



oMG 500 Series Antenna Connections

oMG



SIERRA
WIRELESS®

oMG-ED-130702
1.1
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Consult our website for up-to-date product descriptions, documentation, application notes, firmware upgrades, troubleshooting tips, and press releases: www.sierrawireless.com

Document History

Version	Date	Updates
1.1	October 14 2014	Updated to SWI Template



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1. Introduction

The oMGs use two types of connectors for antennas:

- **SMA (female):** used for GPS. Labeled on the antenna and on the oMG as shown in Figure 1 below.
- **RP-SMA (female, reverse polarity):** used for cellular and WiFi connections.

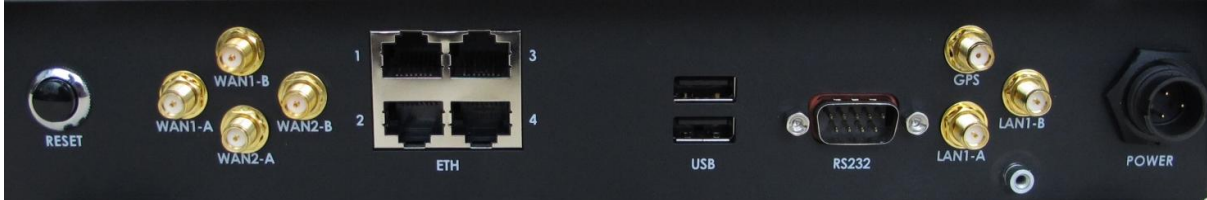


Figure 1 - oMG 500 Rear Panel

The antennas use the following networks:

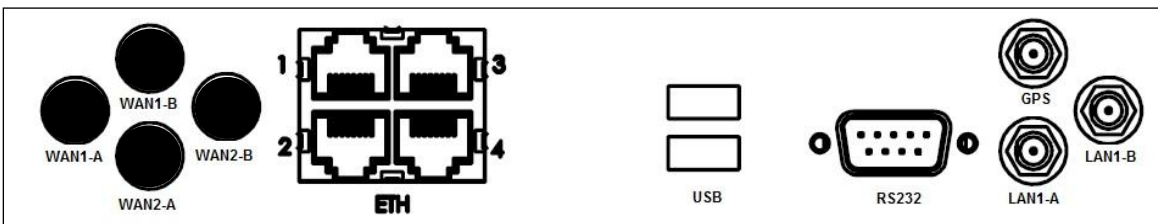
Frequency	Usable Networks
694 to 960 MHz and 1710 to 2170 MHz	3G/LTE
2.4 to 2.5 GHz and 4.9 to 6 GHz	Wi-Fi 2.4 to 5 GHz/Public Safety
GPS	GPS

There are several variants of the oMG backplanes that accommodate different configurations of the oMGs. These are classified by L numbers which define each layout. Below are examples of common layouts.

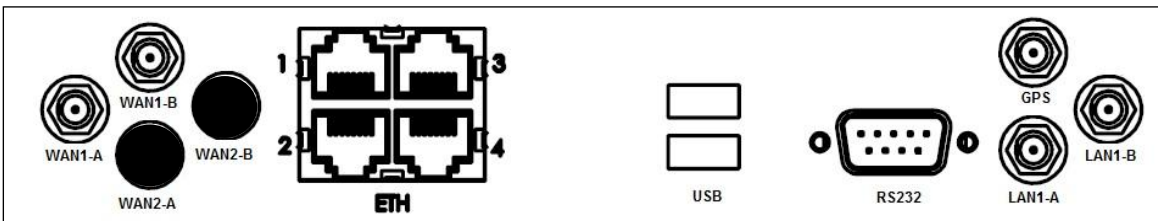
oMG500

The oMG500 series has the following options for backplane layouts. Contact Support for assistance in identifying your specific configuration.

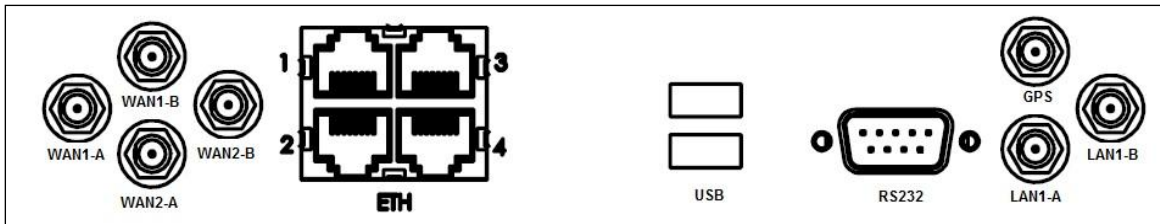
L00



L01, L02, L04, L05 & L06



L03, L07, L01W, L02W, L04W, L05W, & L06W



Note: if two or more wireless connections are being used at the same time, the antennas need to be installed at least 20 cm apart to comply with FCC regulations.

When you receive your antennas, they should be labelled with the connections. If they are not, use this chart to determine which antenna connection to use:

oMG Connection (Label)	Function	Type	Antenna
LAN1-A	WiFi LAN (Primary)	RP-SMA	WiFi - 2.4 to 2.5 GHz and 4.9 to 6 GHz
LAN1-B	WiFi LAN (Secondary)	RP-SMA	WiFi - 2.4 to 2.5 GHz and 4.9 to 6 GHz
GPS		SMA	GPS
WAN1-A	Cellular PEM (Primary)	RP-SMA	LTE - 694 to 960 MHz and 1710 to 2170 MHz
WAN1-B	Cellular PEM (Secondary)	RP-SMA	LTE - 694 to 960 MHz and 1710 to 2170 MHz
*WAN2-A	Cellular PEM (Primary) or WiFi WAN (Primary)	RP-SMA	LTE - 694 to 960 MHz and 1710 to 2170 MHz WiFi - 2.4 to 2.5 GHz and 4.9 to 6 GHz
*WAN2-B	Cellular PEM (Secondary) or WiFi WAN (Secondary)	RP-SMA	LTE - 694 to 960 MHz and 1710 to 2170 MHz WiFi - 2.4 to 2.5 GHz and 4.9 to 6 GHz

*WAN2-A and WAN2-B can be ordered with either a WiFi WAN card or a cellular PCI express mini (PEM) card. They cannot be both installed at the same time.

Please contact In Support at support@inmotiontechnology.com for further information.