

Inputs/Output		
Analog	3 inputs, individually jumper selectable 4-20 mA / 0-10Vdc / 0-5 Vdc	5 to 24 V available to power analog sensors.
Digital	3 discrete individually jumper configurable between dry contact and voltage 1 wake-up (exception-based reporting/notification)	Event driven notifications Pulse counting High-low level switches
Serial Port	RS-485	Master/Slave functionality Custom programming required to poll multiple tags
Digital Out	1 open drain output	24 V, 1 A max applications Custom programmed

Other Key Attributes		
Flash Memory	16 MB	Data Logging, Configuration Files
Antenna	Internal Flexible, 1.4 dBi	
Microprocessor	ARM Cortex-M4	
Encryption	AES 128	
Radio Range	Up to 10 miles Line of Sight	
Radio Frequency	915 MHz	868 MHz available by special order

Power Supply		
Battery	1-D size lithium thionyl chloride user replaceable primary battery provided. <ul style="list-style-type: none"> • 3.6 Volt nominal • 4000 mA pulse current 13.0 Ah capacity	Typical monitoring requirements (one reading per hour, with three 4-20mA pressure sensors attached) result in a calculated 2 + year battery life.
Sleep Mode Power Demand	40 uA	
Wake Mode Power Demand	Up to 250 mA during transmission period.	

Default Configuration		
	Parameter	Default Setting
	Network Type	Public LoRaWan
	Adaptive Data Rate	On
	Frequency Sub Band*	7
	Transmission Receipt Ack	On
	Analog Sensor Voltage*	12 Volts

	Cycle Time*	One (1) hour
	Sensor Settling Time*	3 seconds
	# of Resend Attempts*	1
	Resend Delay*	5 seconds
	Failed Transmissions prior to Rejoin*	2
User Configuration	** Indicates user configurable items. Also, configurable Modbus RTU tag and sensor gain/offset calibration.	Remotely Over the Air
		Locally via USB to RS 232 connection
Custom Configuration	Customized routines for pulse counting, exception reporting, endpoint analytics, polling of multiple Modbus tags.	

Connectivity

Gateway	The VoBo GP-1 connects to any LoRa alliance approved LoRa enabled gateway.	
Network Server's	<p>The VoBo GP-1 has been tested with the following network servers.</p> <ul style="list-style-type: none"> • MultiTech Conduit local server • MultiTech Lens (a network management tool) • Actility's Thing Park Enterprise • Orbiwise's Orbiwan • Senet • Helium 	

Approvals

FCC	Operates in the ISM (unlicensed band). Radio FCC Identifier: AU792U13A16857	
HazLoc	The VoBo GP-1 is a general-purpose device. Class 1 Div 2, Zone 2 certification pending	

Enclosure

Entry Points	3 - Cable Glands (accept 0.105 to 0.315-inch diameter cable)	
Operating Temperature	-40° to 80° C, -40° to 176° F	All components are rated to this range.
Weather	IP 67, NEMA 4X	Enclosure, cable glands built to this standard or better.
VoBo GP-1 Dimensions	7.6" x 4.6" x 3.1" (approx.)	
Mounting	3 mounting holes on either side of enclosure for direct fastening	Pole mount brackets and magnetic mounts available