



G09+ Operational Description

Project code name: PhoenixPlus

June 15, 2020

Table of contents

Table of contents	2
Use Case	3
Major functionality	3
In the box	3
Operating Environment	3
Operating Conditions	3
Product Dimensions	3
I/O	3
Device configurations	4
Technical Details	4
RF Functionality	4
WiFi channel information	4
Firmware Control	4
Simultaneous Device Transmissions	4
Antenna Information	4
Use of Pre-certified modules	4
RF exposure Information	4
Tables	5
Sample table 1	5
Sample table 2 (Comparison)	5
Notes and labels	6

Use Case

The G09+ is used by several industries to collect data from vehicles related to driving conditions, driver behaviour and provides fleets with metrics related to safety, fuel efficiency and driver metrics.

Major functionality

The G09+ provides telematics information (engine data and GPS location) and WiFi hotspot access. It communicates this telematics information and provides internet access by using the data plan associated with the device SIM.

In the box

The G09+ product contains the following items inside the box:

- **G09+** unit
- **Device installation instructions** (along with link to T&C and LoU)
- Additional **serial number labels**
- **Zip-tie** for securing unit after installation

Operating Environment

The device is typically used in a vehicular environment - specific vehicles may range from passenger vehicles to large commercial trucks, and larger off road equipment.

Operating Conditions

The device is able to operate in vehicles with 12V and 24V electrical systems. Voltage and current draw information below:

Tracking mode (ignition on)

-WiFi off

Peak power, 320 mA @ 12V or 3.84W

Average power, 96.2 mA @ 12V or 1.15W

-WiFi on

Peak power, 433 mA @ 12V, or 5.196W (Tx power is 23.37dBm)

Average power, 330 mA @ 12V or 3.96W (Tx power is 16dBm)

Product Dimensions

- **Weight:** 97 g (0.21 lbs)
- **Dimensions:** 77.3 mm L × 53 mm W × 27.5 mm H

I/O

The G09+ has two external interface/I/O

- **16 PIN OBDII connector** (built onto the unit) for primary device installation - connects to any existing OBDII connector inside the vehicle (or use a supported harness for any other connection options).
- **Female mini-USB socket** on the side of the device - used for device functionality expansion using IOX product line (supports upto 2A output current).

Device configurations

Currently only one configuration of this device is available for the AT&T network and limited to Cellular/WiFi functionality only.

Technical Details

RF Functionality

LTE CAT4 module with 3GPP release 10 compliant

Supporting band 2/4/5/12 with configurable bandwidths

B2/B4: 1.4/3/5/10/15/20 MHz

B5/B12: 1.4/3/5/10 MHz

Class 3 transmitter power up to 25.5 dBm for UMTS and 25dBm for LTE.

Supports multi-constellation GNSS.

WiFi channel information

1x1 IEEE 802.11 b/g/n

Support 20MHz or 40MHz at 2.4 GHz band

No 5GHz support or Bluetooth support

Support AP mode and client mode

Firmware Control

Modem FW compliant to 3GPP RF standards. GO Device FW does not manipulate or control RF settings for modem

Simultaneous Device Transmissions

Based on device features, WiFi and cellular transmission may both be active at the same time

Antenna Information

Internal antennas for LTE, WiFi and GPS with LDS technology

- Dual-antenna for LTE CAT4
- Single band antenna for 2.4GHz WiFi
- Single antenna for GPS and Glonass

Use of Pre-certified modules

The GO9+ device uses FCC/IC certified modules.

- WNC M18Q2F-1 Module
 - FCC - NKRM18Q2
 - IC - 4441A-M18Q2

RF exposure Information

Devices should not be mounted near any metal panels or near other RF equipment.