

PHILLIPS CONNECT Arrow-QG Vehicle Tracking Device User Manual

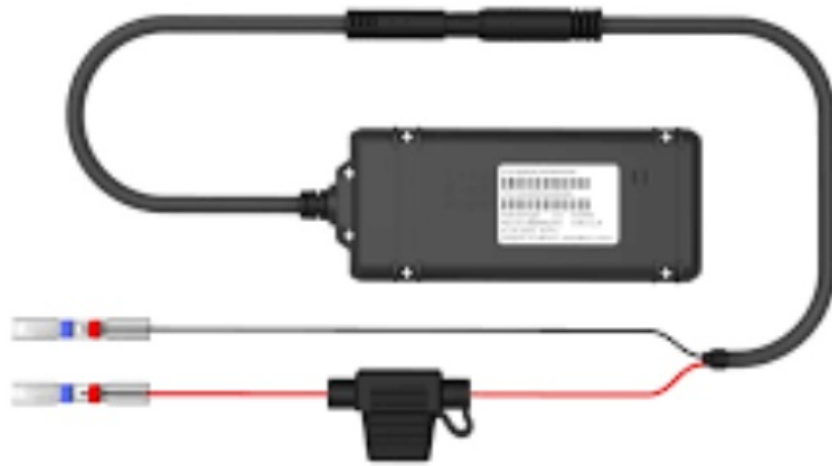
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PHILLIPS CONNECT Arrow-QG Vehicle Tracking Device



PHILLIPS CONNECT Arrow-QG Vehicle Tracking Device

MODEL

ArrowQG Arrow-VI
4-6340-17-12V
4-6340-10
4-6341-17
4-6341-10
Vehicle Tracking Device

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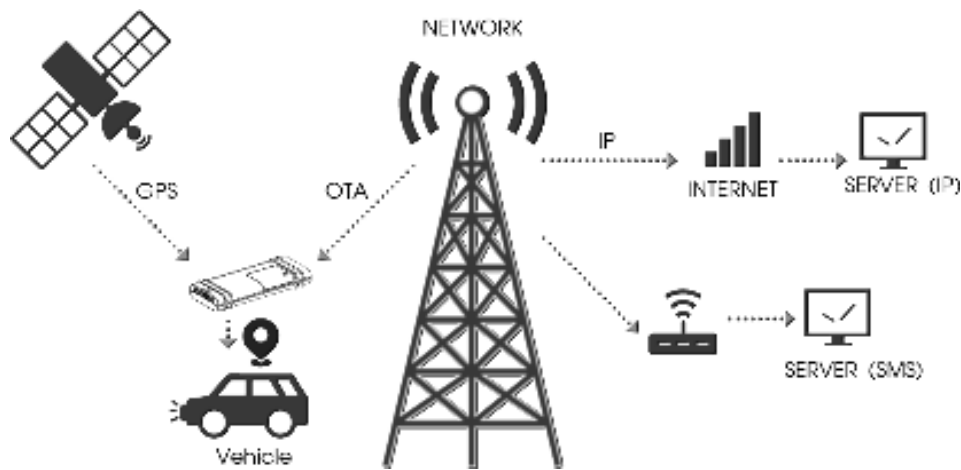
Introduction

The Arrow-QG (Arrow-VI) is a self-Contained vehicle tracking device that combines GPS location with LTE and BLE connectivity.

The Arrow-QG (Arrow-VI) appears to a user or a server application as a single endpoint device. It can be queried, updated and configured either through a serial connection or an over-the-air LTE IP connection. The Arrow-QG (Arrow-VI) presents itself over these connections as an enhanced cellular modem with attached functional elements. These elements include:

- GPS location engine
- General Purpose Bidirectional I/O (GPIO) pins
- Relay drive pin output
- Serial UART port
- CAN Communication (optional)
- BLE5.0

Application scene



Design

Basic Hardware

Items	Requirement
Baseband Chipset	Qualcomm Cat.M1
RF Transceiver	Qualcomm SDR
Memory	Internal
Air Interface	Support for LTE Cat.M1
Frequency	4G band support : Band2/4/5/12/13/25/26 BLE5.0 : 2.4GHz
Antenna	Internal Antenna / Chip Antenna
GPS Antenna	Dedicated high performance ceramic antenna
Interface	UART TX
	UART RX
	12V DC Input 1A current
	Relay Drive
	GPIO
	CAN(Optional)
Voltage Monitor	Supported
Watchdog	Supported
Motion Detect	Supported
LED	2 LED Supported
Battery	Built in battery for backup < 90mAH
Power Cable connector type	8 pin
Power Consumption	< 5Watts

The Arrow-QG (Arrow-VI) provides support for specialized hardware features through extended AT commands. The features supported include the following.

GPS

The major functionality of the GPS system is to compute the correlation results between the incoming signal and the selected PRN code based on certain Carrier Doppler Frequency, Code Doppler Frequency, code phase, carrier phase, and the particular satellite the system is tracking or acquiring.

GPIO

The GPIO pins are presented to the external environment on the main connector. They are general-purpose bidirectional lines capable of providing system interrupts to generate a report or drive logic levels to external devices. These lines are 2.8V logic level and are 16V tolerant.

LED's

Two LED status indicators are provided to verify correct installation and operation.

UART

A UART port is provided for AT command and data interaction and optionally for application-specific control.

Relay Driver

A 500mA sink capable output pin is provided. This pin is meant to drive a relay coil intended to interrupt the starter solenoid relay for the ignition circuit to a car.

Voltage Monitor

The battery monitor is internal analog input scaled such that the DC value of the power input pin to the Arrow-QG (Arrow-VI) system is measured.

Watchdog

MDM9207-1 chipset provide internal software and hardware Watchdog.

Motion Detect

This function will work with firmware power down options to keep the Arrow-QG (Arrow-VI) in a very low power down state until motion is detected. Upon waking, a report can then be generated.

CAN

This function is an option for watching the information of vehicle.

Basic RF Performance

Items	Requirements	Remark
TRP free space	CTIA	TRP free space
TIS free space	CTIA	TIS free space

Board RF Specification	
4G LTE Cat.1	
Band	Band 2/4/5/12/13/25/26
Rx Spec	Follow TS 36.521 Ch.7
Tx Spec	Follow TS 36.521 Ch.6
BLE5.0	
ISM Band	2.4GHz
Rx Spec	Follow chipset
Tx Spec	Follow chipset
GPS	
Frequency Support	L1-band (1.57542GHz)

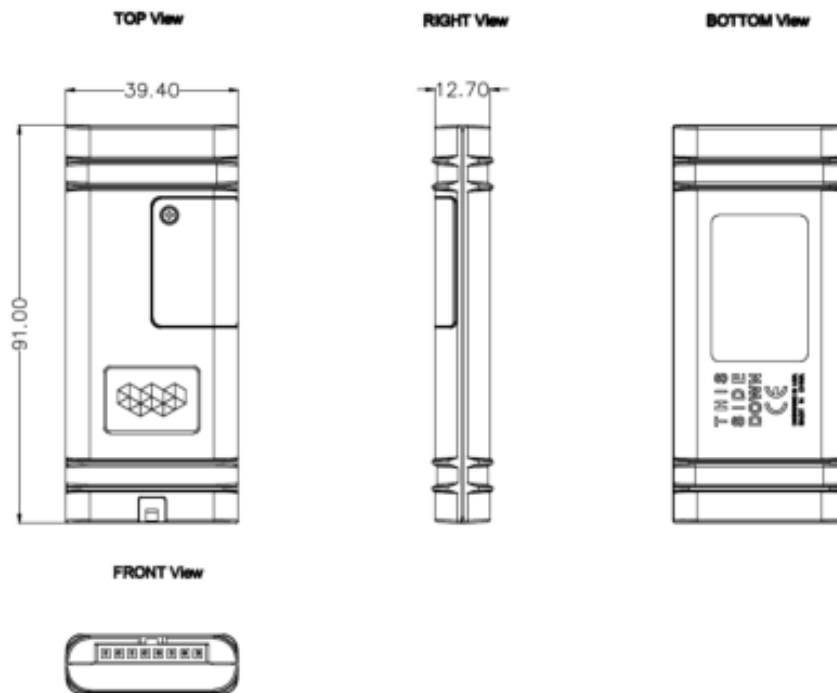
Certification and Safety

Items	Requirement
Drop Design	0.8meter 6 direction standard drop test
Temperature Range	0 to +60°C Operation -40 to +85°C Storage
Humidity:	20% to 90% Operation 10% to 95% Storage
Altitude:	-500 to +18,000m
FCC Certification	FCC Part 15/22/24/27/90
IC Certification	RSS-130/132/133/139/247
ESD Requirement	8KV non-Conductive

Testing

Test Item	Description
Baseband Function Test	<ul style="list-style-type: none">• Power Input Test• Power Consumption and Current Test• Heat Dissipation Test• UART Stability Test• GPIO Level Test• Drop Down Test• ESD Test• High/Low Temperature Test
RF Test	<ul style="list-style-type: none">• LTE Performance Test• GPS Performance Test• BLE Performance Test• Antenna Performance Test

Mechanical Structure(mm)



Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

IMPORTANT NOTE

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Industry Canada statement

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference
2. This device must accept any interference, including interference that may cause undesired operation of the device

Radiation Exposure Statement

This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

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DOWNLOAD RESOURCES

- [PHILLIPS CONNECT Arrow-QG Vehicle Tracking Device](#) [pdf] User Manual AQG01, 2ASKHAQG01, 4-6340-17-12V, 4-6340-10, 4-6341-17, 4-6341-10, Arrow-QG, Arrow-VI, Arrow-QG Vehicle Tracking Device, Vehicle Tracking Device
- **Read more:** <https://manuals.plus/phillips-connect/arrow-qg-vehicle-tracking-device-manual#ixzz7eAIPMBxY>

FAQ'S

Can I use the Arrow-QG (Arrow-VI) without a SIM card?

Yes, the Arrow-QG (Arrow-VI) can be configured to work without a SIM card. However, it will not be able to connect to the LTE network.

Can I use the Arrow-QG (Arrow-VI) without a GPS antenna?

Yes, the Arrow-QG (Arrow-VI) can be configured to work without a GPS antenna. However, it will not be able to report its position.

Can I use the Arrow-QG (Arrow-VI) with a SIM card from another service provider?

Yes, you can use any SIM card with the Arrow-QG (Arrow-VI). However, you will need to ensure that your SIM card is compatible with the LTE Bands supported by your carrier.

Can I use an external GPS antenna with the Arrow-QG (Arrow-VI)?

Yes, you can connect an external GPS antenna to the Arrow-QG (Arrow-VI). However, you will need to ensure that your external GPS antenna is compatible with the GPS frequency band supported by your carrier.

How do I block GPS tracking on my car?

Use a plug-in GPS blocker. A plug-in GPS blocker creates an interference signal that blocks vehicle GPS tracking. Simply plug it into your car's cigarette lighter or auxiliary power outlet. When you turn the car on, the blocking device also turns on and your vehicle disappears from GPS monitors.

Can a GPS Arrow be detected?

Think of them like a tape recorder. Instead of sound, the unit just records your location, but the recording cannot be accessed until someone gets the unit back and plays back the data. These passive trackers are impossible to detect with any electronic detectors because they simply don't give off any kind of signal.

How do you know if you have a Arrow tracker on your phone?

You'll see a little arrow in the right-hand corner um if an app is tracking your location or has tracked your location. If we open up weather.

Where do you hide a tracking device on a car?

Common hiding places for tracking devices under your hood include behind the radiator, next or between batteries, in air ducts, or even in the air filter.

What is the range of a GPS tracker?

GPS trackers maintain a constant connection and can provide an updated location at any time. Bluetooth trackers have a 200 – 300 ft maximum range because they depend on the strength of the Bluetooth signal between the finder and your mobile device.

Can you track a car with Bluetooth?

Can you Track a Car with Bluetooth. Yes, but you would need a bluetooth tracking device in the car and people with special apps installed on their phone. Bluetooth does not have much range. However, you can use a WiFi GPS Tracker, like Trakkit to track your car.

Can someone track your location from a text?

Yes, other people can track your location by sending you a text message on chat platforms or via SMS. They may send you a malicious link, install a hidden app, or triangulate your location using phone company data. However, it's much harder to track your location based on a text you send to someone.

How do you stop GPS tracking?

The simplest way to stop a GPS tracking device from functioning is to place it in a metal box. Any electrically conductive metal will reflect and absorb the device's incoming and outgoing signals and interfere with its operation.





<https://mandals.phillipsconnect.com/uploads/2022/03/Phillips-Connect-EZTrac->



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[www://phillips-connect.com/](http://www.phillips-connect.com/)

Documents / Resources

	<p>PHILLIPS CONNECT Arrow-QG Vehicle Tracking Device [pdf] User Manual AQQ01, 2ASKHAQQ01, 4-6340-17-12V, 4-6340-10, 4-6341-17, 4-6341-10, Arrow-QG, Arrow-V I, Arrow-QG Vehicle Tracking Device, Vehicle Tracking Device</p>
	<p>PHILLIPS CONNECT Arrow QG Vehicle Tracking Device [pdf] User Manual 4-6340-17-12V, 4-6340-10, 4-6341-17, 4-6341-10, 4-6201-10, Arrow QG Vehicle Tracking Device, Arrow QG, Vehicle Tracking Device, Tracking Device</p>