



# ZEBRA 9160 G2

## THE FLEXIBLE WIRELESS GATEWAY FOR MOBILE PRODUCTIVITY

You need to manage and track inventory in some of the most challenging outdoor environments — from seaports and rail yards to airports and expansive outdoor manufacturing yards. Not only are these areas vast, but materials are often present that can wreak havoc on a traditional Wi-Fi signal, from large metal shipping containers to water, wood, ceramics, microwave dryers, other 2.4 GHz wireless networks and more. The 9160 G2 wireless gateway solves that problem with Narrowband wireless connectivity. Narrowband provides a robust and secure wireless connection for simple data applications that can cost-effectively cover every inch of your sprawling facility. Just one 9160 G2 base station covers up to one mile — a distance that would typically require 10 Wi-Fi access points. And since our advanced network and data protocols overcome Narrowband bandwidth constraints, your workers get sub-second access to the information they need to accurately and efficiently move inventory in, through and out of your facility. Get affordable wireless connectivity for your largest spaces with Narrowband, only from Zebra.

### Easy, cost-effective wireless coverage in every inch of your facility

Narrowband is ideal for your largest, most expansive areas, minimizing infrastructure requirements and cost while delivering a solid dependable connection in challenging RF environments. Regardless of the types of materials or volume of traffic in the 2.4 GHz band that are present in your environment, they will not degrade the signal. And since the mobile devices connected to your narrowband network operate in low power receive mode, the resulting substantial energy savings ensures that your workers have plenty of power for a full-shift.

### Flexible backhaul options

The 9160 G2 offers wired and wireless options to connect to your network. You can connect the 9160 G2 to your network with a single Ethernet cable — with support for Power-over-Ethernet, there is no need to run power. The optional Wi-Fi 802.11a/b/g radio provides a wireless connection to your network, addressing areas where running a cable is too challenging or expensive. And the wide variety of indoor and outdoor 2.4 GHz and 5 GHz directional and sector panel antennas ensure a robust wireless connection back to your enterprise network.

### Easy remote management

Centralized and remote management of security, configuration profiles and software upgrades makes network management easy.

### A total solution

In addition to the 9160 G2, you'll need devices that can run on the Narrowband network. That's why our Omnii XT15 handheld and VH10 vehicle mount mobile computers offer Narrowband radio options. These rugged devices are ready for the toughest environmental conditions. And whether workers are on foot or driving a forklift or other material handling vehicle, there is a device option that is perfect for the job.

## COST-EFFECTIVE, ROBUST WIRELESS CONNECTIVITY FOR YOUR MOST EXPANSIVE AREAS

### WHERE IS THE 9160 G2 AT HOME?

#### Indoor environments

- Suitable for rugged warehouse and manufacturing applications with any type of coverage pattern

#### Outdoor environments

- A variety of high gain antenna and wired or wireless (WDS) backhaul options make the 9160 G2 a great choice for outdoor port and yard applications

#### Specialty environments: refrigerated

- Dual radio operation and antenna splitting allows for coverage of isolated refrigerated sections from a single access point

#### Environments that require Multiple SSIDs

- Allows you to easily divide the WLAN into virtual wireless LANs, with VLAN support for different applications and different user types.

For more information, please visit [www.zebra.com/9160g2](http://www.zebra.com/9160g2)

## TECHNICAL SPECIFICATIONS

### PHYSICAL CHARACTERISTICS

Dimensions	14.3 in. L x 10.3 in. W x 2.9 in. D 363 mm L x 262 mm W x 74 mm D
Weight	6.5 lbs./2.9 kg
Network Interface	10/100 Base-T with auto-negotiation, half and full duplex

Diagnostic/ Configuration Terminal Interface	RS232 port for debug and diagnostics supporting configuration and firmware update SNMP support (compatible with MapRF) Telnet to Console HTTP Web Browser Management Interface
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Power	100 – 240VAC, 50/60Hz, 1A
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Power-over-Ethernet (PoE)	802.3af compliant, 48VDC nominal
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Visual Indicators	LED 1 - on solid when Ethernet link present LED 2 - blinks for rx/tx Ethernet traffic LED 3 - blinks for rx/tx radio 1 traffic LED 4 - blinks for rx/tx radio 2 traffic LED 5 - always off (unused at this time) LED 6 - on solid
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### PERFORMANCE CHARACTERISTICS

CPU	Intel IXP420 processor at 266MHz
Memory	16MB Flash, 32MB SDRAM
Operating System	Linux

### USER ENVIRONMENT

Operating Temp.	0°C to +55° C / 32°F to +151°F
Storage Temp.	0°C to +70° C / 32° F to +158° F
Humidity	10% to 90% non-condensing
Sealing	IP42
Vibration	EH0002 (shipping vibration only)
Integrated Sensors	Motion (accelerometer); digital compass

Reliability	MTBF 25,000 Hours (MIL-HDBK-217F)
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### WIRELESS DATA COMMUNICATIONS

Narrowband	UHF bands: 403 – 470 MHz Channel Spacing: 12.5 - 25 kHz ; RF power: 500 - 1,000mW;
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### SECURITY

802.1x authentication  
MAC filtering  
WPA 1 (TKIP encryption)  
WPA 2 (802.11i, AES encryption)  
Inhibit/Ignore SSID Broadcast  
User-based access control via embedded Radius authentication server (PEAP with 8 APIs or less)

### ADVANCED FEATURES

Wireless Distribution System (WDS)  
Load balancing  
Multiple SSIDs/BSSIDs, Virtual Wireless Networks (VWNS)  
Support of 802.1Q protocol  
Mini-controller capabilities for thin client devices featuring VTxx, 5250 and 3274 emulations

### SERVICES AND SUPPORT

Service from the Start Primary:	A unique service that covers normal wear and tear as well as accidental damage to internal and external components. Includes a collection option with pre-paid ground freight on return shipments.
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### REGULATORY

USA	FCC part 15, subpart B, class B (unintentional radiated emission) UL601950, 2000 Bi-Nat (electrical safety) (* Note: NRTL/C done by CSA covers UL 1950 bi-national standards)
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Canada	ICES-003 / CSA C108.8-M1983 (unintentional radiated emission); CSA 950 CSA-C22.2 No. 950-M98 (electrical safety)(* Note: FCC part 15, subpart B covers ICES-003 / CSA C108.8-M1983)
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European (CE Mark)	73/23/EEC Low Voltage Directive: TUV & CB EN 60950:1992+A1+A2 +A3+A4+A11 (electrical safety) 89/336/EEC EMC Directive: EN 50081-2: 1998 Generic Emission Standard – Industrial Environment EN 55022 based on CISPR 22, class B (Information Technology Equipment) EN 50082-1: 1997 Generic Immunity Standard – Industrial Environment EN 61000-4-2 ESD EN 61000-4-3 Radiated RF Immunity EN 61000-4-4 Electrical Fast Transients EN 61000-4-5 Surge withstand
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Transmission speed: 4.8/9.6 kbps  
@ 12.5 kHz, 9.6/19.2 kbps @ 25  
kHz

Environmental

RoHS Compliant

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**Optional Wi-Fi Radio**

IEEE 802.11a/b/g, 802.1X, WPA /  
WPA2-Enterprise & Shared Key,  
FAST-MSCHAPv2; PEAPv0-  
MSCHAPv2; PEAPv1-GTC; TLS,  
64/128 WEP, AESCCMP, TKIP

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**WARRANTY**

Subject to the terms of Zebra's hardware warranty statement, the 9160 G2 is warranted against defects in workmanship and materials for a period of 1 (one) year from the date of shipment. For complete warranty statement, go to: [www.zebra.com/warranty](http://www.zebra.com/warranty)

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**ANTENNA OPTIONS**

Choose from indoor and outdoor UHF, 2.4 and 5GHz omni-directional, directional and sector panel high gain antennae. Supports antennae for bridging (WDS) applications Antennae diversity is supported for 802.11 radios



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**ZEBRA TECHNOLOGIES**