMAX based
T _X Power	21dBm	21dBm	24dBm	25dBm	25dBm	27dBm	27dBm	27dBm

Point-to-Point ►

Series		QB-8100	QB-8200		
Products	QB-8100-LNK	QB-8150-LNK	QB-8150-LNK-12/50	QB-8200-LNK	QB-8250-LNK
Antenna	Connectorized	Integrated 23dBi	Integrated 16dBi	Connectorised	Integrated 23 dBi
MiMO	3x3	2x2	2x2	2x2	2x2
Frequency	2.3 – 2.5 GHz	4.9 – 6.0 GHz	5.3 – 6.0 GHz	4.9 – 5.925 GHz	4.9 – 5.925 GHz
Frequency	4.9 – 6.0 GHz				
Protocol	WORP	WORP	WORP	WORP	WORP
Data Rate	300Mbps	300Mbps	300 Mbps	300Mbps	300Mbps
QoS	WIMAX based	WIMAX based	WIMAX based	WIMAX based	WIMAX based
T _x Power	21dBm	21dBm	24dBm	27dBm	27dBm

Network Management Software >

ProximVision ES provides rapid network deployment, mobile configuration and greater ease of use in a software-based Network Management System - giving you a complete view of your wireless network.

ProximVision ES currently supports the following Proxim products:

- Tsunami[®] MP 8100 high throughput point to multipoint series
- Tsunami® MP 8160 high throughput point to multipoint series
- Tsunami[®] QB 8100 high throughput point to point series
- Tsunami[®] MP 8200 and QB 8200 under development (Q4 2011)

Rapid Network Deployment

ProximVision ES automates configuration processes for faster, more efficient deployment of Proxim Wireless networks.

- Automatic configuration capabilities enable network managers to quickly replicate existing network settings across new network nodes
- User-friendly interface enables you to group, manage and con figure all devices available on your wireless network
- Auto discovery of network devices makes identifying devices for configuration a snap

Mobile Configuration Capabilities

ProximVision ES gives network managers a mobile option for exhaustive device configuration with a software tool.

- Network managers take configuration capabilities with them to address isolated networks
- Exhaustive device configuration capabilities
- ProximVision ES segments the overall network, enabling simpler mobile monitoring and management of the network and devices

Geographical Network View and Statistical Plots

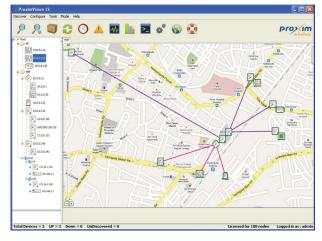
ProximVision ES provides a map overlay of your entire network with real-time, visual network status indicators.

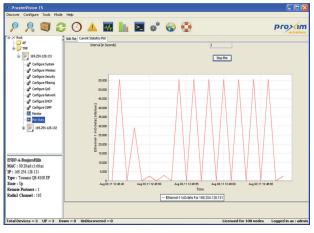
- Use the built-in map location tool to create a geographic view of your network and placement of your wireless devices.
- Devices and link status can quickly be determined thanks to color coded icons.
- Network administrator can plot statistical information such as link SNR, traffic load and other metrics to evaluate network health and manage bottlenecks.
- Dynamic Map supports device placement at the configured GPS co-ordinates. Also extends support to change the existing device positions on the Dynamic Map by drag and drop
- Use Static map feature to place devices on a static map that are located in closed spaces such as buildings and offices; Also enables to edit and save existing static maps using PreConfigured Image Editor from within PVES

Greater Ease of Use and Upgradability

ProximVision ES can support a greater number of devices than competitively priced solutions, and provides the simplest path to configuration and upgrade.

- Once networks are configured and deployed, ProximVision ES provides the ability to automatically reconfigure or per form firmware upgrades on an entire group of devices simultaneously
- Real-time monitoring of devices across the entire wireless network, providing diagnostics and alerts to quickly identify errors and troubleshoot them
- Integrated device inventory and per device diagnostic reports enables quick assessment of the network





PRODUCT MODELS											
MP-8200-BSU	Tsunami® MP 8200 Base Station Unit, 300 Mbps, MIMO 2x2, Type-N Connectors										
MP-8250-BS9	Tsunami [®] MP 8250 Base Station Unit, 300 Mbps, MIMO 2x2, 16 dBi, 90° sector antenna										
MP-8200-SUA	Tsunami® MP 8200 Subscriber Unit, 300 Mbps, MIMO 2x2, Type-N Connectors										
MP-8250-SUR	Tsunami [®] MP 8250 Subscriber Unit	Tsunami [®] MP 8250 Subscriber Unit, 300 Mbps, MIMO 2x2, 23 dBi, panel antenna									
INTERFACES											
WIRED ETHERNET	Two auto MDI-X RJ45 10/100/1000	OMbps Ethernet - Port	#1 with PoE in & Data -	- Port #2 with PoE c	out (802.3af pin out) & Data						
WIRELESS PROTOCOL	WORP (Wireless Outdoor Router Pr	rotocol)									
RADIO & TX SPECS											
MIMO	2x2 MIMO										
MODULATION	OFDM										
FREQUENCY	4.900 – 5.925 GHz (Subject to Cou	untry Regulations)									
CHANNEL SIZE	40 MHz, 20 MHz, 10 MHz, 5MHz	channel bandwidths w	vith support for 1MHz cl	hannel spacing							
DATA RATE	MCS 0 to 15 for High Throughput	mode (6.5 – 300 Mbp	os) with Dynamic Data F	Rate Selection							
	BPSK, QPSK, 16-QAM and 64-QAN	/l for legacy mode (6N	1bps - 54Mbps)								
TX POWER	Up to 27 dBm (two Tx chain)										
TX POWER CONTROL	0 – 25 dB, in 0.5 dB steps. Automa	atic TPC with configura	able EIRP limit								
RX SENSITIVITY (BER=10 ⁻⁶)	Channel Size	40 MHZ	20 MHZ	10 MHZ	5 MHZ						
	MCS 0	-87 dBm	-91 dBm	-93 dBm	-96 dBm						
	MCS 7	-69 dBm	-72 dBm	-74 dBm	-76 dBm						
	MCS 8	-86 dBm	-72 dBm	-91 dBm	-94 dBm						
			-69 dBm	-72 dBm							
	MCS 15	-67 dBm	-03 URIII	-72 UBIII	-74 dBm						
ANTENNA											
	Model MP-8200-BSU and MP-8200 Model MP-8250-BS9 includes an i Model MP-8250-SUR includes an i	ntegrated 2x2 MIMO	16 dBi Dual Polarized 90	0° sector Antenna	ion						
MANAGEMENT											
LOCAL	RS-232 serial (RJ11 to DB-9 dongle provided)										
REMOTE	Telnet and SSH, WebGUI and SSL, TFTP, SNMPv3										
SNMP	SNMP v1-v2c-v3, RFC-1213, RFC-1	215, RFC-2790, RFC-2	2571, RFC-3412, RFC-34	414, Private MIB							
OTHER	Syslog, sFlow™ agent, SNTP and lo	ocal time									
SECURITY											
ENCRYPTION	AES-CCM 128 bits										
AUTHENTICATION	Internal MAC Address Control List,	Radius based Authen	tication (with VLAN and	QoS provisioning)							
NETWORK											
MODES	Bridging, Routing (RIP v2 and IP tu	nnelina)									
GATEWAY FEATURES	DHCP Server & relay, NAT with Std	-	*								
	Difer server & relay, NAT with stu	Acds, FFF0E end poir	11			1					
QoS	Asymmetric Bandwidth Control		nk CIR Control "commit nk MIR Control "maximu								
	Packet Classification		2.1p priority, IPTOS, VLA								
	Capabilities	source/destination	port, Ethernet source/de	estination address, I	P protocol, and Ethertype						
	Scheduling	Best Effort, Real Tin	ne Polling Services								
VLAN	802.1Q: Management VLAN. Trans	inarent Access Truck	and Mixed mode. OisO	double tagging							
ENVIRONMENTAL SPECS		parent, Access, ITUNK	and Mixed Mode. QINQ	aouble tayying							
OPERATING, STORAGE TEMPERATURE	HUMIDITY, IP RATING		WIND LOADING		POWER CONSUMPTION	SAFETY STANDARDS					
-40° to 60°C (-40° to 140° Fahrer -55° to 80°C (-67° to 176° Fahrer		ty (non-condensing)	125 mph		8.1 Watt typical (18.1 Watt max)	UL 60950, CAN/CSA-C22.2 No. 60950, IEC 60950, EN 60950					
PHYSICAL SPECS	· · · · · · · · · · · · · · · · · · ·		·								
DIMENSIONS (PACKAGED)	DIMENSIONS (UNPACKAGE	ED)	WEIGHT (PACKAGED)		WEIGHT (UNPACKAGED)						
Model MP-8200-BSU or MP-8200 SUA: 14.56 x 13.69 x 8.18 in. (37 348 x 208 mm) Model MP-8250-BS9 or MP-8250 15.94 x 15.94 x 9.21 in. (405 x 4)	U or MP-8200- Model MP-8200-BSU or MP-8200-SUA: 10.5 x Model MP-8200-BSU or MP-8200-SUA: 10.5 x Model MP-8200-BSU or MP-8200-SUA: 7.27 lbs (3 lbs (7.6 kg)) 1 x 8.18 in. (370 x) 10.5 x 3.38 in (267 x 267 x 86 mm) 16.57 lbs (7.6 kg) Model MP-8250-BS9 or MP-8250-SUR: 9.26 lbs (4. Model MP-8250-BS9 or MP-8250-SUR: 14.17 x Model MP-8250-BS9 or MP-8250-SUR: Model MP-8250-SUR: 9.26 lbs (4.										

PRODUCT MODELS										
MP-8100-BSU	Tsunami® MP	8100 Base Station Un	nit, 300 Mb	ps, 5.8 GHz, Type	-N Connectors					
MP-8100-SUA	Tsunami® MP 8100 Subscriber Unit, 5.8 GHz, Type-N Connectors									
MP-8150-SUR	Tsunami® MP 8150 Subscriber Unit, 5.8 GHz, MIMO 2x2, 23 dBi Integrated antenna									
INTERFACES										
WIRED ETHERNET	Two auto MDI-X RJ45 10/100/1000Mbps Ethernet - Port #1 with PoE in & Data - Port #2 with PoE out (802.3af pin out) & Data									
WIRELESS PROTOCOL	WORP (Wireless Outdoor Router Protocol)									
RADIO & TX SPECS										
MIMO	3x3 MIMO									
MODULATION	OFDM									
FREQUENCY	2.3 – 2.5 GHz 4.9 – 6.0 GHz	(Subject to Country R	egulations)							
CHANNEL SIZE	40 MHz, 20 N	1Hz, 10 MHz, 5MHz cl	hannel ban	dwidths						
DATA RATE		for High Throughput n I6-QAM and 64-QAM			,	ate Selection				
TX POWER	Up to 21 dBm	(two Tx chain)								
TX POWER CONTROL	0 – 25 dB, in	0.5 dB steps. Automat	ic TPC with	configurable EIR	P limit					
RX SENSITIVITY (BER=10-6)	Channel Siz		40 MHZ	20 MHZ	2 10 MHz	5 MHz				
	MCS 0		-87dBm	-93dBm						
	MCS 7		-71dBm	-75dBm			1			
	MCS 8		-87 dBm	-93 dBr			-			
	MCS 15		-69 dBm	-71 dBn			-			
MANAGEMENT		00-BSU and MP-8100- 50-SUR includes an in				uilt-in Surge Protection anel Antenna				
LOCAL	RS-232 serial (RJ11 to DB-9 dongle provided)									
REMOTE	Telnet and SS	H, WebGUI and SSL, TI	ftp, SNMPv	3						
SNIMP	SNMP v1-v2c-	v3, RFC-1213, RFC-12	15, RFC-27	'90, RFC-2571, R	FC-3412, RFC-34	114, Private MIB				
OTHER	Syslog, sFlow	™ agent, SNTP and loc	al time							
SECURITY										
ENCRYPTION	AES-CCM 128	3 bits								
AUTHENTICATION	Internal MAC	Address Control List, I	Radius base	d Authentication	(with VLAN and	QoS provisioning)				
NETWORK										
MODES	Bridging, Rou	ting (RIP v2 and IP tun	neling)							
GATEWAY FEATURES	DHCP Server	& relay, NAT with Std A	ALGs, PPPoE	end point						
QoS	Asymmetric	Bandwidth Control				ted information rate" p um information rate" p				
	Packet Class	ification Capabilities	802.1D/8	02.1Q/802.1p pri	ority, IPTOS, VLA	N ID, IP source/destinat	ion addres	55,		
	Scheduling			t, Real Time Pollir		stination address, IP pro	הטכטו, and	а силеттуре		
VLAN	802.1Q: Man	agement VLAN. Transp	parent, Acce	ess, Trunk and Mi	xed mode. QinQ	double tagging				
ENVIRONMENTAL SPECS										
OPERATING, STORAGE TEMPERA	TURE	HUMIDITY, IP RATING	G		SAFETY STAND	ARDS		POWER CONSUMPTION		
-40° to 60°C (-40° to 140° Fahrer		Max 100% relative h		on-condensing)	UL 60950, CAI	N/CSA-C22.2 No. 6095	0, IEC	7 Watt typical (17 Watt max)		
-55° to 80°C (-67° to 176° Fahrer		IP67		5	60950, EN 609					
PHYSICAL SPECS										
DIMENSIONS (PACKAGED)		ENSIONS (UN PACKAG		WEIGHT (PACK		WEIGHT (UN PACKAG				
Model MP-8100-BSU or MP-8100 14.56 x 13.69 x 8.18 in. (370 x 3 208 mm) MP-8150-SUR: 15.94 x 15.94 x 9 (405 x 405 x 234 mm)	48 x SUA 267 .21 in. MP-	lel MP-8100-BSU or M : 10.5 x 10.5 x 3.38 in x 86 mm) 8150-SUR: 14.17 x 14 70 x 370 x 94 mm)	(267 x	Model MP-810 8100-SUA: 15 MP-8150-SUR: (7.4 kg)	lbs (6.8 kg)	Model MP-8100-BSU MP-8150-SUR: 9.0 lb		00-SUA: 7.7 lbs (3.5 kg)		

PRODUCT MODELS MP-8160-BSU	Trunamia MD 9160 Page Station Uni	+ 200 Mbp		actors						
MP-8160-SUA	Tsunami® MP 8160 Base Station Unit, 300 Mbps, 5.900 – 6.425 GHz, Type-N Connectors Tsunami® MP 8160 Subscriber Unit, 300 Mbps, 5.900 – 6.425 GHz, Type-N Connectors									
INTERFACES	Isunanno IVII o loo subschbel onit,	500 10005,	5.500 - 0.425 GHz, Type IN Conne							
WIRED ETHERNET	Two auto MDI-X RJ45 10/100/1000Mbps Ethernet - Port #1 with PoE in & Data - Port #2 with PoE out (802.3af pin out) & Data									
WIRELESS PROTOCOL	WORP (Wireless Outdoor Router Prot									
RADIO & TX SPECS	WORF (WIEless Outdoor Router From	0001)								
MIMO	2x2 MIMO									
MODULATION	OFDM									
FREQUENCY	5.900 – 6.425 GHz (Subject to Coun	try Regulati	ons)							
CHANNEL SIZE	40 MHz, 20 MHz, 10 MHz, 5MHz ch	annel band	widths with support for 1MHz cha	nnel spacing						
DATA RATE	MCS 0 to 15 for High Throughput m	ode (6.5 – 3	300 Mbps) with Dynamic Data Rate	e Selection						
TX POWER	Up to 25 dBm (two Tx chain)									
TX POWER CONTROL	0 – 25 dB, in 0.5 dB steps. Automatic	TPC with	configurable EIRP limit							
RF-PORT PROTECTION	Built-in ESD & Lightning/Surge protec	tion in the	radio							
RX SENSITIVITY (BER=10 ⁻⁶)	Channel Size 4	0 MHZ	20 MHZ	10 MHz	5 MHz					
		90 dBm	-92 dBm	-95 dBm	-98 dBm					
		72dBm	-73 dBm	-76 dBm	-80 dBm					
		88 dBm	-90dBm	-92 dBm	-96 dBm					
		69 dBm	-70 dBm	-73 dBm	-76 dBm					
ANTENNA										
	Model MP-8160-BSU and MP-8160-S	SUA include	two N-type Connectors							
MANAGEMENT										
LOCAL	RS-232 serial (RJ11 to DB-9 dongle provided)									
REMOTE	Telnet and SSH, WebGUI and SSL, TFTP, SNMPv3									
SNMP	SNMP v1-v2c-v3, RFC-1213, RFC-1215, RFC-2790, RFC-2571, RFC-3412, RFC-3414, Private MIB									
OTHER	Syslog, sFlow TM agent, SNTP and local time									
SECURITY										
ENCRYPTION	AES-CCM 128 bits									
AUTHENTICATION	Internal MAC Address Control List, R	adius basec	Authentication (with VLAN and Q	oS provisioning)						
NETWORK										
MODES	Bridging, Routing (RIP v2 and IP tunn	eling)								
GATEWAY FEATURES	DHCP Server & relay, NAT with Std Al	-	end point							
QoS		1								
	Asymmetric Bandwidth Control		nd Downlink CIR Control "committ nd Downlink MIR Control "maximu							
	Packet Classification Capabilities		302.1Q/802.1p priority, IPTOS, VLA							
			estination port, Ethernet source/des	stination address, I	P protocol, and					
		Ethertyp								
	Scheduling	Best Effo	rt, Real Time Polling Services							
VLAN	802.1Q: Management VLAN. Transpa	arent, Acces	s, Trunk and Mixed mode. QinQ do	ouble tagging						
POWER CONSUMPTION										
	10 Watt typical (17 Watt max)									
ENVIRONMENTAL SPECS										
OPERATING TEMPERATURE	STORAGE TEMPERATURE		HUMIDITY		IP RATING					
	-55° to 80°C (-67° to 176° Fahrer	heit)	Max 100% relative humidity (nor		IP67					
-40° to 60°C (-40° to 140° Fahrenheit)				'د						
PHYSICAL SPECS	DIMENSIONS (UNPACKAGED)		WEIGHT (PACKAGED)		WEIGHT (UNPACKAGED)					
	DIMENSIONS (UNPACKAGED) Model MP-8160-BSU or MP-8160)-SUA:	WEIGHT (PACKAGED) Model MP-8160-BSU or MP-8160		WEIGHT (UNPACKAGED) Model MP-8160-BSU or MP-8160-SUA: 7.38					

PRODUCT MODELS									
MP-8150-CPE-100a	Tsunami® MP 8	150 Customer Pren	nises Equipment,	, 100 Mbps, MIMO 2x2,	6dBi integrated antenna	a			
INTERFACES									
WIRED ETHERNET	One auto MDI->	(RJ45 10/100 Ether	net						
WIRELSS PROTOCOL	WORP (Wireless	Outdoor Router Pr	otocol)						
RADIO & TX SPECS									
MIMO	2x2								
MODULATION	OFDM								
OPERATING FREQUENCY	5.3 – 6.0 GHz (S	ubject to Country I	Regulations)						
CHANNEL SIZE	40 MHz, 20 MH	z, 10 MHz, 5MHz o	hannel bandwic	ths with support for 1M	Hz channel spacing				
data rate	MCS 0 to 15 for	High Throughput I	mode (6.5 – 300	Mbps) with Dynamic Da	ta Rate Selection				
TX POWER	Up to 24 dBm (t	wo Tx chain)							
TX POWER CONTROL	0 – 25 dB, in 0.5	5 dB steps. Automa	tic TPC with con	figurable EIRP limit					
RX SENSITIVITY	Channel Size		40 MHZ	20 MHZ	10 MHZ	5 MHZ			
(BER=10 ⁻⁶)	MCS 0		-89dBm	-93 dBm	-95 dBm	-96 dBm			
	MCS 7		-73 dBm	-76 dBm	-76 dBm	-78 dBm			
	MCS 8		-89 dBm	-93 dBm	-93 dBm	-94 dBm			
	MCS 15		-73 dBm	-76 dBm	-73 dBm	-94 dBm			
			, 5 0011	-75 0011	-75 0011	-75 0011]		
ANTENNA									
ANTENNA	Integrated 16dB	i dual Polarized (H+	-V) panel antenn	a					
MANAGEMENT									
REMOTE	Telnet and SSH,	Telnet and SSH, WebGUI and SSL, TFTP, SNMPv3							
SNMP	SNMP v1-v2c-v3	SNMP v1-v2c-v3, RFC-1213, RFC-1215, RFC-2790, RFC-2571, RFC-3412, RFC-3414, Private MIB							
OTHER	Syslog, sFlow™	Syslog, sFlow™ agent, SNTP and local time							
SECURITY									
ENCRYPTION	AES-CCM 128 b	its							
AUTHENTICATION	Internal MAC A	ddress Control List,	Radius based Au	uthentication (with VLAN	and QoS provisioning)				
NETWORK									
MODES	Bridging, Routin	g (RIP v2 and IP tur	neling)						
THROUGHPUT	Up to 100 Mbps	; (TCP)	-						
GATEWAY FEATURES		elay, NAT with Std	ALGs PPPoF end	d point					
		ciaj, io a marota							
QoS	Asymmetric Ba	andwidth Control		ownlink CIR Control "con ownlink MIR Control "ma					
	Packet Classifi	cation		Q/802.1p priority, IPTOS,					
	Capabilities		source/destina	ation port, Ethernet sourc	e/destination address, IP	protocol, and Ethertype	9		
	Scheduling		Best Effort, Re	al Time Polling Services					
VLAN	802 10: Manag	ement VI AN Trans	narent Access	Frunk and Mixed mode. C)inO double tagging				
WARRANTY	552.1Q. Maildy	enterit versis, indits	parent, Access,	and mixed mode. C					
	1 1007 00 000	and Jahors Com P-1	Extopdad Curran	rt available					
	i-year on parts	and labor; ServPak	Extended Suppo	i t avallable					
POWER CONSUMPTION									
	7 Watt typical (1	3.8 Watt max)							
ENVIRONMENTAL SPECS									
OPERATING TEMPERATURE	STORA	GE TEMPERATURE		HUMIDITY		IP RATING			
-35° to 55°C (-31° to 131° Fal	nrenheit) -40° to	70°C (-40° to 158	° Fahrenheit)	Max 95% relative hum	idity (non-condensing)	IP65			
PHYSICAL SPECS									
DIMENSIONS (PACKAGED)		DIME	NSIONS (UNPAC	KAGED)		WEIGHT (PACKAGEE))	WEIGHT (UNPACKAGE	
15.15 x 12.40 x 4.33 in. (385	v 215 v 110 mm)	7 77 .	(755 x 3 93 in)	(197.5 x 192 x 100 mm)		5.18 lbs (2.35 kg)		1.6 lbs (0.73 kg)	

PRODUCT MODELS								
MP-8160-CPE-A100	Tsunami® MP 8160 Custom	ner Premises Equipment, 100	Mbps, MIMO 2x2, 15d	Bi integrated antenna				
INTERFACES								
WIRED ETHERNET	One auto MDI-X RJ45 10/10	00Ethernet						
WIRELSS PROTOCOL	WORP (Wireless Outdoor Ro	outer Protocol)						
RADIO & TX SPECS								
MIMO	2x2							
MODULATION	OFDM							
OPERATING FREQUENCY	5.900 – 6.425 GHz (Subject	to Country Regulations)						
CHANNEL SIZE	40 MHz, 20 MHz, 10 MHz,	5MHz channel bandwidths	with support for 1MHz	channel spacing				
data rate	MCS 0 to 15 for High Throu	ighput mode (6.5 – 300 Mb	ps) with Dynamic Data R	ate Selection				
TX POWER	Up to 25 dBm (two Tx chair	1)						
TX POWER CONTROL	0 – 25 dB, in 0.5 dB steps. A	Automatic TPC with configu	rable EIRP limit					
RX SENSITIVITY	Channel Size	40 MHZ	20 MHZ	10 MHZ	5 MHZ			
BER=10-6)	MCS 0	-90 dBm	-92 dBm	-95 dBm	-98 dBm			
	MCS 7	-72 dBm	-73 dBm	-76 dBm	-80 dBm			
	MCS 8	-88 dBm	-90 dBm		-96 dBm			
	MCS 15	-69 dBm	-70 dBm		-76 dBm			
		I						
ANTENNA								
ANTENNA	Integrated 15dBi dual Polari	zed (H+V) panel antenna						
MANAGEMENT								
REMOTE	Telnet and SSH, WebGUI and SSL, TFTP, SNMPv3							
SNMP	SNMP v1-v2c-v3, RFC-1213, RFC-1215, RFC-2790, RFC-2571, RFC-3412, RFC-3414, Private MIB							
OTHER	Syslog, sFlow™ agent, SNTP and local time							
SECURITY								
ENCRYPTION	AES-CCM 128 bits							
AUTHENTICATION	Internal MAC Address Cont	rol List, Radius based Auther	ntication (with VLAN and	d QoS provisioning)				
NETWORK								
MODES	Bridging, Routing (RIP v2 an	d IP tunneling)						
THROUGHPUT	Up to 100 Mbps (TCP)							
GATEWAY FEATURES	DHCP Server & relay, NAT w	ith Std ALGs, PPPoE end poi	nt					
QoS	Asymmetric Bandwidth Co		ink CIR Control "commit ink MIR Control "maxim					
	Packet Classification Capabilities)2.1p priority, IPTOS, VL/ port, Ethernet source/de			_		
	Scheduling	Best Effort, Real Ti	me Polling Services					
VLAN	802.1Q: Management VLAN	N. Transparent, Access, Trunk	and Mixed mode. QinC) double tagging				
POWER CONSUMPTION				-				
	5 Watt typical (18 Watt max	()						
ENVIRONMENTAL SPECS								
OPERATING TEMPERATUR	E	STORAGE TEMPERATURE	IP RATING		HUMIDITY			
-40° to 55°C (-40° to 131°	Fahrenheit)	-45° to 70°C (-49° to 158° Fahrenheit)	IP67		Max 100% rela	ative humidity (non-condensing)		
PHYSICAL SPECS								
DIMENSIONS (PACKAGED))	DIMENSIONS (UNPACKAGE	D)	WEIGHT (PACKAGED))	WEIGHT (UNPACKAGED)		
		8.46 x 4.78 x 2.56 in (215 :				1.93 lbs (0.88 kg)		

PRODUCT MODELS											
QB-8200-LNK	Tsunai	mi QB 8200 Link, 300 Mbps,	MIMO 2x2, Type-N Co	onnectors (Two QB-8200-EF	A)						
QB-8250-LNK	Tsunai	Tsunami QB 8250 Link, 300 Mbps, MIMO 2x2, 23 dBi panel antenna (Two QB-8250-EPR)									
INTERFACES											
WIRED ETHERNET	Two a	uto MDI-X RJ45 10/100/1000)Mbps Ethernet - Port	#1 with PoE in & Data - Po	rt #2 with PoE out	t (802.3af pin out) & D	ata				
WIRELESS PROTOCOL	WORE	? (Wireless Outdoor Router Pr	otocol)								
RADIO & TX SPECS	WOR	(Wheless Outdoor Router Pr	010001/								
	2.2.1	1140									
	2x2 IV										
MODULATION	OFDIV										
REQUENCY		– 5.925 GHz (Subject to Cou									
CHANNEL SIZE	40 Mł	Hz, 20 MHz, 10 MHz, 5 MHz	channel bandwidths	with support for 1MHz cha	nnel spacing						
DATA RATE	MCS (0 to 15 for High Throughput	mode (6.5 – 300 Mbp	s) with Dynamic Data Rate	Selection						
TX POWER	Up to	27dBm (two Tx chain)									
TX POWER CONTROL	0 – 25	0 – 25 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limit									
RX SENSITIVITY (BER=10 ⁻⁶)	Cha	nnel Size	40 MHZ	20 MHZ 1	0 MHZ	5 MHZ					
	MCS		-87 dBm		93 dBm	-96 dBm					
	MCS		-69 dBm		74 dBm	-76 dBm					
	MCS		-86 dBm		91 dBm	-94 dBm					
	MCS	5 15	-67 dBm	-69 dBm -7	72 dBm	-74 dBm					
ATENCY											
	< 3 m	sec									
	< 5 m										
NTENNA											
	Model QB-8200-EPA includes two N-Type Antenna Connectors with built in Surge Protection Model QB-8250-EPR includes an Integrated 2x2 MIMO 23dBi Dual Polarized Antenna										
IANAGEMENT	Widde			Sabi Baari Gianzea Antenin	u .						
	DC 22	2 seriel (BI11 to DB 0 decels	energiale al								
OCAL	RS-232 serial (RJ11 to DB-9 dongle provided)										
emote		Telnet and SSH, Web GUI and SSL, TFTP, SNMPv3									
SNMP	SNMP	v1-v2c-v3, RFC-1213, RFC-1	215, RFC-2790, RFC-2	2571, RFC-3412, RFC-3414	, Private MIB						
OTHER	Syslog	, sFlow™ agent, SNTP and lo	cal time								
SECURITY											
ENCRYPTION	AES-C	CM 128 bits									
AUTHENTICATION	Intern	al MAC Address Control List,	Radius based Authen	tication							
NETWORK											
NODES	Bridai	ng(support LACP through ext	ernal switches) Bouti	ng (BIP v2 and IP tunneling)							
	5	5. 11 5	,.								
GATEWAY FEATURES	инср	Server & relay, NAT with Std	ALGS								
QoS	Asyr	nmetric Bandwidth Control		nk CIR Control "committed ate" per service flow	information rate"	' per service flow Uplin	k and Downlink MIR Control "maxi-				
	Pack	et Classification	802.1D/802.1Q/802	2.1p priority, IPTOS, VLAN I	D, IP source/destir	nation address,					
	Сара	abilities	source/destination	port, Ethernet source/destin	ation address, IP	protocol, and Ethertype	e				
	Sche	eduling	Best Effort, Real Tin	ne Polling Services							
/LAN	202.1		parant Access Truck	and Mixed mode OinO de	uble tagging						
	0UZ. I	Q: Management VLAN. Trans	parent, Access, Irufik	and Mixed Mode, QINQ do	uore rayyiriy						
NVIRONMENTAL SPECS											
DPERATING, STORAGE TEMPERA		HUMIDITY		WIND LOADING	IP RATING		SAFETY STANDARDS				
40° to 60°C (-40° to 140° Fahre 55° to 80°C (-67° to 176° Fahre		Max 100% relative humidit	y (non-condensing)	125 mph	IP67		UL 60950, CAN/CSA-C22.2 No. 60950, IEC 60950, EN 60950				
PHYSICAL SPECS											
DIMENSIONS (PACKAGED)		DIMENSIONS (UNPACKAGE	D)	WEIGHT (PACKAGED)	WEIGHT (UNP.	ACKAGED)					
Model QB-8200-EPA: 14.56 x 13	69 v			Model QB-8200-EPA:			a)				
Model QB-8200-EPA: 14.56 x 13 8.18 in. (370 x 348 x 208 mm) Model QB-8250-EPR: 15.94 x 15 9.21 in. (405 x 405 x 234 mm)		Model QB-8200-EPA: 10.5 (267 x 267 x 86 mm) Model QB-8250-EPR: 14.17 (370 x 370 x 94 mm)		Model QB-8200-EPA: 16.75 lbs (7.6 kg) Model QB-8250-EPR: 18.30 lbs (8.3 kg)		00-EPA: 7.27 lbs (3.3 k 50-EPR: 9.26 lbs (4.2 k					
.2 I III. (405 X 405 X 234 mm)		(370 X 370 X 94 mm)		18.30 IDS (8.3 KG)							

PRODUCT MODELS										
QB-8100-LNK	Tsunami QB 8	100 Link, 300 Mbps, I	VIMO 3x3, Type-N	Connectors (Two	QB-8100-EP	PA)				
QB-8150-LNK		150 Link, 300 Mbps, I								
INTERFACES										
WIRED ETHERNET	- Port #1 with	Two auto MDI-X RJ45 10/100/1000Mbps Ethernet - Port #1 with PoE in & Data - Port #2 with PoE out (802.3af pin out) & Data								
WIRELESS PROTOCOL	WORP (Wirele	ess Outdoor Router Pro	otocol)							
RADIO & TX SPECS										
MIMO	3x3 MIMO									
MODULATION	OFDM									
FREQUENCY	2.3 – 2.5 GH: 4.9 – 6.0 GH:	<u>z</u> z (Subject to Country F	egulations)							
CHANNEL SIZE	40 MHz, 20 M	MHz, 10 MHz, 5 MHz								
data rate	MCS 0 to 15	for High Throughput r	node (6.5 – 300 M	1bps) with Dynam	ic Data Rate	Selection				
TX POWER	Up to 21dBm	(two Tx chain)								
TX POWER CONTROL	0 – 25 dB, in	0.5 dB steps. Automat	ic TPC with config	jurable EIRP limit						
RX SENSITIVITY (BER=10 ⁻⁶)	Channel Siz		40 MHZ	20 MHZ	10 MHz	5 MHz				
	MCS 0		-87dBm	-93dBm	-94 dBm	-96 dBm				
	MCS 7		-71dBm	-75dBm	-78 dBm	-81 dBm				
	MCS 8		-87 dBm	-93 dBm	-94 dBm	-95 dBm				
	MCS 15		-69 dBm	-71 dBm	-74 dBm	-77 dBm	J			
LATENCY	1									
	< 3 msec									
ANTENNA										
		50-LNK and QB-8150- 00-LNK includes three		0						
MANAGEMENT	1									
LOCAL	RS-232 serial	(RJ11 to DB-9 dongle	provided)							
REMOTE	Telnet and SS	H, Web GUI and SSL, 1	fftp, SNMPv3							
SNMP	SNMP v1-v2c	-v3, RFC-1213, RFC-12	215, RFC-2790, RF	C-2571, RFC-341	2, RFC- 3414	1, Private MIB				
OTHER	Syslog, sFlow	™ agent, SNTP and lo	cal time							
SECURITY										
ENCRYPTION	AES-CCM 12	8 bits								
AUTHENTICATION	Internal MAC	Address Control List,	Radius based Auth	entication						
NETWORK										
MODES	Bridging(supp	oort LACP through exte	ernal switches), Ro	uting (RIP v2 and	IP tunneling))				
GATEWAY FEATURES	DHCP Server	& relay, NAT with Std /	ALGs							
QoS	Asymmetric	Bandwidth Control		nlink CIR Control um information r			er service flow Uplink and Downlink MIR			
	Packet Class Capabilities	sification	802.1D/802.1Q/	802.1p priority, IF	PTOS, VLAN II	D, IP source/destinat	ion address, otocol, and Ethertype			
	Scheduling			Time Polling Serv						
VLAN	802.1Q: Man	agement VLAN. Transp	oarent, Access, Tru	nk and Mixed mo	ode. QinQ do	uble tagging				
ENVIRONMENTAL SPECS										
OPERATING, STORAGE TEMPERA	TURE	HUMIDITY		WIND LOADING	G IP R	RATING	SAFETY STANDARDS			
-40° to 60°C (-40° to 140° Fahre -55° to 80°C (-67° to 176° Fahre		Max 100% relative h condensing)	numidity (non-	125 mph	IP6	7	UL 60950, CAN/CSA-C22.2 No. 60950, IEC 60950, EN 60950			
PHYSICAL SPECS										
CONNECTORIZED (LXWXH) :		INTEGRATED ANTEN	NA (LXWXH) :	CONNECTORIZ	ED :		INTEGRATED ANTENNA :			
PACKAGED 14.56 x 13.7 x 8.19 x 208 mm) UNPACKAGED 10.79 x 11.14 x 3 283 x 86 mm)		PACKAGED 15.94 x (405 x 405 x 215 mr UNPACKAGED 14.57 in (370 x 370 x 113.	n) 7 x 14.57 x 4.47	PACKAGED 15 UNPACKAGED		:g)	PACKAGED 16.31 lbs (7.4 kg) UNPACKAGED 9.0 lbs (4.1 kg)			

Q8-8150-LNK-12Stunami Q8 8150 Link, 12 Mbps, MIMO 2x2, 16 dBi integrated antennaQ8-8150-LNK-50Stunami Q8 8150 Link, 50 Mbps, MIMO 2x2, 16 dBi integrated antennaRADIO & TX SPECSMIMO2x2MODULATIONOPDMOPERATING FREQUENCY5.3 ~ 6.0 GHz (Subject to Country Regulations)CHANNEL SIZE40 MHz, 20 MHz, 10 MHz, 5 MHz channel bandwidths with support for 1MHz channel spacingDATA RATEMCS 0 to 15 for High Through put mode (6.5 – 300 Mbps) with Dynamic Data ReselectionTX POWERUp to 24dBm (two Tx chain)TX POWER CONTROL0 – 25 dB, in 0.5 dB steps. Automstruct FUC with configurable EIRP limitRX SENSITIVITY (BER=10°)Channel SizeMCS 0-98 dBmMCS 0-93 dBm <tr< th=""><th></th></tr<>									
RADIO & TX SPECSMIMO2x2MODULATIONOFDMOPERATING FREQUENCY5.3 ~ 6.0 GHz (Subject to Country Regulations)CHANNEL SIZE40 MHz, 20 MHz, 10 MHz, 5 MHz channel bandwidths with support for 1MHz channel spacingDATA RATEMCS 0 to 15 for High Throughput mode (6.5 – 300 Mbps) with Dynamic Data Rate SelectionTX POWERUp to 24dBm (two Tx chain)TX POWER0 – 25 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limitRX SENSITIVITY (BER=10°)Channel Size40 MHZ20 MHZ10 MHZSENSITIVITY (BER=10°)Channel SizeNCS 0-89 dBm-93 dBm95 dBm-96 dBmMCS 7-73 dBm-76 dBmMCS 8-89 dBm-93 dBm93 dBm-94 dBmMCS 15-73 dBm-76 dBm76 dBm-73 dBm									
RADIO & TX SPECSMIMO2x2MODULATIONOFDMOPERATING FREQUENCY5.3 ~ 6.0 GHz (Subject to Country Regulations)CHANNEL SIZE40 MHz, 20 MHz, 10 MHz, 5 MHz channel bandwidths with support for 1MHz channel spacingDATA RATEMCS 0 to 15 for High Throughput mode (6.5 – 300 Mbps) with Dynamic Data Rate SelectionTX POWERUp to 24dBm (two Tx chain)TX POWER0 – 25 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limitRX SENSITIVITY (BER=10°)Channel SizeMCS 0-89 dBm-93 dBm-95 dBmMCS 3-73 dBm-76 dBm-93 dBmMCS 4-94 dBm-93 dBm-93 dBmMCS 15-73 dBm-76 dBm-73 dBm									
MODULATIONOFDMOPERATING FREQUENCY5.3 ~ 6.0 GHz (Subject to Country Regulations)CHANNEL SIZE40 MHz, 20 MHz, 10 MHz, 5 MHz channel bandwidths with support for 1MHz channel spacingDATA RATEMCS 0 to 15 for High Throughput mode (6.5 – 300 Mbps) with Dynamic Data Ret SelectionTX POWERUp to 24dBm (two Tx chain)TX POWER CONTROL0 – 25 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limitRX SENSITIVITY (BER=10*)Channel SizeMCS 0-89 dBmMCS 7-73 dBmMCS 8-89 dBmMCS 8-94 dBmMCS 15-73 dBmMCS 15-75									
OPERATING FREQUENCY5.3 ~ 6.0 GHz (Subject to Country Regulations)CHANNEL SIZE40 MHz, 20 MHz, 10 MHz, 5 MHzDATA RATEMCS 0 to 15 for High Throughput mode (6.5 – 300 Mbps) with Dynamic Data Rate SelectionTX POWERUp to 24dBm (two Tx chain)TX POWER CONTROL0 – 25 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limitRX SENSITIVITY (BER=10*)Channel SizeMCS 0-89 dBm-93 dBmMCS 7-73 dBm-76 dBmMCS 8-89 dBm-93 dBmMCS 15-73 dBm-73 dBmMCS 15-75 dBm-73 dBmMCS 15-75 dBm-75 dBmMCS 15-75 dBm-75 dBmMCS 15-75 dBm-75 dBmMCS 15-75 dBm-75 dBmMC									
CHANNEL SIZE40 MHz, 20 MHz, 10 MHz, 5 MHzchannel bandwidths with support for 1MHz channel spacingDATA RATEMCS 0 to 15 for High Throughput mode (6.5 – 300 Mbps) with Dynamic Data Rate SelectionTX POWERUp to 24dBm (two Tx chain)TX POWER CONTROL0 – 25 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limitRX SENSITIVITY (BER=10*)Channel Size40 MHZ20 MHZ10 MHZ5 MHZMCS 0-89 dBm-93 dBm-95 dBmMCS 7-73 dBm-76 dBm-76 dBmMCS 8-89 dBm-93 dBm-93 dBm-94 dBmMCS 15-73 dBm-73 dBm-76 dBm-73 dBm-75 dBm									
DATA RATE MCS 0 to 15 for High Throughput mode (6.5 – 300 Mbps) with Dynamic Data Rate Selection TX POWER Up to 24dBm (two Tx chain) U TX POWER CONTROL 0 – 25 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limit MICS 0 6 – 89 dBm 93 dBm 95 dBm 96 dBm RX SENSITIVITY (BER=10 ⁶) MCS 0 -89 dBm -93 dBm -95 dBm -96 dBm MCS 0 -89 dBm -76 dBm -76 dBm -78 dBm -94 dBm MCS 8 -89 dBm -93 dBm -93 dBm -94 dBm -94 dBm MCS 15 -73 dBm -76 dBm -73 dBm -75 dBm -75 dBm									
TX POWER Up to 24dBm (two Tx chain) TX POWER CONTROL 0 – 25 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limit RX SENSITIVITY (BER=10 ⁵) Channel Size 40 MHZ 20 MHZ 10 MHZ 5 MHZ MCS 0 -89 dBm -93 dBm -95 dBm -96 dBm MCS 7 -73 dBm -76 dBm -76 dBm -78 dBm MCS 8 -89 dBm -93 dBm -93 dBm -94 dBm MCS 15 -73 dBm -76 dBm -73 dBm -75 dBm									
TX POWER CONTROL 0 - 25 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limit RX SENSITIVITY (BER=10 ⁶) Channel Size 40 MHZ 20 MHZ 10 MHZ 5 MHZ MCS 0 -89 dBm -93 dBm -95 dBm -96 dBm MCS 7 -73 dBm -76 dBm -76 dBm -78 dBm MCS 8 -89 dBm -93 dBm -93 dBm -94 dBm MCS 15 -73 dBm -76 dBm -73 dBm -75 dBm									
RX SENSITIVITY (BER=10*) Channel Size 40 MHZ 20 MHZ 10 MHZ 5 MHZ MCS 0 -89 dBm -93 dBm -95 dBm -96 dBm MCS 7 -73 dBm -76 dBm -76 dBm -78 dBm MCS 8 -89 dBm -93 dBm -93 dBm -94 dBm MCS 15 -73 dBm -76 dBm -73 dBm -75 dBm									
Channel Size 40 MHZ 20 MHZ 10 MHZ 5 MHZ MCS 0 -89 dBm -93 dBm -95 dBm -96 dBm MCS 7 -73 dBm -76 dBm -76 dBm -78 dBm MCS 8 -89 dBm -93 dBm -93 dBm -94 dBm MCS 15 -73 dBm -76 dBm -73 dBm -75 dBm									
MCS 0-89 dBm-93 dBm-95 dBm-96 dBmMCS 7-73 dBm-76 dBm-76 dBm-78 dBmMCS 8-89 dBm-93 dBm-93 dBm-94 dBmMCS 15-73 dBm-76 dBm-73 dBm-75 dBm									
MCS 7 -73 dBm -76 dBm -76 dBm -78 dBm MCS 8 -89 dBm -93 dBm -93 dBm -94 dBm MCS 15 -73 dBm -76 dBm -73 dBm -75 dBm									
MCS 8 -89 dBm -93 dBm -93 dBm -94 dBm MCS 15 -73 dBm -76 dBm -73 dBm -75 dBm									
MCS 15 -73 dBm -76 dBm -73 dBm -75 dBm									
LATENCY									
5 msec (typical)									
ANTENNA									
Integrated 16dBi dual Polarized (H+V) panel antenna									
INTERFACES									
WIRED ETHERNET One auto MDI-X RJ45 10/100Mbps Ethernet	One auto MDI-X RJ45 10/100Mbps Ethernet								
WIRELESS PROTOCOL WORP (Wireless Outdoor Router Protocol)									
MANAGEMENT									
	Telnet and SSH, Web GUI and SSL, TFTP, SNMPv3								
	SNMP v1-v2c-v3, RFC-1213, RFC-1215, RFC-2790, RFC-2571, RFC-3412, RFC-3414, Private MIB								
SECURITY									
ENCRYPTION AES-CCM 128 bits									
AUTHENTICATION Internal MAC Address Control List, Radius based Authentication									
NETWORK									
MODES Bridging, Routing (RIP v2 and IP tunneling)									
THROUGHPUT Model Q8 8150-LNK-12: Up to 12Mbps (TCP) Model Q8 8150-LNK-50: Up to 50Mbps (TCP)									
GATEWAY FEATURES DHCP Server & relay, NAT with Std ALGs									
QoS Asymmetric Bandwidth Control Uplink and Downlink CIR Control "committed information rate" pe	er service								
flow Uplink and Downlink MIR Control "maximum information rate									
service flow									
Packet Classification Capabilities 802.1D/802.1Q/802.1p priority, IPTOS, VLAN ID, IP source/destinati source/destination port, Ethernet source/destination address, IP pro									
Ethertype									
Scheduling Best Effort, Real Time Polling Services									
VI AN 20210: Management VI AN Transport Access Truck and Mixed mode Oico double transis									
WARRANTY									
WARRANTY 1-year on parts and labor; ServPak Extended Support available									
WARRANTY 1-year on parts and labor; ServPak Extended Support available ENVIRONMENTAL SPECS									
WARRANTY 1-year on parts and labor; ServPak Extended Support available ENVIRONMENTAL SPECS									
WARRANTY 1-year on parts and labor; ServPak Extended Support available ENVIRONMENTAL SPECS OPERATING, STORAGE TEMPERATURE HUMIDITY WIND LOADING IP RATING SAFETY STANDARDS -35° to 55° C (-31° to 131° F) Max 95% relative humidity (non- 125 mph IP65 UL 60950, CAN/CSA-CC	22.2 No. 60950, IEC								
WARRANTY 1-year on parts and labor; ServPak Extended Support available ENVIRONMENTAL SPECS OPERATING, STORAGE TEMPERATURE HUMIDITY WIND LOADING IP RATING SAFETY STANDARDS -35° to 55° C (-31° to 131° F) Max 95% relative humidity (non- condensing) 125 mph IP65 UL 60950, CAN/CSA-C 60950, EN 60950	22.2 No. 60950, IEC								
WARRANTY 1-year on parts and labor; ServPak Extended Support available ENVIRONMENTAL SPECS EVVIRONMENTAL SPECS OPERATING, STORAGE TEMPERATURE HUMIDITY WIND LOADING IP RATING SAFETY STANDARDS -35° to 55° C (-31° to 131° F) Max 95% relative humidity (non- 125 mph IP65 UL 60950, CAN/CSA-CC									
WARRANTY I-year on parts and labor; ServPak Extended Support available ENVIRONMENTAL SPECS OPERATING, STORAGE TEMPERATURE HUMIDITY WIND LOADING IP RATING SAFETY STANDARDS -35° to 55° C (-31° to 131° F) Max 95% relative humidity (non40° to 70° C (-40° to 158° F) Condensing) PHYSICAL SPECS	D)								

		Package Contents		
Tsunami® MP 8200	One Tsunami® MP 8200-BSU with two N-type surge protected con- nectors, or One Tsunami® MP-8250-BS9 with an integrated 16 dBi dual polarized 90° sector Antenna or One Tsunami® MP 8200-SUA with two N-type surge protected connectors, or One Tsunami® MP-8250-SUR with an integrated 23dBi dual polar- ized panel antenna	One Connector weatherproofing kit (Includes all recommended weatherproofing material)	One Serial (RJ-11 to DB9) dongle	One Gigabit PoE Surge Arresto
Tsunami® MP 8100	One Tsunami® MP 8100-BSU with three N-type surge protected connectors or One Tsunami® MP 8150-SUR with 5 GHz dual polarity 23 dBi Integrated antenna or One Tsunami® MP 8100-SUA with three N-type surge protected connectors	Three N-connector weather proof- ing caps installed at factory (for connectorized Version Only) One Connector weatherproofing kit (Includes all recommended weatherproofing material)	One Serial (RJ-11 to DB9) dongle	One Gigabit PoE Surge Arreston
Tsunami [®] MP 8160	One Tsunami® MP 8160-BSU or MP 8160-SUA with two N-type connectors	One Connector weatherproofing kit (Includes all recommended weatherproofing material)	One Serial (RJ-11 to DB9) dongle	One Gigabit PoE Surge Arreston
Tsunami [®] MP 8150 CPE	One CPE unit with 16 dBi integrated antenna	One Connector weatherproof- ing kit		
Tsunami [®] MP 8160 CPE	One CPE unit with 15 dBi integrated antenna	One Connector Weather proof- ing Kit		
Tsunami® QB 8200 Series	One Tsunami® QB-8200-LNK based on two QB-8200-EPA with two N-type surge protected con- nectors or One Tsunami® QB-8250-LNK based on two QB-8250-EPR with an integrated 23dBi dual polarized panel antenna	Two Connector weatherproofing kit (Includes all recommended weatherproofing material)	Two Serial (RJ-11 to DB9) dongle	Two Gigabit PoE Surge Arrestor
Tsunami® QB 8100 Series	One Tsunami® QB 8100-EPA with three N-type surge protected connectors or One Tsunami® QB 8150-EPR with 5 GHz dual polarity 23 dBi Integrated antenna	Three N-connector weather proof- ing caps installed at factory (for connectorized Version Only) or Two Connector weatherproof- ing kit (Includes all recommended weatherproofing material)	One Serial (RJ-11 to DB9) dongle	One Gigabit PoE Surge Arrestor
Tsunami [®] QB-8150-LNK-12	Two QB End Point units with 16dBi integrated antenna	Two Connector Weather Proof- ing kit		
Tsunami [®] QB-8150-LNK-50	Two QB End Point units with 16dBi integrated antenna	Two Connector Weather Proofing kits		
Also includes:				
• One(Two for OB link)	power injector and country specific pow	er cord		

• One (Two for QB link) Wall/Pole mounting kit

• One (Two for QB link) Grounding kit

• One Printed Quick Install Guide / Documentation

Proxim Wireless Corporation (OTC Markets: PRXM) provides Wi-Fi[®], Point-to-Point and Point-to-Multipoint 4G wireless network technologies for wireless internet, video surveillance and backhaul applications. Our ORiNOCO[®] and Tsunami[®] product lines are sold to service providers, governments and enterprises with over 2 million devices shipped to over 250,000 customers in over 65 countries worldwide. Proxim is ISO 9001-2008 certified. For more information, visit www. proxim.com. For investor relations information, e-mail ir@proxim.com or call +1 413-584-1425.



Proxim Wireless Corporation 1561 Buckeye Drive, Milpitas CA 95035, USA

Proxim[®] and Tsunami[®] are registered trademarks of Proxim[®] Wireless Corporation in the US Patent and Trademark Office. All other products or services are the property of their registered owners.