

# Pilot Walktour Pack4.8

Powering Network Experience

DingLi Corporation Limited

PILOT  
WALKTOUR  
PACK

1 ONE

# Product Overview

# Overview



- Pilot Walktour Pack is a portable multi-device and multi-technology field test solution in a backpack. A tablet controller unit is used to manage all the test configuration and real-time measurement. The robust chassis was designed with processing power and secure device connectivity to handle multi-device testing or multi-network benchmarking.
- Pilot Walktour Pack's unique design and portability enable users to conveniently perform outdoor and indoor mobile network.



Operational efficiency



Centralized control



Comprehensive information



# Pilot Walktour Pack



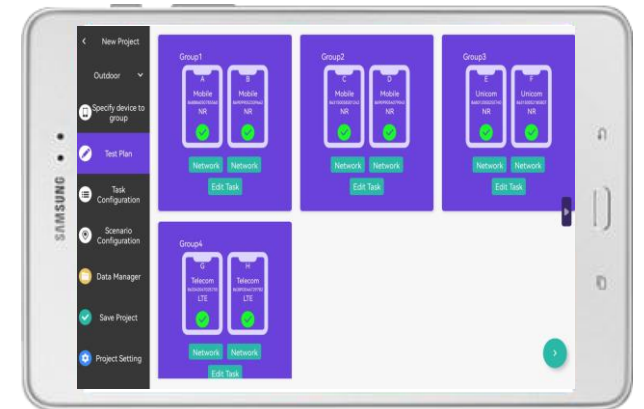
Backpack 1.0



Backpack 2.0



Controlling Chassis



Tablet  
Controller



## Powerful, portable, simple operation for benchmarking testing

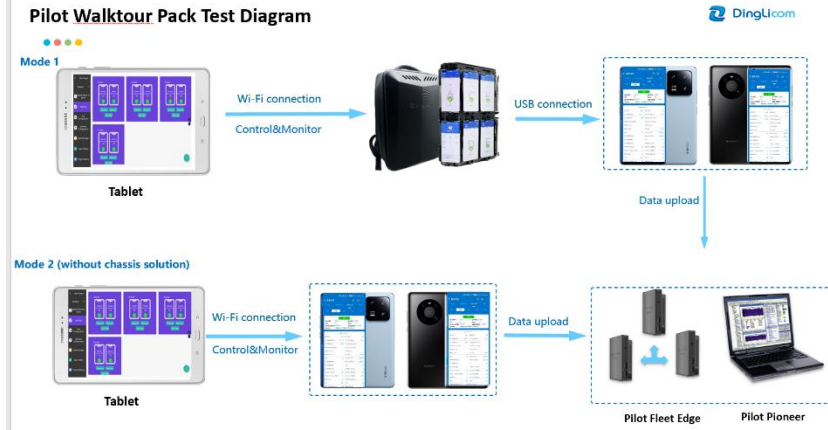
### Traditional Test Drivel



- Multiple test devices for network benchmarking. Not portable enough due to equipment set up
- Connection via cable or USB port
- Sufficient power solution needed for continuous outdoor tests
- Mostly dependent on Android based devices



### Pilot Walktour Pack



- Portable, a backpack contains all test devices
- Built-in battery, Continuous test capability: up to eight hours
- Connection with WiFi or data cable, Stable, and easy for commissioning
- Multiple commercial handsets used for testing

# PILOT WALKTOUR PACK

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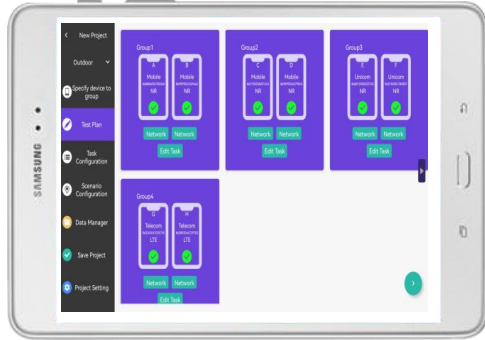
## Product Details



# Pilot Walktour Pack Test Diagram



## Mode 1



Tablet

Wi-Fi connection  
Control&Monitor

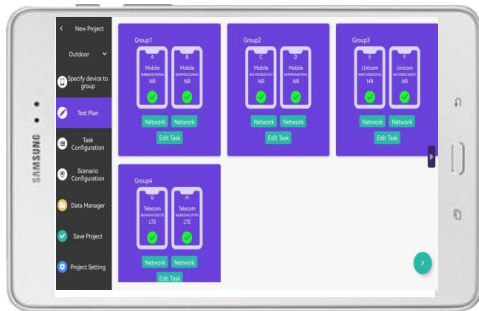


USB connection



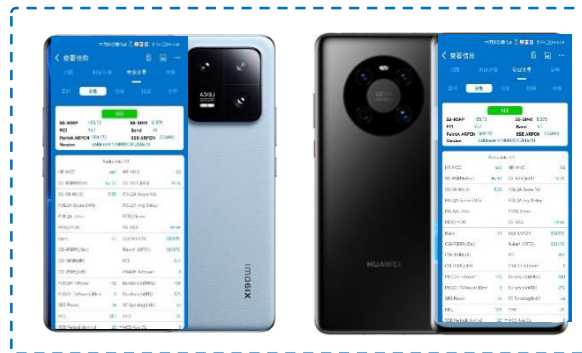
Data upload

## Mode 2 (without chassis solution)



Tablet

Wi-Fi connection  
Control&Monitor



Data upload



Pilot Fleet Edge

Pilot Pioneer



## Tablet

- Controller
- Configure test terminal groups
- Deliver test plans
- Manage data files
- Monitor test terminals and test progress
- Display real-time measurement information



## Mobile Phone

- Test terminal
- Based on Harmony OS / Android OS mainstream commercial terminals for measuring mobile network
- Supports GSM/UMTS/LTE/NR network technologies
- Captures L1/L2/L3 signaling messages



## Pilot Walktour Pack Chassis and Backpack

- Up to 8-14 test terminals (where max. 8 may be used for simultaneous MOS test)
- Connect to Android tablet over Wi-Fi
- Automatic detection for connectivity
- Unique QR code on each chassis for connectivity to the respective Pilot Walktour Pack software.









## Test Anytime and Anywhere

### Indoor test

Such as passenger lifts, stairs, shopping centers, residential and commercial buildings, etc.

- Pre-defined floor plans
- Automatic/manual pinpointing
- Indoor coverage distribution display
- JPG/PNG/BMP map import
- Automatic map import for indoor testing
- Log files storage according to the floors



### Outdoor test

Such as highways, high-speed rail, scenery spots, campus, tunnel, etc.

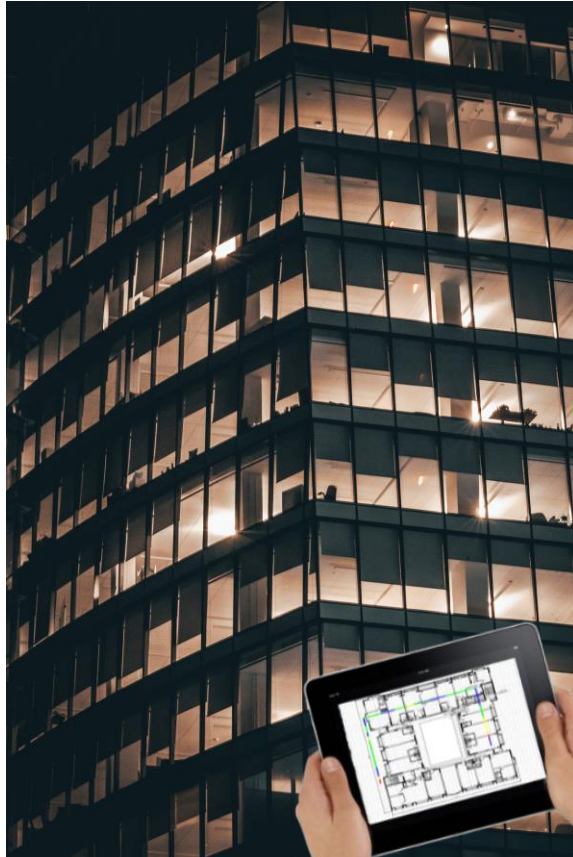
- Built-in/external high- performance GPS
- Google online/offline Maps
- Real-time GPS coverage
- User-defined parameter display
- Site details verification





## Indoor test:

hotel  
buildings,  
Offices, etc.



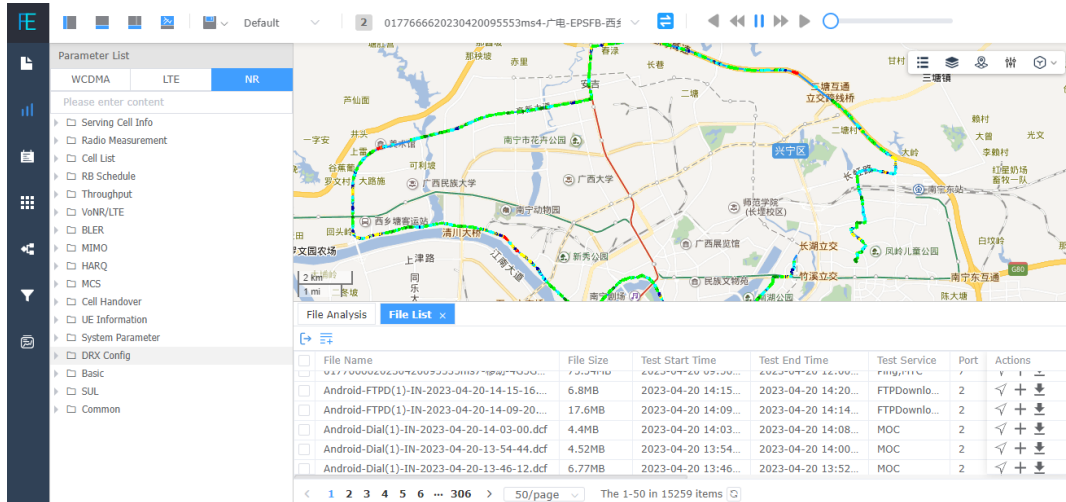
## Outdoor test:

road, high-speed rail,  
schools, scenery spots, etc.

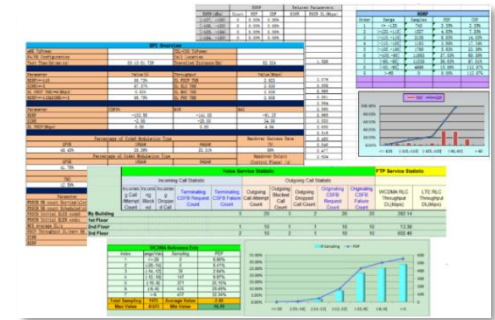
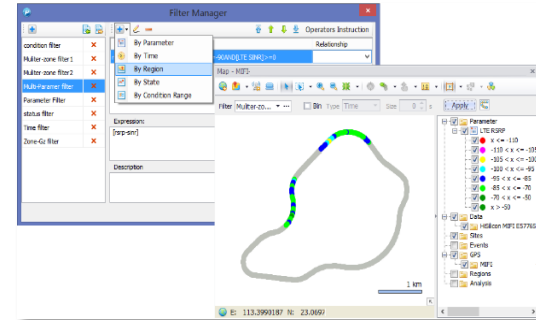




## Upload data files to Pilot Fleet Edge for centralized management and specialized analysis



## Import data files to Pilot Pioneer Expert for professional analysis



- Data Insight
- Measurement over Distance Analysis
- Parameter Quadrant Analysis
- Overshooting Analysis
- Extended Coverage Analysis
- Coverage Rate Analysis
- Overlapping Coverage Analysis
- Antenna Feeder Reversed Analysis
- Mod3 Analysis

- Pilot Pollution Analysis
- Cell Coverage Analysis
- Cell Statistics and Analysis
- MO/MT Union Analysis
- CSFB Exception Analysis
- Delay Analysis

- Parameter Query
- Events Query
- Parameter Associate Analysis
- Permeability Analysis
- Qualified Coverage Analysis
- Antenna Reverses Analysis
- Region Comparison
- Period Based Comparison
- Operator Comparison
- Route Completion
- Cell Statistics Analysis
- 4G/5G Exception Analysis

# PILOT WALKTOUR PACK

# 3

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## New Features





## Battery Life Indicators

- battery life of backpack controller
- Low battery alert

## Cell phone Indicators

- battery life and temperature indicator
- CPU temperature

The screenshot shows a dashboard with a top status bar displaying 95% battery and the time 20:56:42. Below the status bar, there are several device thumbnails labeled B through H. Each thumbnail displays detailed information for a specific device, including battery level, signal strength, and various technical parameters. A red box highlights the 95% battery indicator in the top left corner.

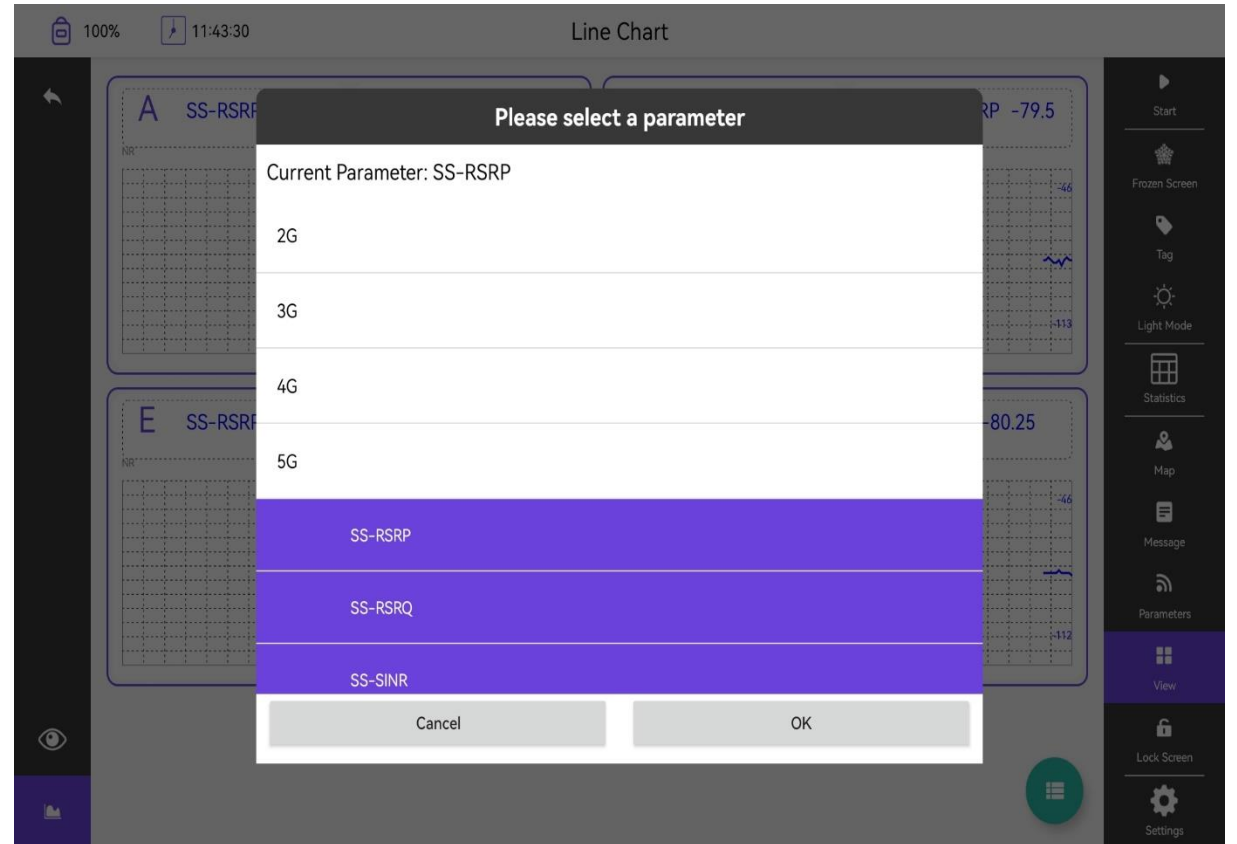
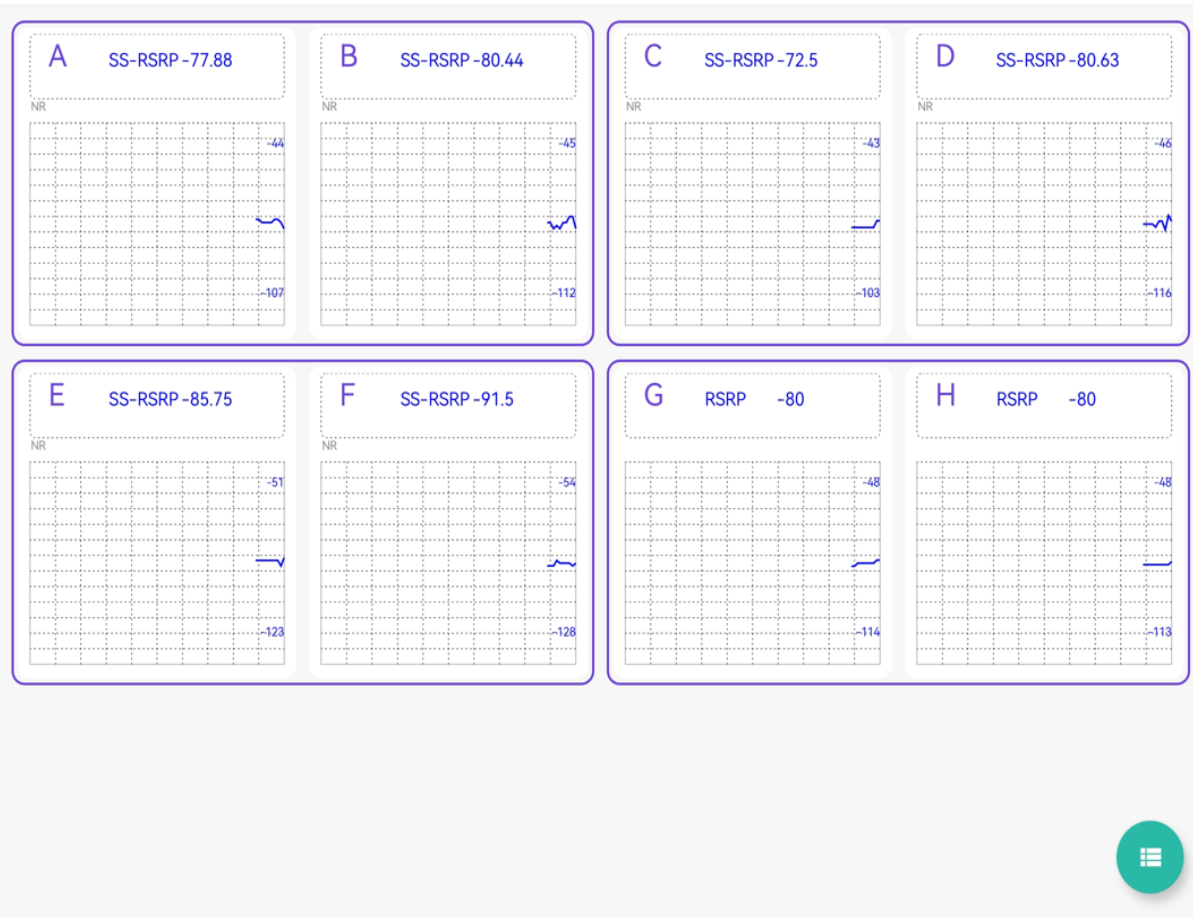
The screenshot shows a dashboard with a top status bar displaying 95% battery and the time 20:56:39. Below the status bar, there is a table titled "Device Status" with columns A through H. The table contains various indicators for each device, including battery level, run duration, connection status, phone status, historical exception count, battery temperature, SDCard usage, CPU load, and CPU temperature.

	A	B	C	D	E	F	G	H
Device Status								
Model number	NOH-AN00	NOH-AN01	NOH-AN01	NOH-AN01	NOH-AN01	NOH-AN01	NOH-AN00	NOH-AN01
System OS Version	Android10	Android10	Android10	Android10	Android10	Android10	Android10	Android10
Battery Level	95	70	79	85	85	76	71	68
Run Duration	2Days 6:25:00	2Days 7:53:15	0Days 0:21:50	2Days 8:09:20	2Days 7:32:15	2Days 7:02:50	2Days 8:17:20	2Days 7:40:10
Connection Status	Connected	Connected	Connected	Connected	Connected	Connected	Connected	Connected
Phone Status	Power On	Power On	Power On	Power On	Power On	Power On	Power On	Power On
Historical Exception Count	0	0	0	0	0	0	0	0
Battery Temperature	28.0°C	29.0°C	29.0°C	29.0°C	30.0°C	28.0°C	29.0°C	29.0°C
SDCard Used	25.69 GB	27.12 GB	7.83 GB	26.45 GB	24.39 GB	23.96 GB	72.05 GB	69.30 GB
SDCard Free	88.81 GB	87.38 GB	107 GB	88.05 GB	90.12 GB	90.55 GB	170 GB	45.20 GB
CPU Load								
CPU Temperature	30.974°C	31.551°C	32.077°C	31.242°C	33.888°C	30.794°C	31.2°C	31.84°C
CPU Frequency	2.99GHz	2.99GHz	2.99GHz	2.99GHz	2.99GHz	2.99GHz	2.99GHz	2.99GHz
CPU Scaling Rate	1.34	1.34	1.34	1.34	1.36	1.34	1.34	1.34
CPU Load Main Process	72	71	46	68	69	67	69	71





## Self-defined parameters





## Added Backpack without Controlling Chassis Solution

Without Controlling Chassis, only a tablet and test devices can complete tests.

21:18:49 Thumbnails

Card	Network	SS-RSRP	SS-SINR	PCI	Band	Control
A	Mobile NR	-6894	14063	527	41	Power On, Power Off, Port Reset
B	Mobile NR	-7888	7625	527	41	Power On, Power Off, Port Reset
C	Mobile NR	-7375	10750	527	41	Power On, Power Off, Port Reset
D	Mobile NR	-7638	8125	527	41	Power On, Power Off, Port Reset
E	Unicom NR	-8588	5375	107	78	Power On, Power Off, Port Reset
F	Unicom NR	-9075	9000	107	78	Power On, Power Off, Port Reset
G	Telecom LTE	-8038	13000	330	3	Power On, Power Off, Port Reset
H	Telecom LTE	-8000	13000	330	3	Power On, Power Off, Port Reset

9:22 PM Multi-Test SETTINGS

Connect Event Data

RSCP -75.671 EcIo -5.176

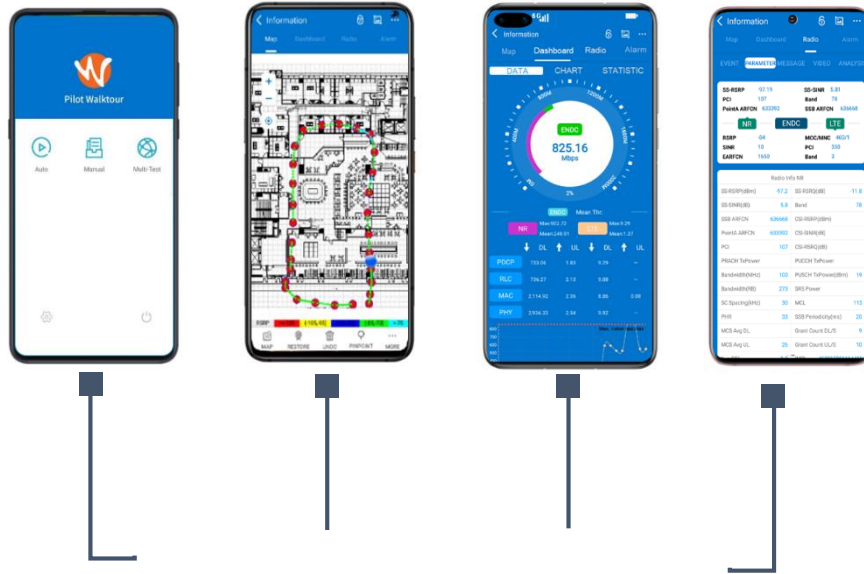
WCDMA

861065050186852

Connected

WIFI Deric..

# Specification



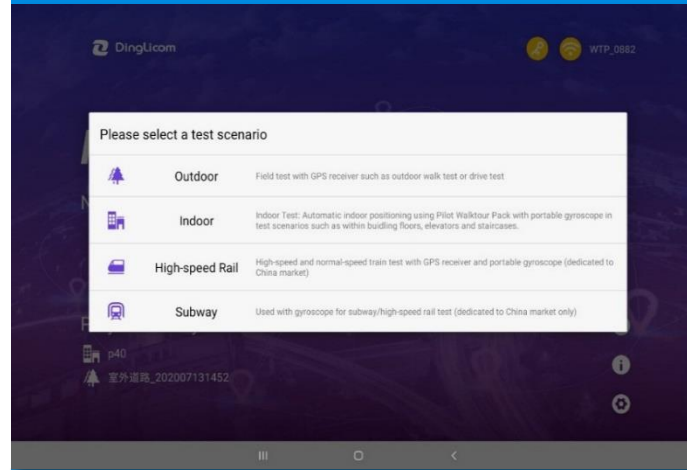
DL845PV

- Dimension (mm): 400\*300\*72mm
- Weight: About 3.05Kg
- Battery: 10.8V, 6800mAh\*2
- OS: Windows
- CPU: Intel X86 processor
- GPS: EM1612
- Max. External Terminals: 14 handsets
- Data Transmission Mode: Wi-Fi
- Working Current: 5A (Max. with 19V external power supply)
- Quick Charge: 2 hours (8 handsets with full charge)
- Plug Name: DC charger
- Working Temperature: -10°C to +40°C
- Storage Temperature: 45°C to +85°C
- Humidity: 93%RH, +40°C

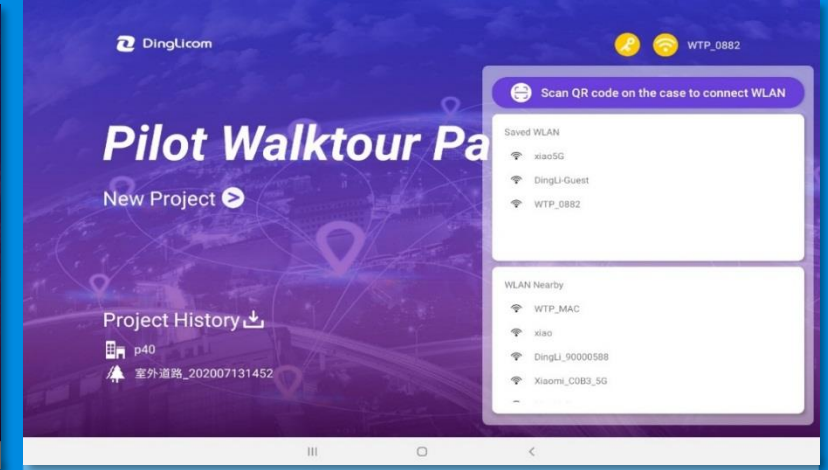
# New UI Design and Connection Mode



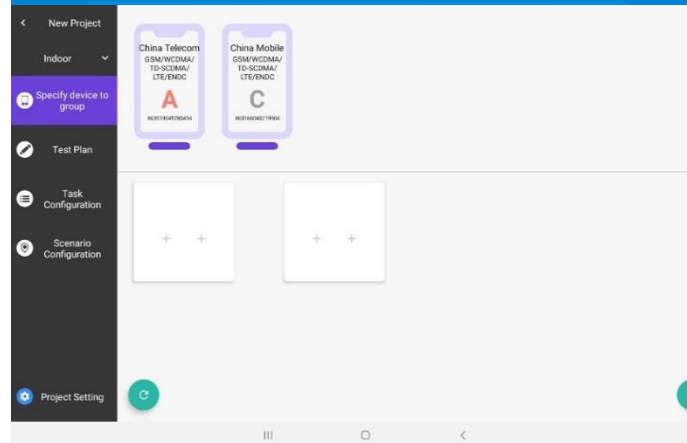
- Better visualization and user interaction
- Easier and smoother operation
- Quicker interface loading
- QR Code Connection: one code for one Pilot Walktour Pack case to avoid test interference
- Adjust WiFi channel to avoid intra-frequency interference
- Support multiple Android tablet models



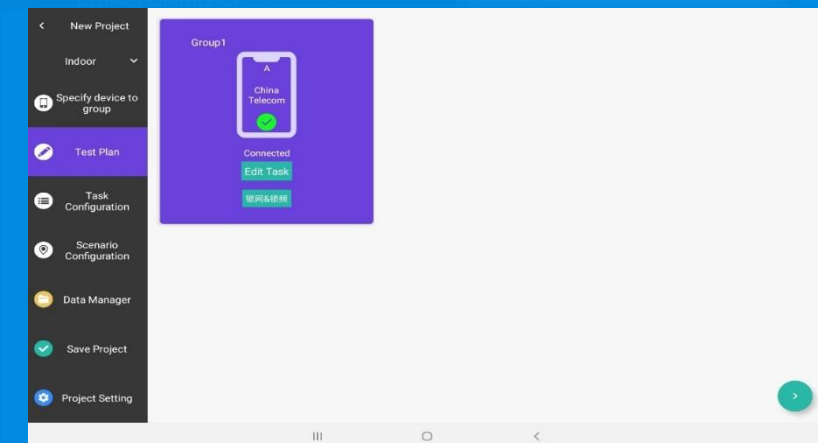
Select test scenario



Connect Pilot Walktour Pack to chassis



Connect to Pilot Walktour terminals



Pilot Walktour Test Group

# High-Accuracy Auto Pinpointing



Pilot Walktour Pack supports automatic indoor positioning with a mini high-accuracy pinpointing device integrated with a gyroscope connected through Bluetooth.

Features:

- Applicable with various indoor test scenarios, e.g. airport, malls, office buildings, elevator, staircase, high-speed rail/subway etc.
- Positional accuracy deviation less than 0.3%



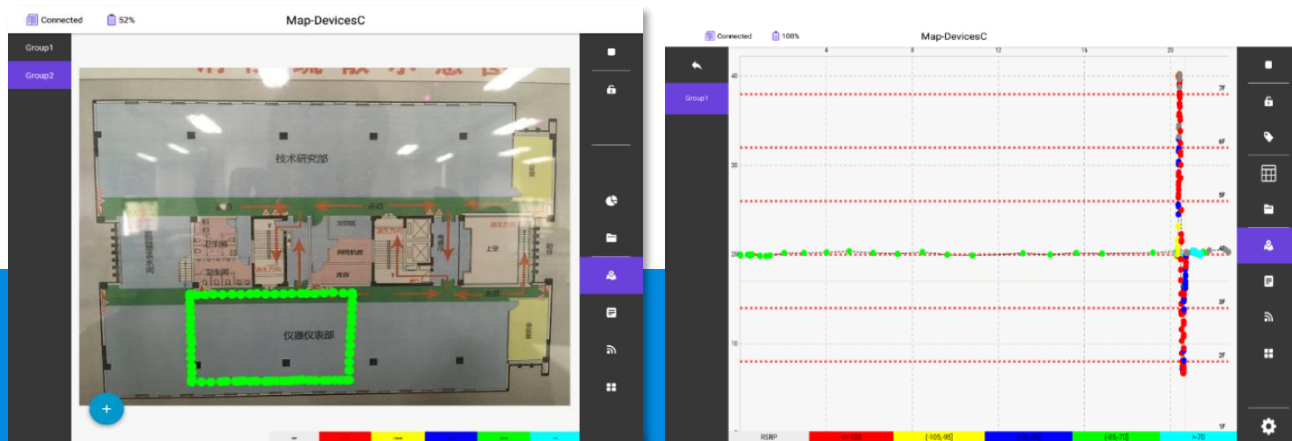
Bluetooth connection



Gyroscope Mini High-Accuracy Pinpointing Device



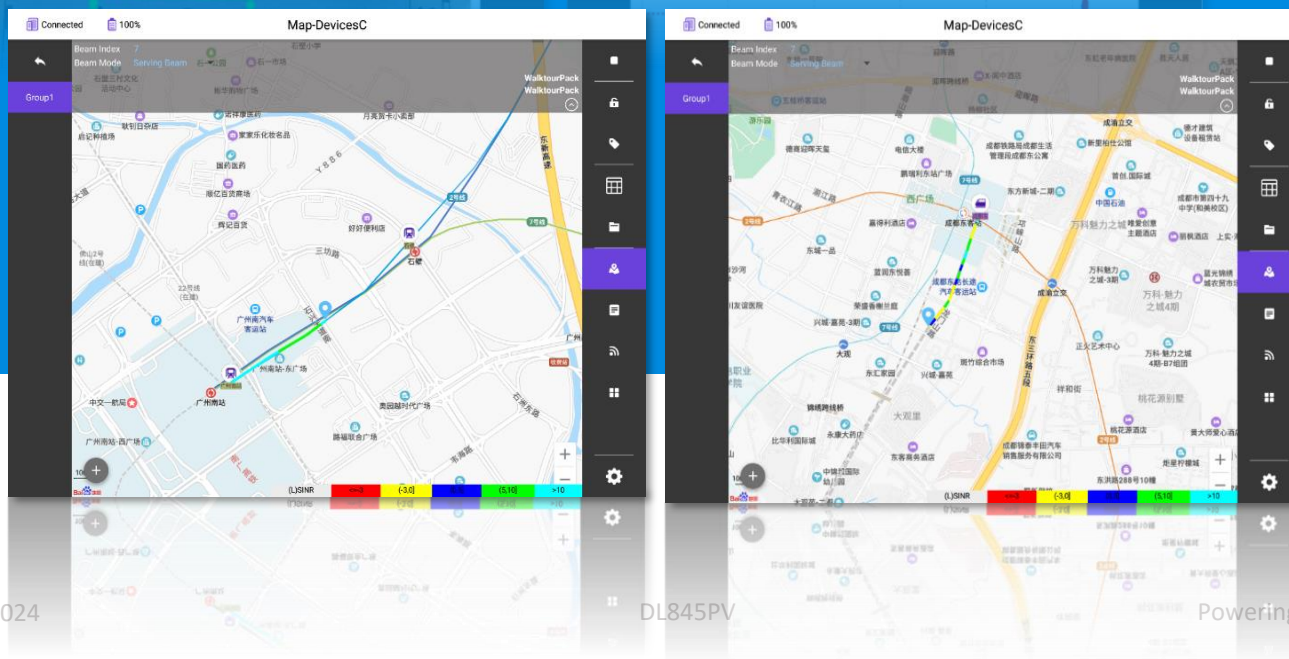




## Indoor Pinpointing

DingLi Gyroscope

- Multiple Pinpointing Scenarios: Indoor, Lift/Escalator/Stairs/High-speed Rail/Subway
- Portable, accurate and stable operation



## High-Speed Rail/Subway Pinpointing



# Data Replay and Statistics Report



**Replay Data Files**

Import Map | Change Map | Display Parameters | Open File

Latitude: 22.39293861  
Longitude: 113.55380249

**LTE Parameters**

- Duplex Mode: 2.00
- (L)Band: 38.00
- (L)DL Freq(MHz): 2585.00
- DL BandWidth(MHz): 20.00
- TM: 2.00
- CodeWord: 1.00
- Special SubFrame Patterns: 7.00
- SubFrame Assignment Type: 2.00
- EARFCN UL: 37900.00
- EARFCN DL: 37900.00
- (L)RSSI(dBm): -67.31
- RSRQ(dB): -10.19
- RSRP Rx0(dBm): -97.50
- RSRP Rx1(dBm): -101.06
- SINR Rx0(dB): 5.00
- SINR Rx1(dB): 4.50
- RSRQ Rx0(dB): -10.19
- RSRQ Rx1(dB): -10.19

11:16:42 | 11:19:36

Message	Events
11:16:41LTE_Cell_List	11:16:39Network Connect Start
11:16:42LL1 PUCCH CSF log	11:16:40RRC Connection Request
11:16:42LL1 PCFICH decoding results	11:16:40Prach: MSG1(RA)
11:16:42LL1 PUCCH CSF log	11:16:40Prach: MSG2(RAR)
11:16:42LL1 SRS Tx report	11:16:40Prach: Msg3(UE ID)
11:16:42LL1 PCFICH decoding results	11:16:40Prach: Msg4
11:16:42LTE_DL_Thr	11:16:40RRC Connection Setup Received
11:16:42RLC DL statistics	11:16:40RRC Connection Completed
11:16:42LTE_Cell_List	11:16:40RRC Connection Reconfiguration
11:16:42LL1 PUCCH CSF log	11:16:40LTE Service Request
11:16:42LL1 PCFICH decoding results	11:16:40LTE Service Success

Replay Data File

Video-PBM-Speedtest

Voice CSFB

HTTP

Ping-Traceroute

Voice 23G

FTP

Report Template

**Statistics Reports**

- 20200630161116\_WT 5G KPI Reports .xlsx  
2020-06-30 16:11:17
- 20200630152445\_Video-PBM-Speedtest.xls  
2020-06-30 15:24:46

Statistics Report List

Index Service Access Handover DL UL Coverage Interference Ping

Basic Information							FTP Download							
Log_Name	Total Tx Power Distance (km)	Total Tx Power Duration (min)	OutofService Distance (km)	OutofService Duration (min)	Vehicle Speed (km/h)	DL/UL Duration (min)	DL/UL Coverage Rate	FTP DL Attempt Count	FTP DL Success Count	FTP DL Dropped Count	FTP DL Dropped Rate(%)	FTP DL File Size(MB)	FTP DL Duration (s)	FTP DL Average Speed (Mbps)
Results	0.00	81.18	0.00	0.00	0.00	47.09	0.00%	1	0	0		0.00	0.00	
3#BBK32_FTF	0.00	81.18	0.00	0.00	0.00	47.09	0.00%	1	0	0		0.00	0.00	

最近文件

Statistics Report

- Data Replay and Statistics generation:
- Upload logfiles from test terminals to Pilot Walktour Pack Android tablet
- Offload the data post processing and analysis from the test

# PILOT WALKTOUR PACK

# 4

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## Main Features

Please Select a Test Task

Call	FTP Down
FTP Up	HTTP Page
HTTP Download	HTTP Upload
WAP Page	WAP Download
Email Send	Email Receive
Ping	Idle
Parallel Service	Video Play
Speed Test	FaceBook
Trace Route	Multi FTP Up
Multi FTP Down	PBM

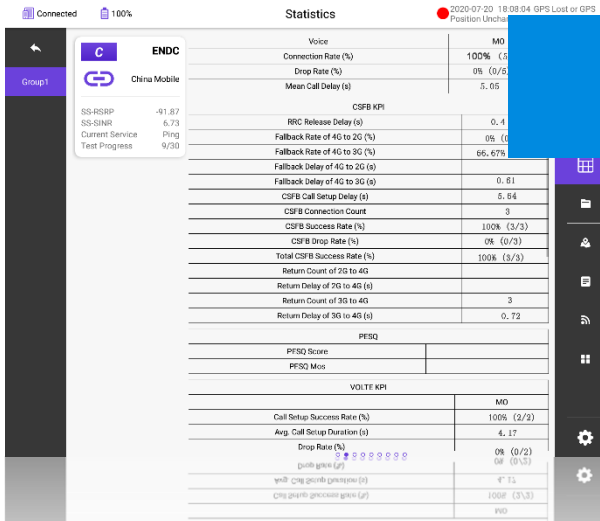


YouTube



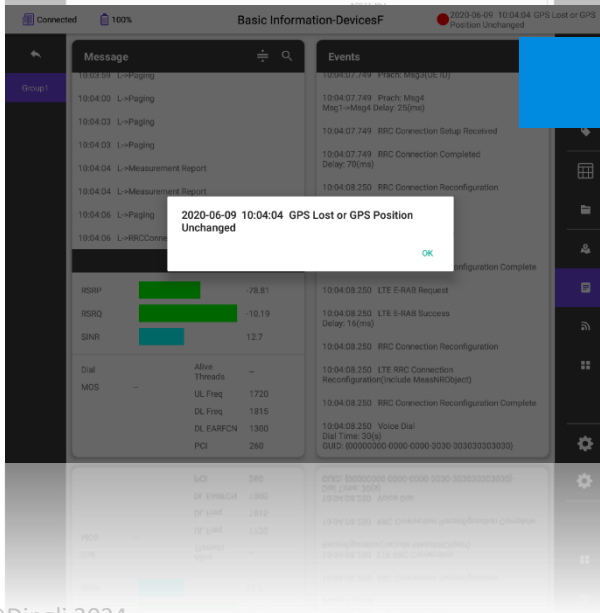
## Various test services are supported

- Voice services:** CS Call, CSFB, VoLTE, VoNR, ViNR, EPS fallback
- Data services:** Ping, FTP UL/DL, HTTP Download, HTTP Page, WAP Page, WAP Download, Email Send, Email Receive, Trace route, Video Play, Facebook, Multi FTP Upload, Multi FTP Download, HTTP Upload, PBM
- Scanner test:**
  - Supports R&S TSME6 for scanner test.
  - Supported RATs include: 2G,3G,4G,NR
  - Supported test services include Spectrum, cw and Pilot.
- Others:**
  - Idle, Parallel test
  - TCP/IP SNIFFER
  - Loop test
  - PPP disconnection modes control for data services



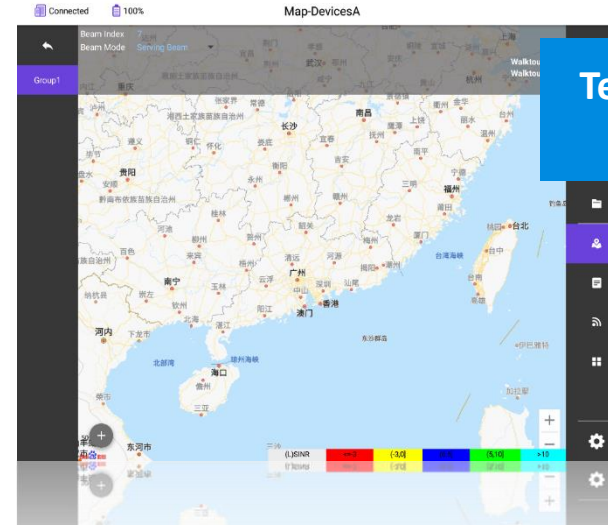
## Real-time Information

Real-time parameters, events, messages of all devices can be monitored and displayed during tests.



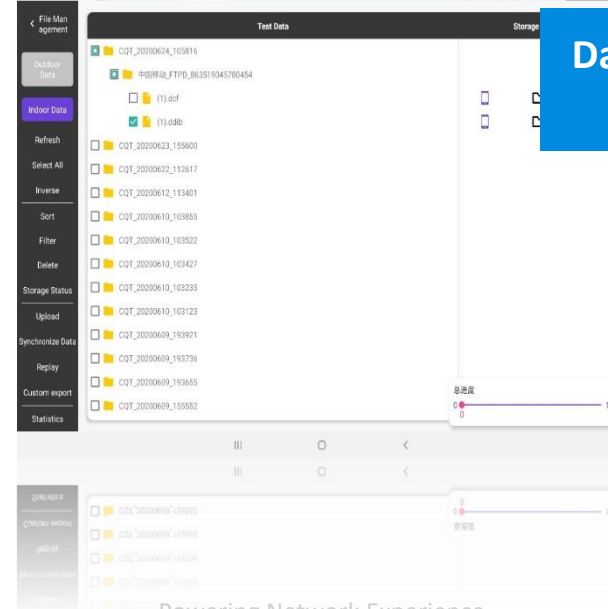
## Alarm

- Supports various alarm modes: audio alarm, alarm with icons, alarm with subtitle, etc.
- Supports alarm summary



## Test routes displayed on Map

- Collects GPS data and display tracks in real time
- Support pin-pointing for indoor tests
- Support automatic indoor positioning test



## Data file uploaded to the iPad

- Data files are uploaded to the Android tablet for management after testing.



## Messages & Events

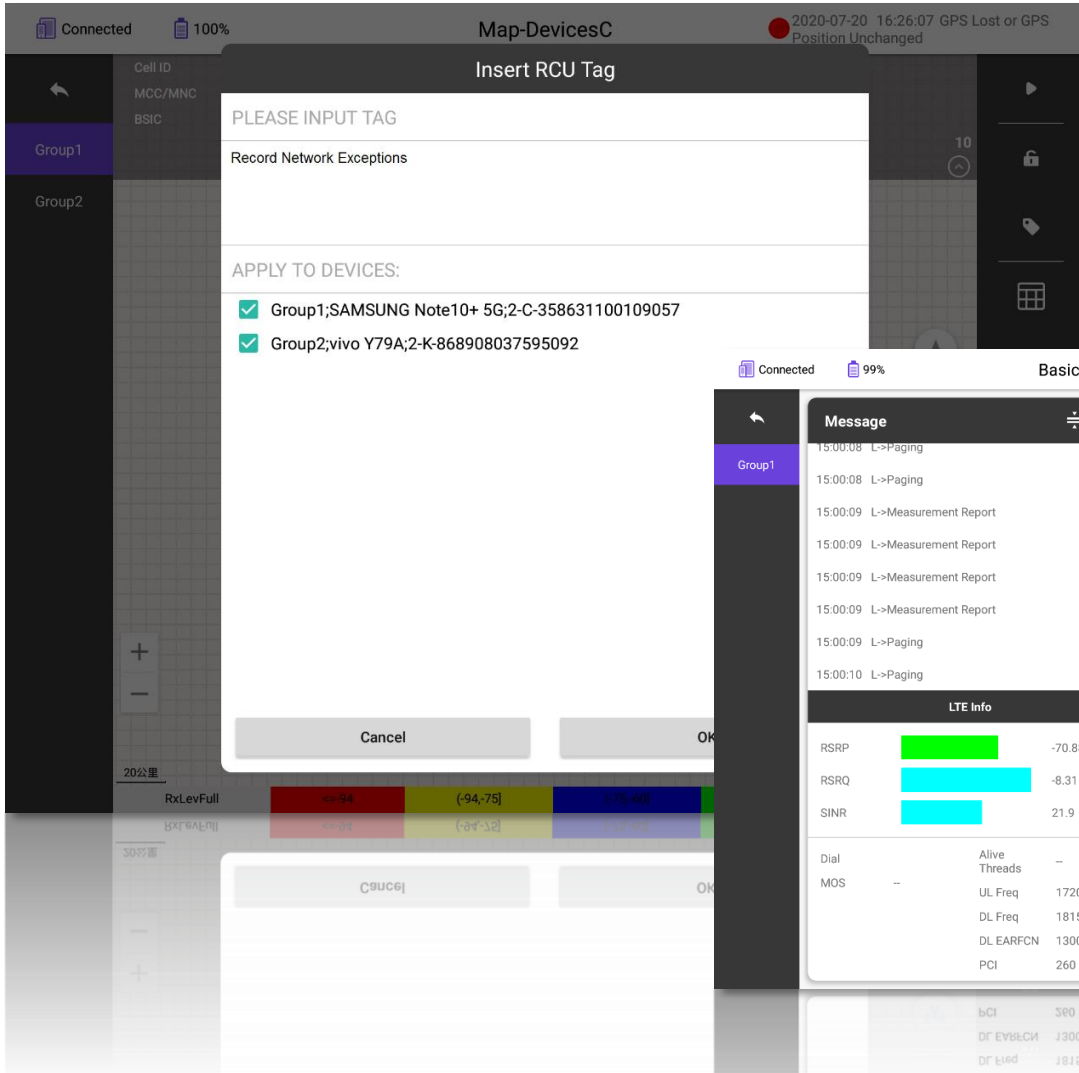
**Events**

- NR PCI: 527  
NR ARFCN: 504990  
21:38:40
- 21:38:40 NR Beam Change Complete  
BeamID: 1 --> 7  
NR PCI: 527  
NR ARFCN: 504990  
21:38:40
- 21:38:41 NR Beam Change Complete  
BeamID: 7 --> 1  
NR PCI: 527  
NR ARFCN: 504990  
21:38:41
- 21:38:41 NR Beam Change Complete  
BeamID: 1 --> 7  
NR PCI: 527  
NR ARFCN: 504990  
21:38:41
- 21:38:41 POLQA Result  
POLQA Score SWB: 4.377  
MeanDelay: 2169.621(ms)  
Direction: Downlink  
RecordFile:  
mos\_2023-04-06\_21-38-42\_4.38\_868886050785560.wav  
Jitter: 0.000232(ms)  
Source FileName: sample48k.wav  
RecordFileIndex: 0  
StartTime: 21:38:30.008  
EndTime: 21:38:42.084  
21:38:41
- 21:38:42 NR Beam Change Complete  
BeamID: 7 --> 1  
NR PCI: 527  
NR ARFCN: 504990

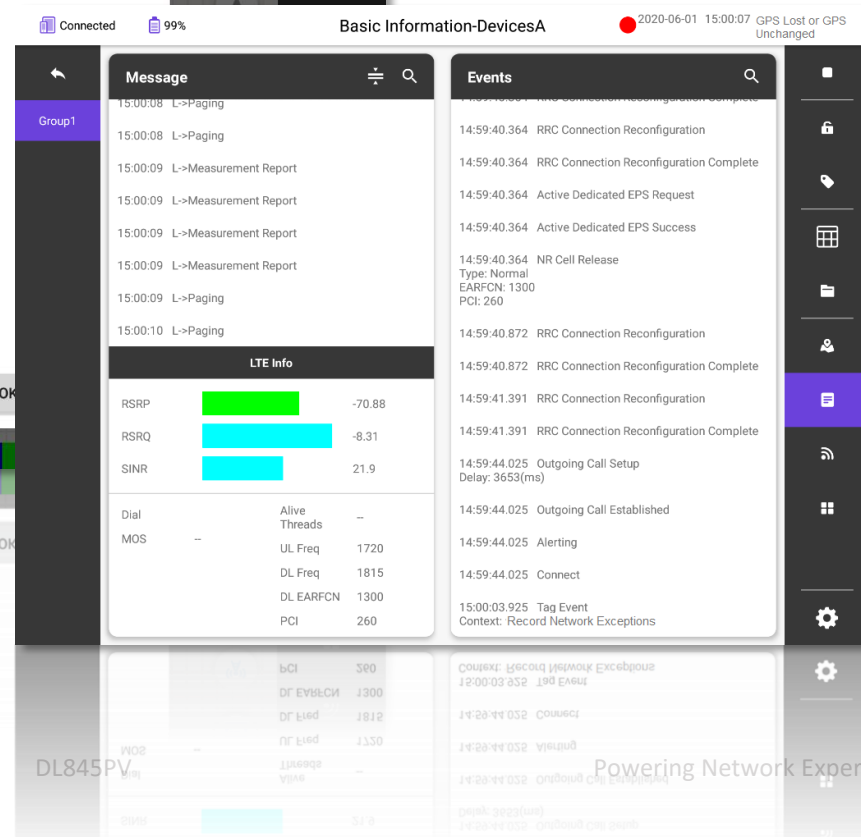
**Message**

- 21:38:04 NR->PDU session modification complete
- 21:38:04 NR->UL NAS transport
- 21:38:04 NR->CellGroupConfig
- 21:38:04 NR->RRCReconfigurationComplete
- 21:38:04 NR->DL NAS transport
- 21:38:04 NR->PDU session modification command
- 21:38:04 NR->PDU session modification complete
- 21:38:04 NR->UL NAS transport
- 21:38:04 NR->ULInformationTransfer
- 21:38:04 NR->Paging
- 21:38:04 NR->Paging
- 21:38:04 NR->Paging
- 21:38:05 IMS\_SIP\_INVITE
- 21:38:05 IMS\_SIP\_PRACK
- 21:38:05 IMS\_SIP\_PRACK

# Customize Test Process Tags



- During service test, users may add tags to mark the test process as required.
- Users may use the tags to perform a search on the data file.
- The added tags will be saved to corresponding data files





Support real-time statistics for voice, FTP and other services during testing, and present information such as the number of attempts, successes, and various scores.

**Mobile A (NR)**  
 SS-RSRP: -7225, SS-SINR: 14313, PCI: 527, Band: 41  
 MOC: 1/10, Test Progress: 4294

VONR KPI	A		B	
	MO	MT	MO	MT
Call Setup Success Rate (%)	100% (1/1)		100% (1/1)	
Avg. Call Setup Duration (s)	2.66		0.66	
Drop Rate (%)	0% (0/1)		0% (0/1)	

**Mobile B (NR)**  
 SS-RSRP: -8625, SS-SINR: 5438, PCI: 527, Band: 41  
 MTC: 1/10, Test Progress: 4268

POLQA	A		B	
	MO	MT	MO	MT
POLQA MOS	4.28		4.27	
Total POLQA MOS Samples	12		13	
POLQA MOS>=3.5 Samples	12		13	
Rate of POLQA MOS>=3.5 Samples	100		100	
POLQA Latency Mean	2187.03		2198.88	

CSFB KPI	A		B	
	MO	MT	MO	MT
RRC Release Delay (s)				
Fallback Rate of 4G to 2G (%)				
Fallback Rate of 4G to 3G (%)				
Fallback Delay of 4G to 2G (s)				
Fallback Delay of 4G to 3G (s)				
CSFB Call Setup Delay (s)				
CSFB Connection Count				
CSFB Success Rate (%)				
CSFB Drop Rate (%)				
Total CSFB Success Rate (%)				

**Mobile A (NR)**  
 SS-RSRP: -7356, SS-SINR: 14688, PCI: 527, Band: 41  
 MOC: 1/10, Test Progress: 4294

Voice	MO	MT	MO	MT
Connection Rate (%)	100% (1/1)		100% (1/1)	
Drop Rate (%)	0% (0/1)		0% (0/1)	
Mean Call Delay (s)	2.66		0.66	

**Mobile B (NR)**  
 SS-RSRP: -8050, SS-SINR: 3250, PCI: 527, Band: 41  
 MTC: 1/10, Test Progress: 4268

VOLTE KPI	A		B	
	MO	MT	MO	MT
Call Setup Success Rate (%)				
Avg. Call Setup Duration (s)				
Drop Rate (%)				

Radio Parameters	A			
	最大	最小	平均	最大
Jitter	19.0	0.0	6.37	19.0
Delay	51.0	0.0	34.71	50.0
Packet Loss Rate	0.0	0.0	0	13.79

EPS Fallback	A		B	
	MO	MT	MO	MT
EPS Fallback Success Rate (%)				
EPS Call Drop Rate (%)				
Avg. EPS Call Setup Duration(s)				

VONR KPI	A		B	
	MO	MT	MO	MT
Call Setup Success Rate (%)	100% (1/1)		100%	
Avg. Call Setup Duration (s)	2.66		0.66	

PILOT  
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# Supported Terminals



Supported Android-based terminals:

Device	Operating System	Model
Controller	Android Tablet	Samsung S Series HUAWEI Tab Or an Android tablet the same size as the screen
Test Phones	HiSilicon	HUAWEI P40 HUAWEI P40 pro HUAWEI MATE40 HUAWEI MATE40E pro
	Qualcomm	Samsung Galaxy S24/S23/S22/S21 Xiaomi 14/14pro Xiaomi 13/13 Pro Xiaomi 12S

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**Conclusion**

## Product Advantages

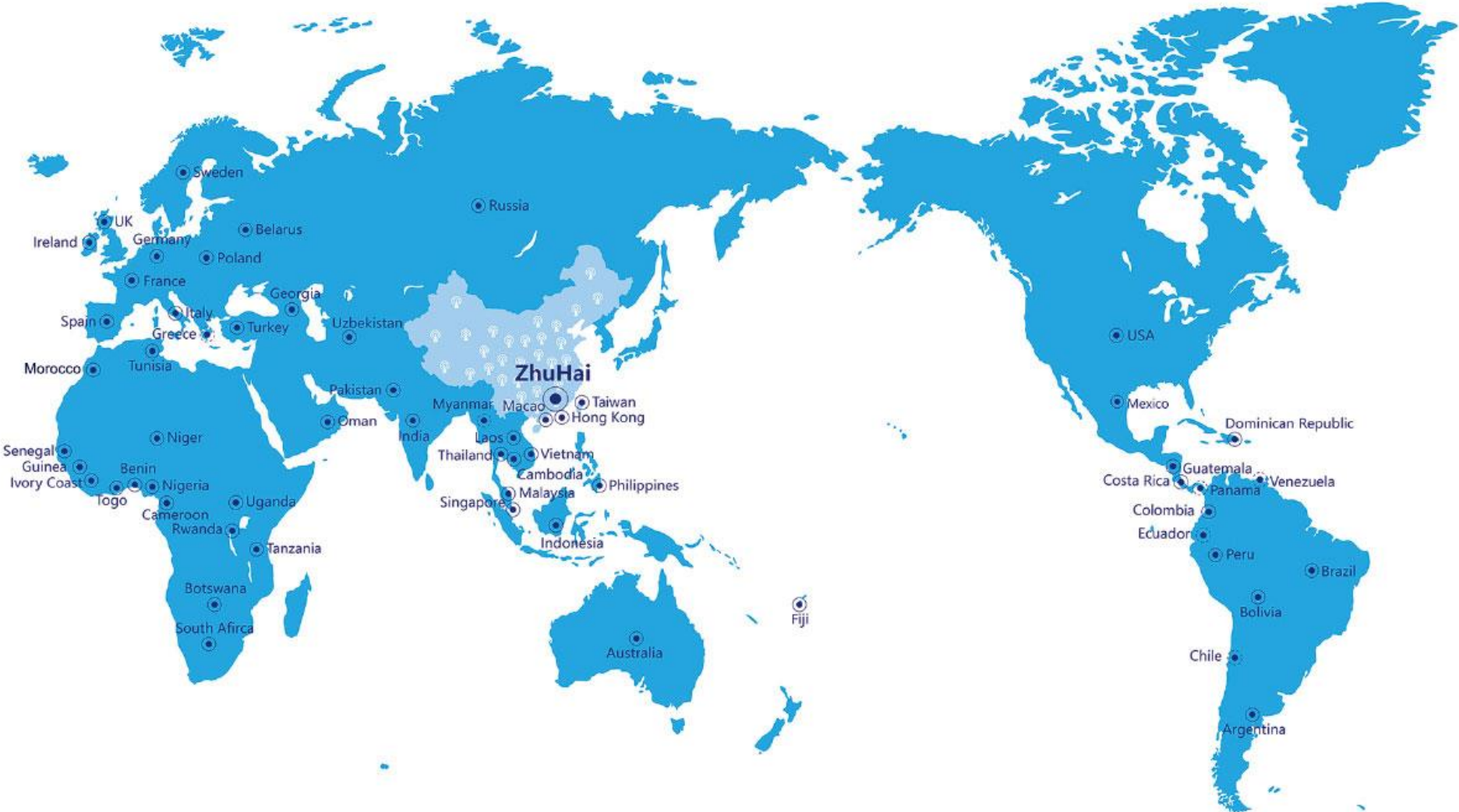
- Portable, managed by one engineer for benchmarking tests
- Small and easy to operate
- Built-in battery for continuous testing
- Built-in high-performance GPS



## Business Values

- Provide comprehensive and authentic user perception.
- Fast and efficient network measurement
- Significant reduction in labor costs
- Stable operation and high efficiency

# Customer Base







Thank you for  
your support!



Powering Network Experience

**Website:** [telecom.dingli.com](http://telecom.dingli.com)

**Telephone:** +86 0756-3391933

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