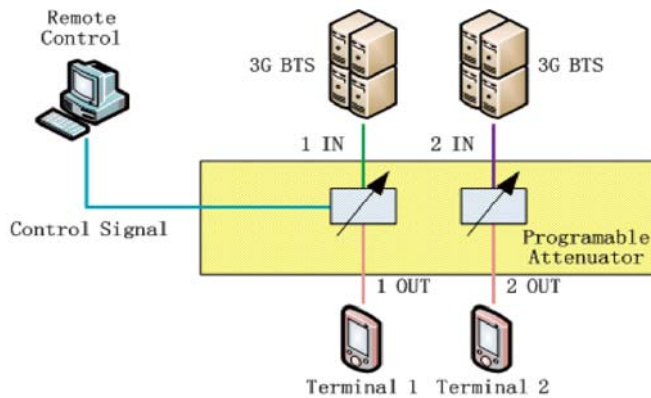


## Model Name: Double Channel Microwave Test Subsystem

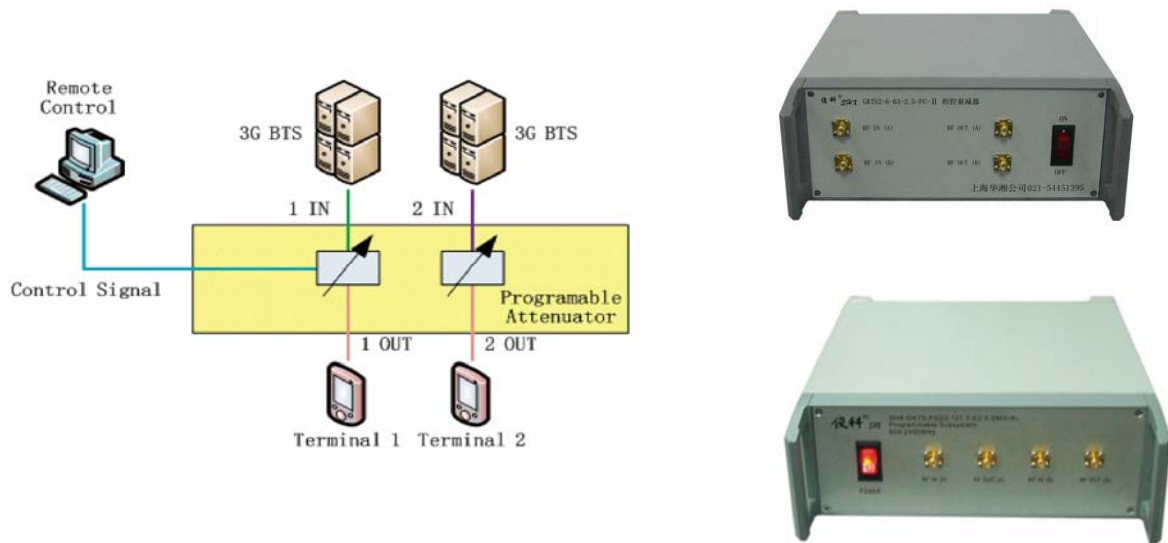


型号 Model Number	频率范围 Frequency Range(GHz)	衰减范围 Attenuation Range(dB)	衰减精度 Attenuation Accuracy	驻波比 VSWR	插入损耗 Insertion Loss(dB)	射频输入功率 RF Input Power(dBm)	切换速率 Switch Speed	控制方式 Control Model	外形尺寸 Dimension (mm)	重量 Weight (kg)
SHX-GKTS-FS2/2-127-0.8/3-NK(-E)	0.8-3	0-127 in 1dB step	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5%dB(64~127dB)	≤1.5	≤5.0	33	6ms	Mechanical or Remote	200×217×95	2
SHX-GKTS-FS2/2-127-3.0-SMAK-E	DC-3	0-127 in 1dB step	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5%dB(64~127dB)	≤1.5	≤5.0	33	6ms	Mechanical or Remote	200×217×95	2
SHX-GKTS-FS2/2-127-3-NK(-E)	DC-3	0-127 in 1dB step	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5%dB(64~127dB)	≤1.5	≤6.0	33	6ms	Mechanical or Remote	200×217×95	2
SHX-GKTS-HFS2/2-91-5-NK(-E)	DC-5	0-91 in 1dB step	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5%dB(64~91dB)	≤1.6	≤6.0	33	6ms	Mechanical or Remote	200×217×95	2
SHX-GKTS-HFS2/2-110-0.8/3-NK(-E)	0.8-3	0-110 in 1dB step	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5%dB(64~110dB)	≤1.5	≤10.0	30	2μs	Mechanical or Remote	200×217×95	2
SHX-GKTS-HFS2/2-63-0.8/3.5-NK-E	0.8-3.5	0-63 in 1dB step	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB)	≤1.5	≤10.0	30	2μs	Mechanical or Remote	200×217×95	2
SHX-GKTS-HFS2/2-93-0.8/6-NK(-E)	0.8-6	0-93 in 1dB step	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5%dB(64~93dB)	≤1.9	≤13.0	30	2μs	Mechanical or Remote	200×217×95	2
SHX-GKTS-HFS2/2-103-2.0/6.0-NK-E	2.0-6.0	0-103 in 1dB step	±0.4dB or 3% whichever is greater	≤1.6	≤5.5	30	2μs	Mechanical or Remote	200×217×95	2.5

### Notes:

1. Dimensions Tolerance ±2%
2. Custom designs available

## Model Name: 2 In 2 Out Microwave Test Subsystem

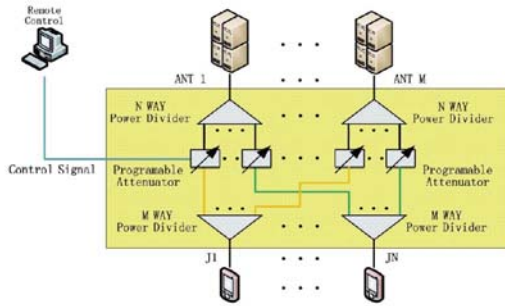


型号 Model Number	频率范围 Frequency Range(GHz)	衰减范围 Attenuation Range(dB)	衰减精度 Attenuation Accuracy	驻波比 VSWR	插入损耗 Insertion Loss(dB)	射频输入功率 RF Input Power(dBm)	切换速率 Switch Speed	连接器形式 Connector Type	外形尺寸 Dimension (mm)	重量 Weight (kg)
GKTS2-6-63-2.5-FC-II	DC-2.5	0-63 in 1dB steps	±0.8dB (≤10dB) ±1.5dB (16,32dB)	≤1.4	≤4.5	33	6ms	SMA(K)	302×235×105	2.7
SHX-GKTS-FS2/2-127-0.8/2.5-SMA(K)	0.8-2.5	0-127 in 1dB steps	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB (32~63dB) ±2.5%dB(64~127dB)	≤1.4	≤5.0	30	6ms	SMA(K)	236×302×103.5	2.7

### Notes:

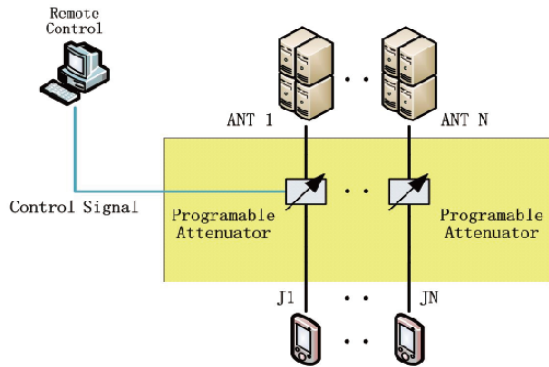
1. Dimensions Tolerance ±2%
2. Custom designs available

## Model Name: M × N Microwave Test Subsystem



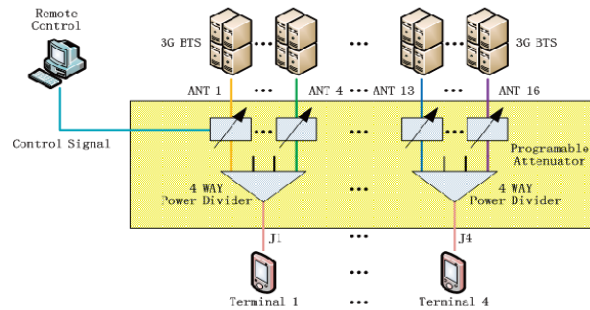
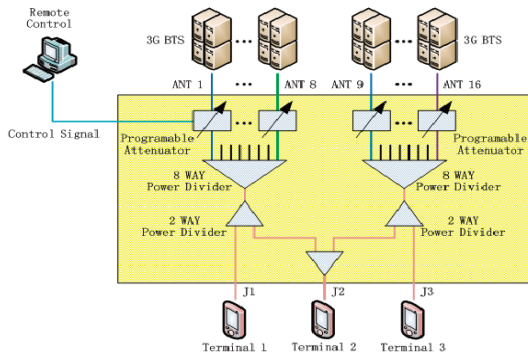
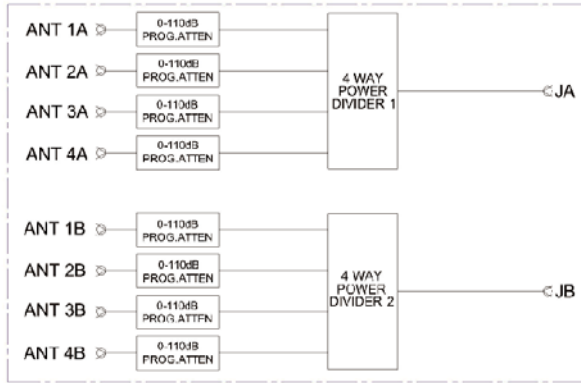
型号 Model Number	频率范围 Frequency Range(GHz)	衰减范围 Attenuation Range(dB)	衰减精度 Attenuation Accuracy	驻波比 VSWR	插入损耗 Insertion Loss(dB)	射频输入功率 RF Input Power(dBm)	切换速率 Switch Speed	连接器形式 Connector Type	外形尺寸 Dimension (mm)	重量 Weight (kg)
SHX-GKTS-SPS2/2-127-0.8/3-NK	0.8-3	0-127 in 1dB step	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5%dB(64~127dB)	≤1.5	≤12	33	6ms	N(K)	483×388×88	5
SHX-GKTS-FS4×2-127-0.8/3-NK	0.8-3	0-127 in 1dB step	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5%Db(64~127dB)	≤1.5	≤16	33	6ms	N(K)	483×88×540	12
SHX-GKTS-HFS4×2-110-0.8/3-NK	0.8-3	0-110 in 1dB step	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5%dB(64~110dB)	≤1.5	≤22	33	2μs	N(K)	482.6×448×132.5	9
SHX-GKTS-FS4×4-127-0.8/3-NK	0.8-3	0-127 in 1dB step	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5%dB(64~127dB)	≤1.5	≤20	33	6ms	N(K)	483×133×592	15
SHX-GKTS-HFS4×4-110-0.8/3-NK	0.8-3	0-110 in 1dB step	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5%dB(64~110dB)	≤1.5	≤25	33	2μs	N(K)	483×133×592	12
SHX-GKTS-HFS6*8-90-0.7/3.5-NK	0.7-3.5	0-90 in 1dB step	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±3%dB(64~90dB)	≤1.5	≤28	33	2μs	N(K)	483×565×532	22
SHX-GKTS-FS8*2-127-0.8/2.5-NK	0.8-2.5	0-127in 1dB step	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5%dB(64~127dB)	≤1.5	≤20	33	6ms	N(K)	594×483×177	14.5
SHX-GKTS-HFS8*2-110-0.8/2.5-NK	0.8-2.5	0-110 in 1dB step	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5%dB(64~110dB)	≤1.5	≤24	33	2μs	N(K)	594×483×177	14.5
SHX-GKTS-HFS8*4-63-0.8/3-NK	0.8-3	0-63 in 0.5dB step	±0.5dB(<10dB) ±0.8dB(10~31dB) ±1.5dB(32~63dB)	≤1.5	≤22	33	2μs	N(K)	482.6×427×177	20
SHX-GKTS-HFS8×8-110-0.7/3-NK-L	0.7-3	0-100 in 0.5dB step	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5%dB(64~110dB)	≤1.6	≤34	33	10μs	N(K)	483×580×177	22
SHX-GKTS-FS16*2-127-0.8/3-NK	0.8-3	0-127 in 1dB step	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±3.0%dB(64~127dB)	≤1.5	≤22	33	6ms	N(K)	483×310×592.5	22
SHX-GKTS-HFS16*2-110-0.8/3-NK	0.8-3	0-110 in 1dB step	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±3.0%dB(64~110dB)	≤1.5	≤28	33	2μs	N(K)	483×310×592.5	20

## Model Name: N In N Out Microwave Test Subsystem



型号 Model Number	频率范围 Frequency Range(GHz)	衰减范围 Attenuation Range(dB)	衰减精度 Attenuation Accuracy	驻波比 VSWR	插入损耗 Insertion Loss(dB)	射频输入功率 RF Input Power(dBm)	切换速率 Switch Speed	连接器形式 Connector Type	外形尺寸 Dimension (mm)	重量 Weight (kg)
GKTS2-6-63-2.5-FC-III	DC-2.5	0-63 in 1dB steps	±0.8dB(≤10dB) ±1.5dB(16,32dB)	≤1.5	≤4.5	33	6ms	SMA(K)	302×235×150	3.9
SHX-GKTS-FS4/4-127-0.8/2.5-NK	0.8-2.5	0-127 in 1dB steps	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5dB(64~127dB)	≤1.5	≤5.0	33	6ms	N(K)	483×394×88	4.8
SHX-GKTS-FS4/4-127-3-NK-L-II	DC-3	0-127 in 1dB steps	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5dB(64~127dB)	≤1.5	≤5.0	33	6ms	N(K)	465×451×85	10
SHX-GKTS-HFS4/4-110-0.8/3-NK-L	0.8-3	0-110 in 1dB steps	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5dB(64~110dB)	≤1.5	≤16	30	2μs	N(K)	482.6×448×132.5	6
SHX-GKTS-HFS4/4-90-0.8/6-NK-L	0.8-6	0-90 in 1 dB steps	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±3%dB(64~90dB)	≤1.6	≤22	30	2μs	N(K)	482.6×448×132.5	6
SHX-GKTS-HFS8/8-63-0.8/6-NK-L	0.8-6	0-63 in 1dB steps	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB)	≤1.6	≤14	30	2μs	N(K)	482.6×448×132.5	6
SHX-GKTS-FS8/8-127-0.8/3-NK-L	0.8-3	0-127 in 1dB steps	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5dB(64~127dB)	≤1.5	≤16	33	6ms	N(K)	482.6×448×132.5	8.6
SHX-GKTS-HFS8/8-90-0.8/3-SMA-D	0.8-3	0-90 in 1dB steps	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5dB(64~90dB)	≤1.5	≤12	30	2μs	SMA(K)	308×280×118	3
SHX-GKTS-HFS8/8-110-0.8/3-NK-L-II	0.8-3	0-110 in 1dB steps	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5dB(64~110dB)	≤1.5	≤12	30	2μs	N(K)	482.6×448×85	8.6
SHX-GKTS-HFS8/8-110-0.8/3-NK-L	0.8-3	0-110 in 1dB steps	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5dB(64~110dB)	≤1.5	≤16	30	2μs	N(K)	482.6×448×132.5	8.6
SHX-GKTS-HFS8/8-110-0.8/6-NK-L	0.8-6	0-110 in 1dB steps	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~50 dB) ±3%dB(51~80dB)	≤1.6	≤22	30	2μs	N(K)	482.6×448×132.5	8.6
SHX-GKTS-HFS8/8-63-0.8/6-SMA-D	0.8-6	0-63 in 1dB steps	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB)	≤1.6	≤14	30	2μs	SMA(K)	308×280×118	3

## Model Name: M In N Out Microwave Test Subsystem



型号 Model Number	频率范围 Frequency Range(GHz)	衰减范围 Attenuation Range(dB)	衰减精度 Attenuation Accuracy	驻波比 VSWR	插入损耗 Insertion Loss(dB)	射频输入功率 RF Input Power(dBm)	切换速率 Switch Speed	连接器形式 Connector Type	外形尺寸 Dimension (mm)	重量 Weight (kg)
SHX-GKTS-HFS3/1-110-0.8/3-NK-L	0.8-3	0-110 in 1dB steps	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5%dB(64~110dB)	≤1.5	≤16	30	20μs	N(K)	483×451×88	6
SHX-GKTS-HFS3/4-44-0.3/1-NK	0.3-1	0-44 in 1dB steps	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~44dB)	≤1.5	≤16	30	2μs	N(K)	483×430×88	5
SHX-GKTS-FS8/2-127-0.8/3-NK-NX	0.8-3	0-127 in 1dB steps	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5%dB(64~127dB)	≤1.5	≤18	33	6ms	N(K)	482.6×448×132.5	8.6
SHX-GKTS-HFS8/2-110-0.8/3-NK-L	0.8-3	0-110 in 1dB steps	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5%dB(64~110dB)	≤1.5	≤22	30	2μs	N(K)	482.6×448×132.5	8.6
SHX-GKTS-HFS12/2-110-1.8/2.7-NK	1.8-2.7	0-110 in 1dB steps	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5%dB(64~110dB)	≤1.5	≤20	30	2μs	N(K)	483×448×132.5	9
SHX-GKTS-FS16-127-0.8/2.5-NK	0.8-2.5	0-127 in 1dB steps	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5%dB(64~127dB)	≤1.5	≤22.8	33	6ms	N(K)	596×483×132.5	15
SHX-GKTS-HFS16/3-110-0.8/3-NK	0.8-3	0-110 in 1dB steps	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5%dB(64~110dB)	≤1.5	≤20	30	2μs	N(K)	482.6×448×132.5	8
SHX-GKTS-FS16/4-127-0.8/2.7-NK	0.8-2.7	0-127 in 1dB steps	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5%dB(64~127dB)	≤1.5	≤11	33	6ms	N(K)	596×483×132.5	15
SHX-GKTS-HFS16/4-110-0.8/3-NK	0.8-3	0-110 in 1dB steps	±0.5dB(<10dB) ±1.0dB(10~31dB) ±1.5dB(32~63dB) ±2.5%dB(64~110dB)	≤1.5	≤20	30	2μs	N(K)	596×483×132.5	15

## Model Name: Switch Matrix



型号 Model Number	频率范围 Frequency Range(GHz)	驻波比 VSWR	插入损耗 Insertion Loss(dB)	输入端功率 Input Power(dBm)	切换速率 Switch Speed	隔离度 Isolation (dB)	连接器形式 Connector Type	外形尺寸 Dimension (mm)	重量 Weight (kg)
SHX-GKTS-SPS1/6-0/4-SMA(K)	DC-6	≤1.2	≤0.2	47	≤15ms	≥80	SMA(K)	236×302×113.5	2.5
SHX-GKTS-PSP1/6-0.8/2.5-SMAK	0.8-2.5	≤1.5	≤1.5	40	≤15ms	≥50	SMA(K)	236×302×113.5	3
SHX-GKTS-PSP1/8-15-SMAK	DC-15	≤1.5	≤1.5	40	≤15ms	≥50	SMA(K)	302×236×113.5	2
SHX-GKTS-SPS1/16-0.8/2.5-SMAK	0.8-2.5	≤1.6	≤4.0	40	≤20ms	≥60	SMA(K)	342×361×147.5	5.3
SHX-GKTS-SPS2×4-8-SMA(K)	DC-8	≤1.6	≤1.5	40	≤15ms	≥80	SMA(K)	236×302×113.5	3
SHX-GKTS-SPS3×6-6-SMA(K)	DC-6	≤1.6	≤1.4	40	≤20ms	≥75	SMA(K)	342×361×147.5	3.5
SHX-GKTS-MSP6/6-18-SMAK	DC-18	≤1.5	≤1.5	40	≤15ms	≥50	SMA(K)	302×236×113.5	2
SHX-GKTS-PSS8x4-0.8/3.0-NK	0.8-3.0	≤1.6	≤16	40	≤15ms	≥75	N(K)	483×478×177	12
SHX-GKTS-PSS8/16-0.8/2.5-NK	0.8-2.5	≤1.5	≤17	33	≤15ms	/	N(K)	483×532×513	25
SHX-GKTS-SPS12x12-1.8/2.7-NK-L	1.8-2.7	≤1.6	≤28	40	≤15us	≥90	N(K)	483×310×570	30
SHX-GKTS-PSS24/8-0.8/2.5-NK	0.8-2.5	≤1.5	≤20	40	≤10ms	≥40	N(K)	483×532×562	26

## Model Name: SMARTPERF Intelligent Pressure Testing System



SMARTPERF system is mainly testing KPI specifications with real terminals for the wireless system such as LTE, WCDMA, 3G, 4G, 5G etc.

System features:

1. SMARTPERF is built on the Android smartphone operation system, it can simulate the maximum user actual behavior in the network. Such as CS, PS, Wechat, web browsing, taobao, Twitter, etc.
2. The intelligent business dynamic load balancing capability makes it possible for single PC precise controlling as many as 64 mobile phones for testing at the same time.
3. With high scalability, SMARTPERF can be in the form of 4, 8, 16 sets to infinite extend with lower TCO.
4. With industrial-grade block processing, SMARTPERF can maximum reduce the interference between mobile phones, accurate assess the indicators of system performance
5. SMARTPERF support most wireless system such as LTE, WCDMA, 3G, 4G, 5G and support all the Android smart mobile phones and smart feature phones.
6. SMARTPERF support 7x24 hours unattended execution of test tasks, such as high and customizability test scripts
7. The user can get current test execution results through the terminals such as PC, mobile phones.

### Test solution project:

- ▶ Scene\_1: Lab Press test
- ▶ Scene\_2: Out-field press test
- ▶ Expansion test\_1: Combined with the map application(drawing KPI index on the map)
- ▶ Expansion test\_2 :Analysis the integration of network KPI
- ▶ Expansion test\_3: Large date collection
- ▶ Expansion test\_4: Network signal simulation

**Test case configuration :** Single mobile phone multiple voice call test、 Multiple mobile phone calling and called multiple voice call test、 Single mobile phone date download test、 Multiple mobile phone date download test、 Single mobile phone date upload test、 Multiple mobile phone date upload test、 Any combination of the above test cases of multiple mobile phone(Several tests can be arranged more than 500 times and multiple mobile phone can be extended 8\*N).

### Output test report:

- ▶ Date business test report
- ▶ Signal mobile phone calling test result statistics
- ▶ Multiple mobile phone calling test result statistics
- ▶ Measured the WCDMA KPI value of the base station (the index of RSCP diagram)
- ▶ Measured the LTE KPI value of the base station (the index of RSRP diagram)
- ▶ Multiple terminal connection statistics