



TeraHop Gateway/Controller Technical Overview

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Controller (GC1040)

The Controller is a server/gateway, which contains a single board computer, hard drive, Ethernet, WiFi, server software and the database. The GC1040 is designed to communicate to users via WiFi and system components via Class Based Networking, and Bluetooth.

The Controller contains a hard disk drive and runs the Server software. In typical deployments, a second Controller is also installed to act as a backup to provide continued operation if a failure of the primary Controller occurs (to be completed in a future release). The Controller is also able to support Ethernet, mobile phone (T-Mobile and Sprint) and satellite (Iridium) links back to the MSS for backup and maintenance.

Gateway (GC1030)

Gateway contains a single board computer, Ethernet, WiFi for communication to the GC1040. The GC1030 is designed to communicate to system components via WiFi, Class Based Networking, Bluetooth and RCR. Gateways supply a bridge between the Controller and the appropriate sensors. In future releases, the Gateways will be configured as a WiFi bridge to “hop” gateways back to the Controller. Gateways can optionally be equipped with mobile phone (Sprint and T-Mobile) and Satellite (Iridium) data modems to link remotely to network elements. Gateways contain a GPS Receiver that is used to determine the Gateway’s exact location.

Product	Performance Characteristics	Specification
	WiFi (802.11b)	Frequency: GHz Data rate: up to 11 Mbps Range: average 100 m
	Mobile Phone (T-Mobile)	Tri-band GSM Frequencies: 900, 1800, 1900 MHz Range: approximately 7 miles from mobile tower
	Mobile Phone (Sprint)	Frequency: 1900 MHz Range: approximately 7 miles from mobile tower
	Satellite (Iridium)	Frequency: 1600 MHz Data Rate: 2400 bps
	Bluetooth	Frequency: 2.4 GHz Data Rate: up to 1 Mbps Range: average 100m
	TTO (Tag Turn On)	Frequency: 2.4 GHz Range: average 100m
	GPS	Frequency: 1.54 GHz Position: approximately 3 feet, assuming no multipath
	Temperature Range	Operating -20C to +60C Storage: -40C to +70C
	Power	AC100 to 230 VAC 50/60 Hz; DC 8-15 VDC 400 milliamps (stand conf)
	Size	10.75 in x 14.25 in x 4.75 in
	Weight	9 lbs
Controller (GC1040)	Hard Drive	30 GB
	Server Application	KeyZone Operating System