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IOTACOMM DUAL-BAND GATEWAY

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1 Product Description

1.1 Overview

The IotaComm Dual-Band Gateway is a custom gateway that addresses the request from IotaComm for a solution to implement a Low Power Wide Area Network (LPWAN) using licensed 800 MHz Private Land Mobile Radio (PLMR) band spectrum. Additionally, it supports the full range of US915 LoRa WAN channels. The Kona platform is designed to support a multitude of deployment configurations in an outdoor environment.

The hardware architecture supports two antennas, a GPS antenna, direct DC input power or Power over Ethernet (PoE), and backhaul options including copper Ethernet and 3G/4G wireless. Table 1 presents the currently available IotaComm Dual-Band Gateway models.

Table 1: IotaComm Dual-Band Gateway Models

Product Code	Region	Ch. Plan	Description	GPS Ant.	Direct DC Power	Copper Eth.	3G/4G Ant.	LoRa Ant.
T0007754	NA	US915 + IOTA Band	IOTA 64 Module, 2x LoRa, OPTION #3	1	1	1	0	2
T0007752	NA	US915 + IOTA Band	IOTA 64 Module, 2x LoRa, 3G/4G, OPTION #4	1	1	1	1	2

The two variants share the same PCBA. The only difference is that Option #3 does not support cellular backhaul and therefore does not have the cellular modem installed on the PCBA.

Figure 1 illustrates the common Gateway external form-factor. The differences between the options are limited to the bulkhead field.

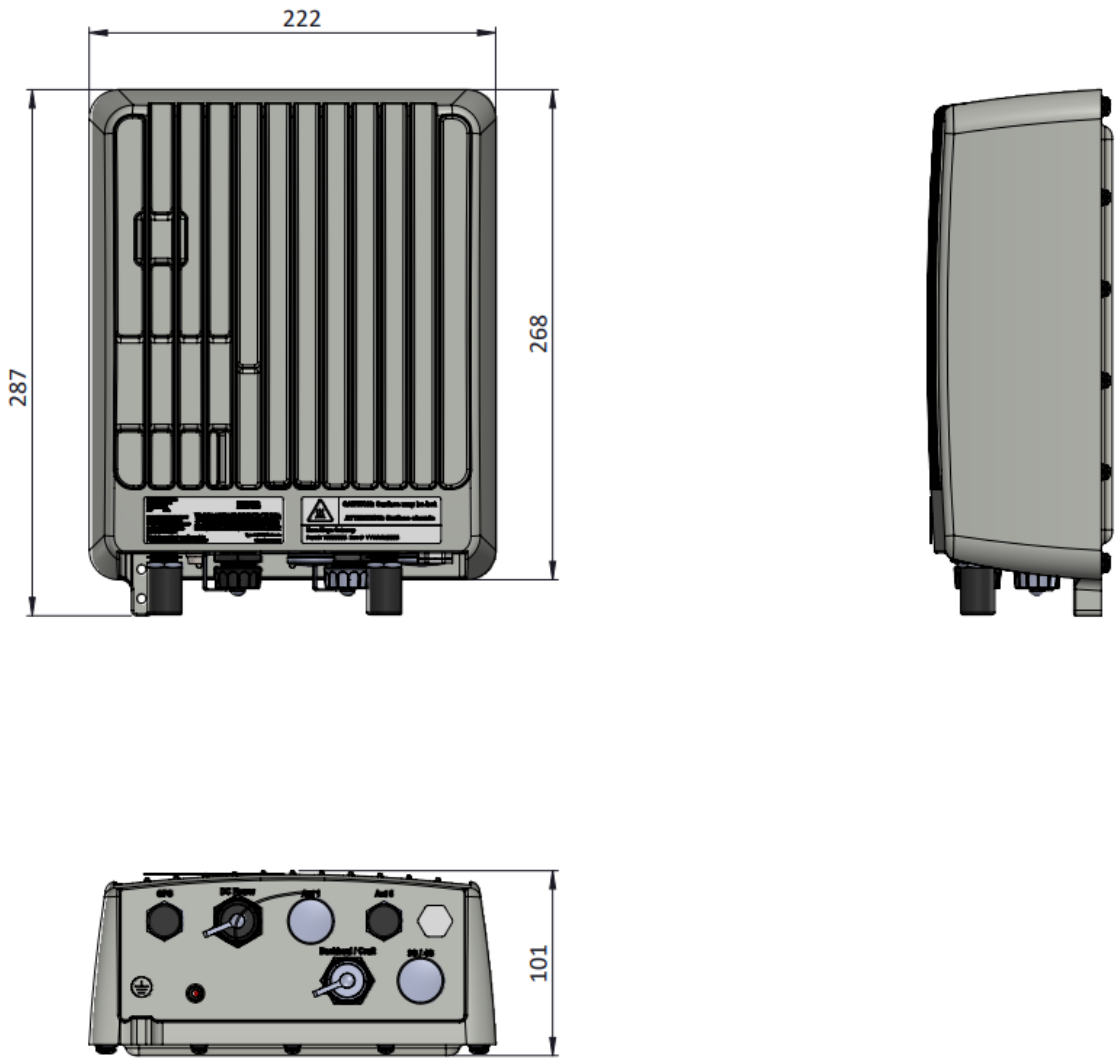

Figure 1: IotaComm Dual-Band Gateway Common Dimensions

1.2 Bulkhead Layout

The IotaComm Dual-Band Gateway bulkhead component fields are detailed in the following figures.

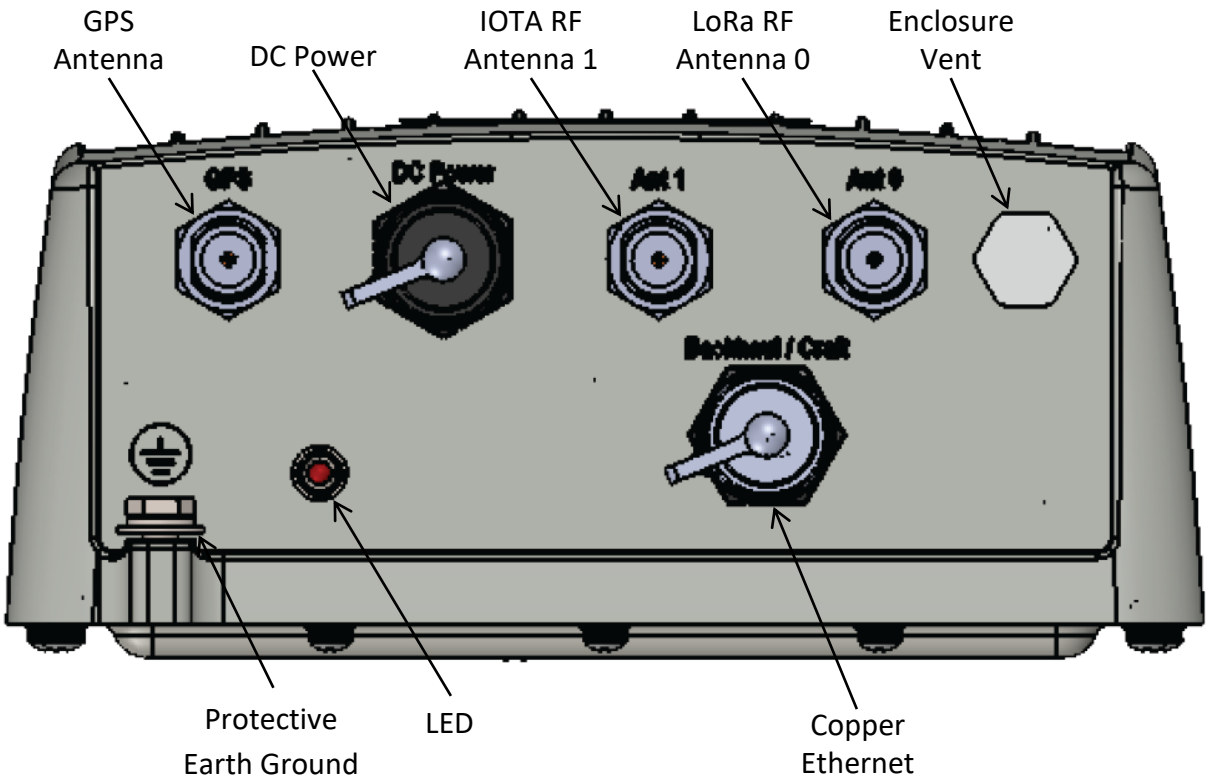

Figure 2: IotaComm Dual-Band Gateway Option #3 Bulkhead Field

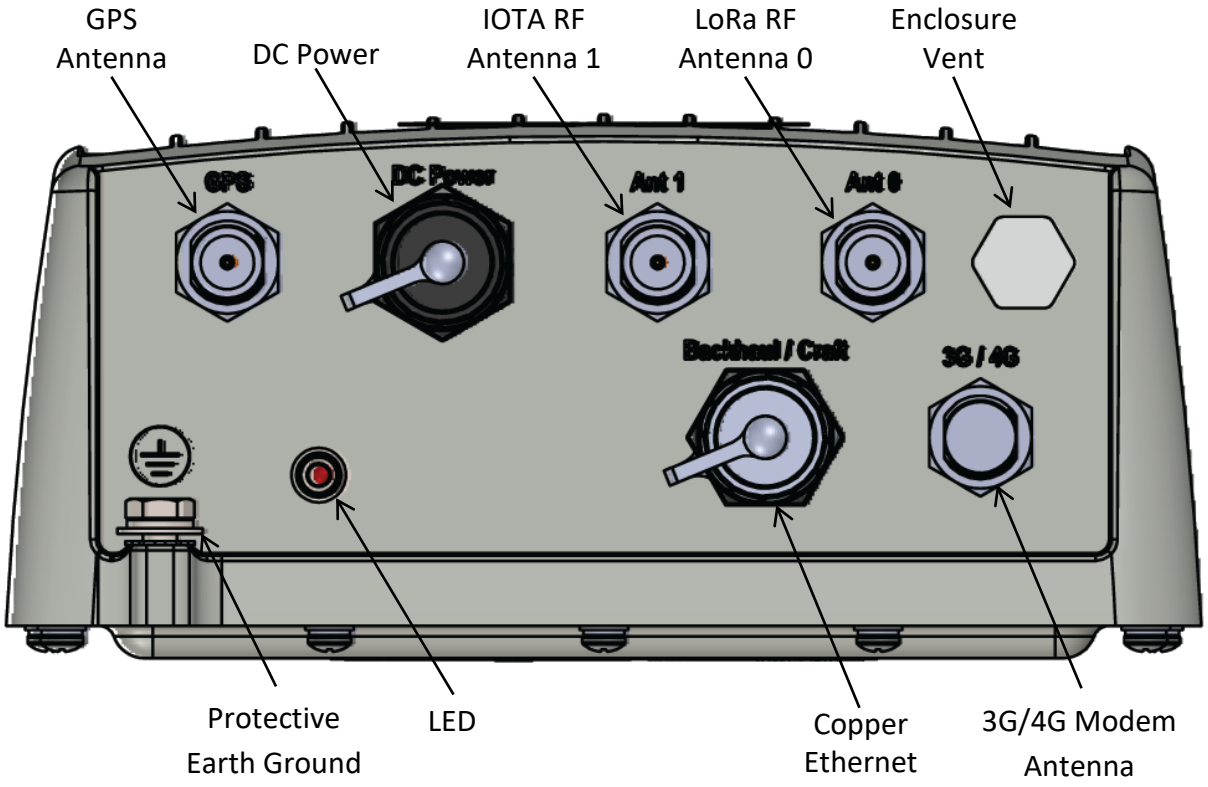

Figure 3: IotaComm Dual-Band Gateway Option #4 Bulkhead Field

All gateway module interconnect is located on the bottom facing bulkhead. The RF connectors are water proof while un-mated but all other connectors must be terminated with mating connectors or covered with the supplied protective cap when not in use in order to be water tight. Connector types and their mating connectors are listed in Table 2.

Table 2: IotaComm Dual-Band Gateway Interface Connector Types

Interface	Connector Type	Mating Connector
LoRa Antenna	N-Type female	Industry standard N-Type male
IOTA Antenna	N-Type female	Industry standard N-Type male
Cellular Antenna	N-Type female	Industry standard N-Type male
GPS Antenna	N-Type female	Industry standard N-Type male
Copper Ethernet (CPC connector)	Circular plastic threaded, RJ-45	Shenzhen Chogori Technology Co., Ltd. Approved mating connector (p/n 33000111-02 or equivalent)
DC Power Input (CPC connector)	Circular plastic threaded, 2 contact, DC power	Shenzhen Chogori Technology Co., Ltd. Approved mating connector (p/n 23002211-02 or equivalent)
Earth Ground	1/4 - 20 UNC double hole	Industry standard 2-hole lug, 1/4 x 0.75” spacing