

Ultra-Portable Equipment for Voice & Data Testing

vMobile connects to Radio for full VQT testing while also supporting PTT

vMobile connects to any 4-wire analog device for full VQT testing

Support NB (8000 sampling) and WB (16000 sampling) for both Bluetooth and 4-wire Analog interfaces

All events and results access centrally with WebViewer

Supports fully automated tests

Embedded Wi-Fi for connecting to Central system for operation and analysis

Audio Analysis providing Power and Frequency

P56 Analysis including Speech Activity, Active Speech Level, Noise Level, Total RMS Power

Google Map plotting of Results and Call Control Information within WebViewer™

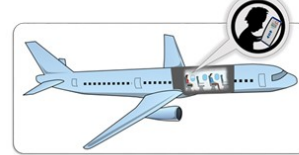


vMobile™ in Hand



vMobile™ Interfaces

On the Plane



In the Drone



On the Train



On the Bus



In the Car



In the pocket/backpack



Overview

vMobile™ is GL's new offering under the wide variety of Voice and Data Quality testing tools. This device brings true mobility to perform voice, video and data quality testing on wireless devices (any mobile phone or radio). The vMobile™'s ultra-handheld-portable device changes the way automated drive and walk testing is performed. Simple to setup and conduct simultaneous voice, video, and data quality tests to benchmark performance of any type of telephony devices.

vMobile™ includes two Bluetooth™ modules, an embedded Wi-Fi module, and onboard GPS. The device can operate either in Bluetooth™ mode or Analog mode (replace the headset on any analog device including Mobile Radio with PTT). The embedded Wi-Fi supports remote Data and Video testing as well as connecting to central system for remote operation and analysis.

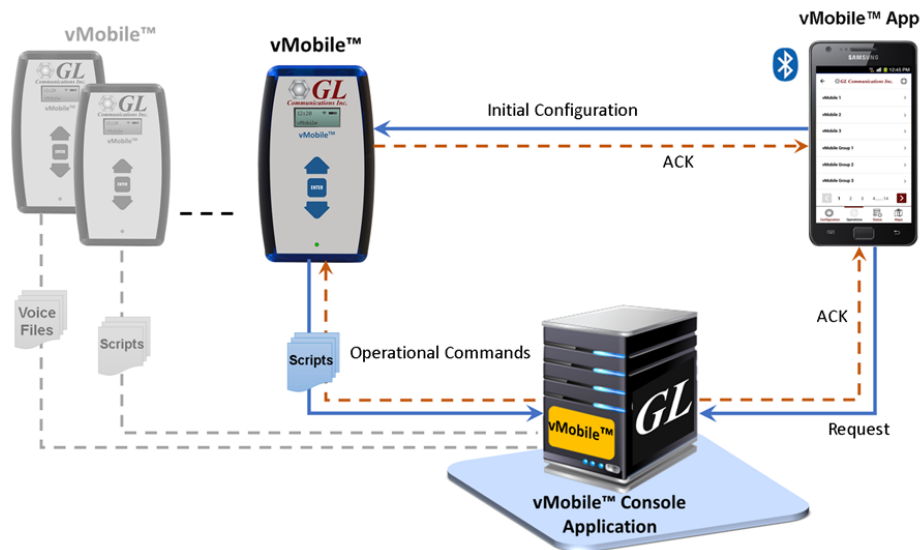
Features

- Methods for testing voice and data in any mobile network using the new GL handheld device, vMobile™.
- Can operate either in Bluetooth mode or Analog mode (connect to any 4-wire Analog device including Mobile Radio with PTT).
- vMobile™ includes two Bluetooth modules, a WiFi module, and onboard GPS.
- Automated mobile Voice Quality Testing using embedded Wi-Fi for connecting to Central system and supporting full remote operation and analysis
- Portability with various options for remote connectivity
- Drive Testing of Mobile Phone or Mobile Radio devices.
- Options for controlling the vMobile™ using an Android/IOS app.
- Support both NB (8000 sampling) and WB (16000 sampling) for both Bluetooth and 4-wire Analog interfaces.
- vMobile™ script supports fully automated tests while sending events/results to Central System for analysis and Access (WebViewer).

 **GL Communications Inc.**

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Operations and Controlling vMobile™



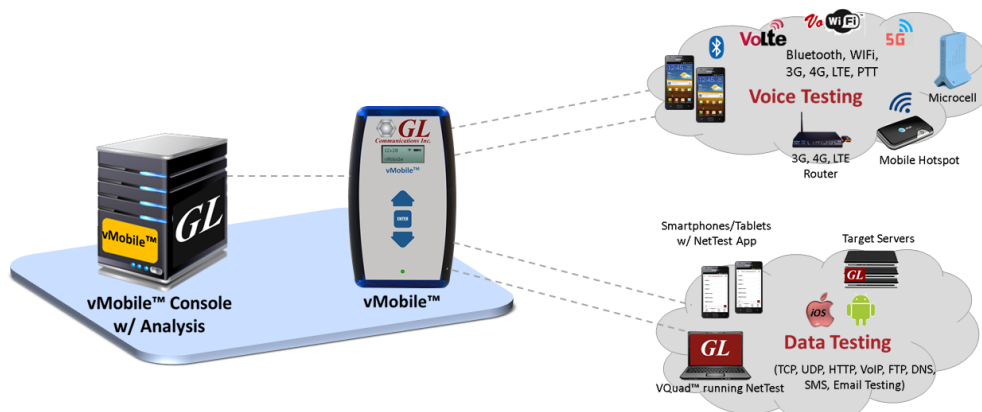
vMobile™ app on Android / iPhone mobile devices are works in conjunction with vMobile™, which are used for configuring and controlling individual or Group vMobile™ devices. User can Load/Start/Stop vMobile™ scripts and retrieve status of individual vMobile™ devices via this app.

The mobile phones (vMobile™ app) can connect to vMobile™ via WiFi connectivity and transfer the required initial configurations to get started with the vMobile™ operations.

vMobile™ Console application, which is running on Central System can remotely control vMobile™ as well as create/ transfer scripts and VQT POLQA voice files between the Console system and the individual vMobile units (supporting multiple connections). Switching between the Bluetooth mode and 4-wire analog mode is done via the vMobile script. In fact, all configuration settings are done using the vMobile scripting (including switching the sampling rate between NB and WB). vMobile™ after the completion of tests, sends degraded voice files to Central System for analysis.

vMobile™ can also work with VQuad™ solution (vMobile™ in the field and VQuad™ with Dual UTA HD or VQuad™ Probe in the lab or static location). Both the systems connected to Central System and WebViewer™. Central Database with WebViewer™ allows accessing all events and results while also plotting results on Google Maps.

Voice Quality and Data Testing



The vMobile™, an ultra-portable solution supports testing Wireless and Mobile Radio devices for voice, and data quality. vMobile™ includes interfaces for Push-to-Talk for mobile radios, and Bluetooth for connecting to any mobile phone.

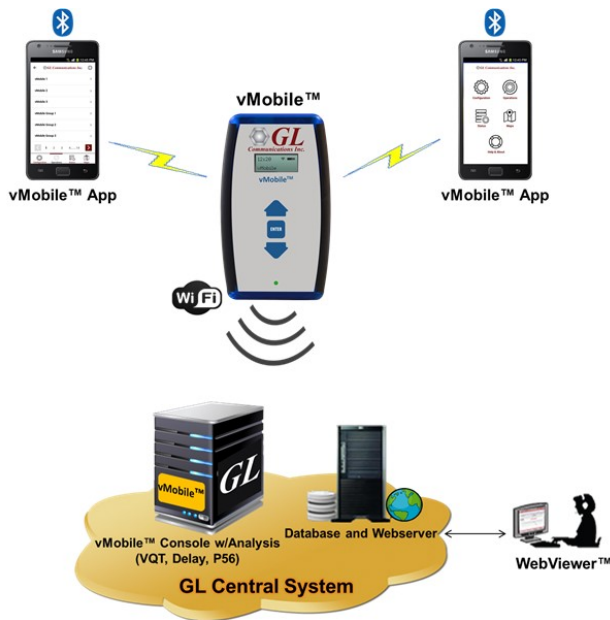
vMobile™ fully supports both NB and WB audio over VoLTE networks. vMobile™ provides the required sophisticated testing methods for VoLTE HD voice and data quality. Testing must include older generation narrowband networks along with wideband networks when VoLTE to VoLTE calls are established and maintained. Along with voice and data testing, the next generation networks also require delay and call retention testing. GL's mobile test solution provides this capability with the flexibility of connecting to and between any network, any service, and any interface.

GL's vMobile™ is a recommended solution for drive testing as it includes all the necessary functionalities within portable equipment for a true mobile test.



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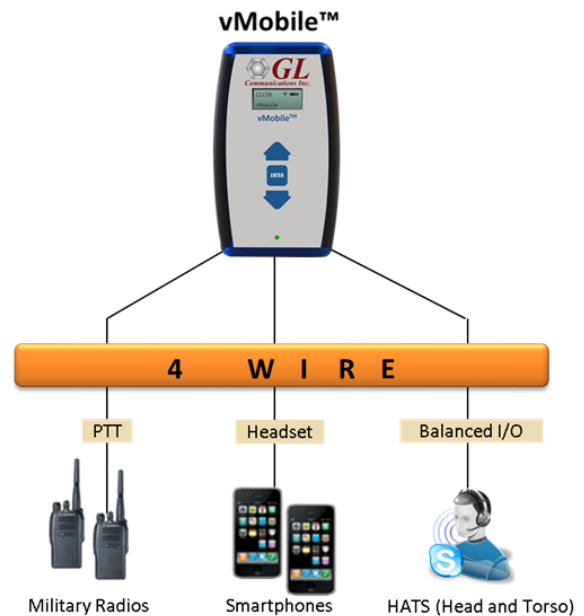
Automated Call Control via Bluetooth®



The Bluetooth modules on vMobile™ connects to two independent mobile phones to perform automated voice quality analysis along with delay measurements on Bluetooth® enabled mobile devices.

- Mobile (3G, VoLTE, VoWiFi, VoFemto, 5G) network with both NB and WB voice
- Support for voice quality testing on VoLTE network using Bluetooth® Wideband
- Control Mobile Radios with Push-to-Talk functionality; Supports radio keying and send/record audio
- Bluetooth® also performs RSSI, Battery level functions, and Network identity

Automated Analog (4-Wire) Testing



vMobile™ provides a complete automated 4-Wire Analog network testing solution.

vMobile™ 4-wire Analog connects to Balanced (headset -mic/speaker), RJ22 (phone Handset), PTT (Push to Talk) connecting to any mobile radio (DoD, Emergency Services, Government) and to any mobile phone, the phone will recognize the vMobile™ as a headset.

- vMobile™ Analog (4-wire) testing
- Connect to any Mobile Radio (includes PTT)
- Connect to any device through analog interface (vMobile™ acts as analog headset).
- Manual or Automatic operation of traffic generation and full call control

For more details on the related products, contact [GL Communications Inc.](http://www.gl.com)

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