

<b>Inputs/Output</b>		
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

<b>Other Key Attributes</b>		
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	Other LoRa channel plans (EU 868, AU 915)available by special order

<b>Power Supply</b>		
Battery	1-D size lithium thionyl chloride user replaceable primary battery provided. <ul style="list-style-type: none"> <li>• 3.6 Volt nominal</li> <li>• 4000 mA pulse current</li> </ul> 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.	

<b>Default Configuration</b>		
	<b>Parameter</b>	<b>Default Setting</b>
	Network Type	Public LoRaWan
	Adaptive Data Rate	On
	Frequency Sub Band	2
	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 OTA user configurable items. FSB can be changed using local configuration. Modbus RTU tag and Analog gain/offset calibration also configurable	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.	

<b>Connectivity</b>		
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"> <li>• MultiTech Conduit local server</li> <li>• MultiTech Lens (a network management tool)</li> <li>• Actility's Thing Park Enterprise</li> <li>• Orbiwise's Orbiwan</li> <li>• Senet</li> <li>• Helium</li> </ul>	

<b>Approvals</b>		
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 certification pending	

<b>Enclosure</b>		
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