



Pilot Matrix 16.3

Unattended High-Performance
Benchmarking and Monitoring Solution



Pilot Matrix is an industrial grade and fully automated mobile network benchmarking, monitoring and optimization solution. Its modular design architecture incorporates a dedicated CPU for each of the 6 test board modules to ensure peak performance and stability during demanding operation. Pilot Matrix supports Qualcomm X55/ X62/X65 chipset-based 5G SA/NSA test modules. This enables various high-volume benchmarking test cases between different network technology, network operators, or device brands to be conducted in a single solution.

Product Highlight

- First-to-market 5G autonomous benchmarking and monitoring system since 2019
- Highly compact and portable design for different test scenarios and use cases
- Integrated test modules combined with external test mobiles solution, captures consistent KPIs for effective identification of QoE and QoS issues
- Higher performance centralized CPU structure with improved power efficiency
- Pluggable test boards design for scalable configuration and easy maintenance
- Support Qualcomm X62/X65 chipset based 5G test modules, 3G/4G competed
- Support latest external 5G Qualcomm mobiles, compatible with 3G/4G
- Measurements with up to 12 test UEs simultaneously
- 12 independent MOS channels: 12 built-in module MOS channels
- Optional external integrated antenna



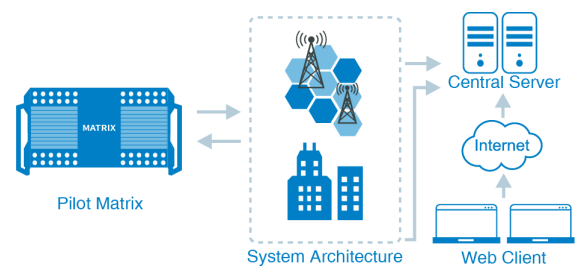
Product Values

For Network Operators, System Vendors and Service Providers

- Improves operational efficiency with automatic data processing and remote administration
- Reduces network testing operational cost with significantly reduced number of onsite engineers
- Share best practices and trending data with other projects

For Engineers

- Very little setup is required. Equipment is ready for testing instantly.
- Centralized test plan creation, assignment and execution. No onsite operation required.
- Highly stable equipment allowing long-term, and uninterrupted testing
- Pilot Matrix has a Watchdog capability to take corrective action in restoring Pilot Matrix normal operation.



System Architecture

Product Features

Remote Management

Pilot Matrix can be remotely managed by Pilot Fleet Edge. This includes test plan configuration and execution, real-time equipment monitoring, statistics report generation, exception location, and firmware upgrade, among others.

Intelligent Test Exceptions Handling

With intelligent software and hardware protection procedure, Pilot Matrix operation may resume as normal upon encountering any system errors.

Highly Integrated Design

- Twelve-channel 2G/3G/4G/5G built-in test modules
- high speed throughput and demanding processing power requirements of multi-channel 5G test and measurement.
- Support external scanner
- Meet the requirements of 5G testing for hardware mass storage and high throughput performance

Real Time Data Upload to the Pilot Fleet Edge

- Real-time and complete data upload with built-in wireless modem, WiFi, or Ethernet connection.
- Resume data transmission from the point of last failure reducing bandwidth consumption
- Reliable transmission protocol ensures return data integrity

Apply for various test cases and scenarios

Outdoor drive test or hotspot locations (e.g. in public transports/personal vehicles, high network traffic areas, ocean etc.) and indoor tests (hotels, shopping malls, airports, offices etc.)

Real-Time Monitoring of Test Status

- Pilot Fleet Edge centralized system monitors in real-time all test and measurement status (including geo-position, exceptions etc.) captured from the remote Pilot Matrix unit.
- Users may also connect Pilot Matrix to Pilot Watcher (a monitoring software that runs on a tablet unit) via WiFi hotspot, to monitor real-time onsite information such as measurement parameters, events, messages, test status and test plan information.

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Durable Operation with Built-in and External Batteries

Pilot Matrix may operate continuously for at least 60 minutes with a built-in battery or at least 3 hours with an external battery.

Multiple Network Technologies and Services

Pilot Matrix supports 2G, 3G, 4G, IoT, 5G network technologies and various services test, which include the latest voice (VoNR), data services, and Scripted OpenSignal.

OTT testing such as Youtube, Facebook, Instagram, Skype, WhatsApp, etc.

VoLTE and VoNR (POLQA/PESQ)

- VoLTE and VoNR testing
- Simultaneous 12 channels POLQA/PESQ measurements with built-in test modules.
- 4 external cell phone test interfaces, supporting data services testing