



SUNYIELD

新 益 技 术

SX-7500

Radio Signal Tester for 5G

Bluetooth

Wi-Fi 6E

mmWave

NB-IoT

5G

UWB

802.11 a/b/g/n/a

eMTC



SX-7500

DESCRIPTION

SX-7500 Introductio:

SX-7500 is a radio frequency signal test platform launched by Sunyield to meet the demands of new technologies for 5G era. The product supports 5G New Radio (NR) access technology, realizes mmWave frequency testing, and supports large-bandwidth non-cellular technologies such as UWB/Wi-Fi 6E. At the same time, SX-7500 is backward compatible with 2/3/4G and traditional Wi-Fi, Bluetooth, GPS and other wireless characteristics testing, providing full-standard wireless devices.

SX-7500 Technical Features:

1

Excellent RF Performance

Support 400M-8GHz and 24G-44GHz frequency bands(with M8128 optional module); Maximum transmitting bandwidth 500MHz, receiving bandwidth 400MHz;

Fully support 5G NR/mmWave/Wi-Fi6 E /Wi-Fi 7 /UWB testing frequency bands; .

2

Abundant Peripheral Interfaces

Equipped with various interfaces that are easy to build integrated test environments including wireless RF port; USB, display port DP, Ethernet, high-speed optical port QSFP, mmWave control port Type-C, trigger (IN/OUT), reference signal (IN/OUT);

3

Flexiblesoftware Options

Selectable test software for different standards (5G NR/other cellular technologies/loT/Wi-Fi 6E /Wi-Fi 7 /UWB/other Wi-Fi standards, Bluetooth, GPS);

Interface drivers (mmWave module/RF front-end data)

Application tools (Toolkit for UE test/ RF test)



Mobile Phone Production Test

SX-7500 can meet the following test requirements in mobile phone production:

5G NR and all cellular technologies for 2/3/4G;

1

2

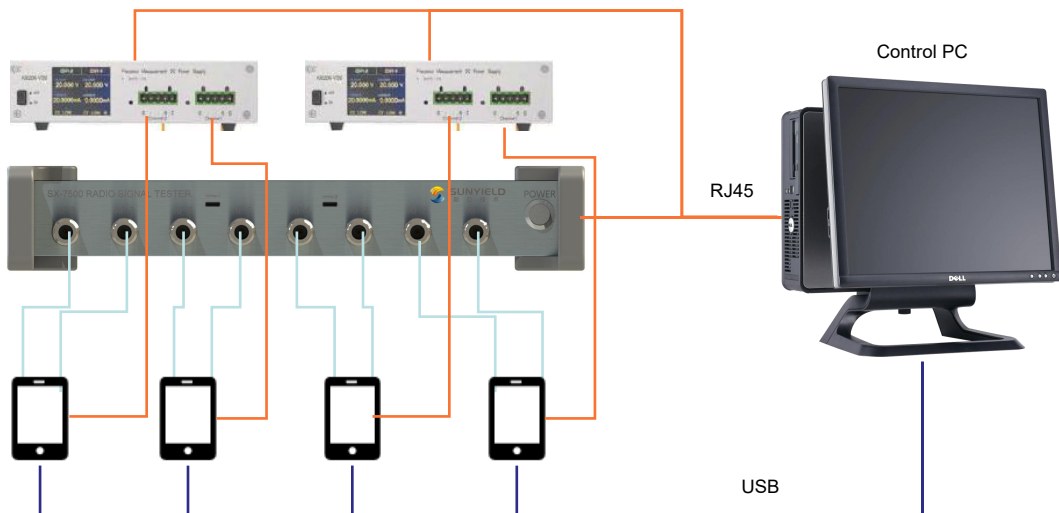
802.11a/b/g/n/ad/ax(Wi-Fi 6),including testing of 160MHz and higher bandwidth, such as Wi-Fi 6E/Wi-Fi 7/UWB; ;

Bluetooth/GNSS(GPS/BeiDou BDS).

3

SX-7500 can support simultaneous testing of multiple devices (up to 8 in parallel)

Sunyield U5117 Programmable power supply



✦ The Sunyield U5117 program-controlled power supply shown in the figure can be replaced by other compatible power supply.

IoT Device Test

SX-7500 provides efficient test solutions for various IoT devices and modules.

Common software options in IoT testing include:

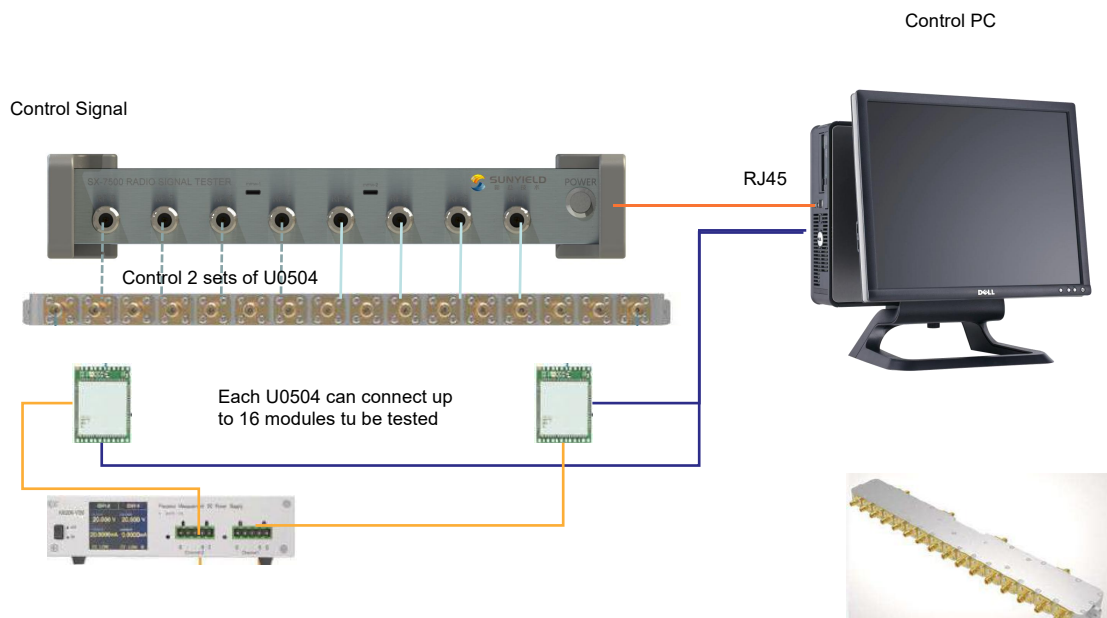
IoT Standard Test: NB-IOT/Emtc

Wi-Fi Standard Test: 802.11 a/b/g/n/ac/ax

Buetooth and GNSS Test: GPS/BeiDou

Cellular Standard Test: 2/3/4/5G NR FR1/FR2 (*: Welzek mmWave Module M8128 is mandatory for 5G NR FR2 test)

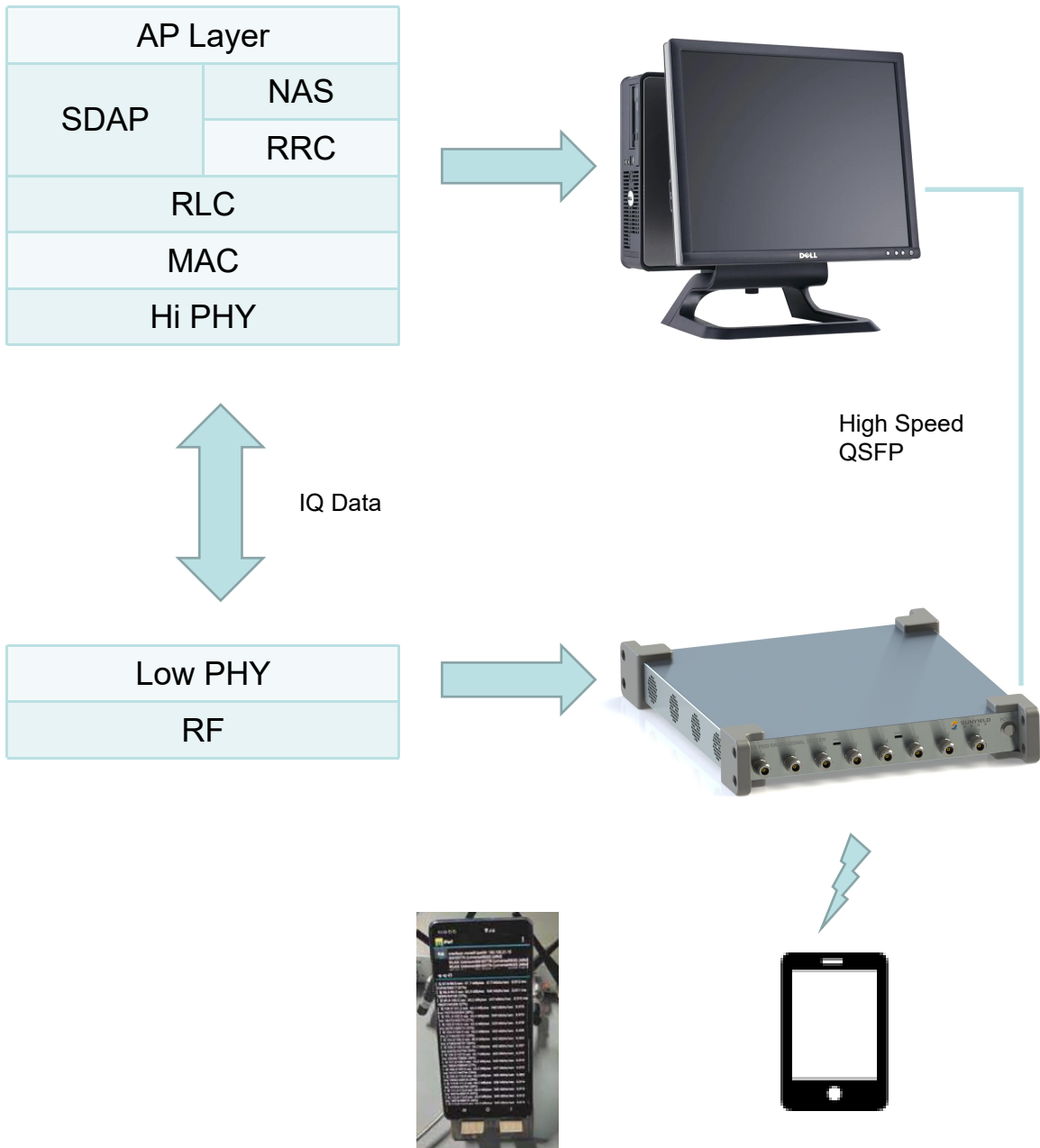
SX-750 can achieve the maximum parallel testing of 32 modules at the same time, which significantly improves the test efficiency.



✦ The Sunyield RF switch matrix U0504 can realize 1 to 4 mapping of RF signals, and map the SX-7500 RF port to a maximum of 32 signals.

Integration Development of Various Wireless Systems

SX-7500 has a wealth of peripheral interfaces and excellent performance, which can be used as a RF hardware integration of software-defined radio to build various high-frequency broadband wireless network equipment.



✦ The Sunyield RF switch matrix U 0504 can realize 1 to 4 mapping of RF signals, and map the SX-7500 RF port to a maximum of 32 signals.

Main Specifications of SX-7500

Frequency Specifications

Frequency	
Frequency range	400MHz -8000MHz
Frequency setting resolution	24GHz-44GHz ("Welzek M8128 is mandatory)
Frequency accuracy	1Hz
	equal to time base accuracy

Signal Generator Specifications

Maximum signal bandwidth	500MHz,Center frequency from 600 MHz to 8000 MHz:
in band amplitude flatness	600MHz to 8000MHz: $< \pm 2$ dB (± 1.5 dB typ.) relative to carrier frequency,over 500 MHz bandwidth, for corrected port
	4000MHz to 8000MHz: $< \pm 1.5$ dB (± 1 dB typ.) relative to carrier frequency, over 160 MHz bandwidth, for corrected port
Output level range	400MHz to 3000MHz:-130dBm to 0 dBm continuous wave (CW)
	3000MHz to 4000MHz:-130dBm to -10 dBm continuous wave (CW)
	4000MHz to 6000MHz:-120dBm to -10 dBm continuous wave (CW)
	6000MHz to 8000MHz:-110dBm to -15 dBm continuous wave (CW)
Output level accuracy	400MHz to 4000MHz: ± 0.6 dB, output level > -80 dBm
	4000MHz to 8000MHz: ± 1.0 dB, output level > -80 dBm
Phase noise	
Carrier offset 1 MHz, single sideband	< -125 dBc,CW output -15 dBm,400 MHz to 8000 MHz
Carrier offset 100 KHz, single sideband	< -95 dBc,CW output -15 dBm,400 MHz to 8000 MHz

Signal Analyzer Specifications

Maximum signal bandwidth	400MHz,Center frequency from 600 MHz to 8000 MHz:
in band amplitude flatness	600MHz to 8000MHz: $< \pm 1$ dB (± 0.5 dB typ.)relative to carrier frequency, over 400 MHz bandwidth
	4000MHz to 8000MHz: $< \pm 0.5$ dB (± 0.3 dB typ.) relative to carrier frequency, over 160 MHz bandwidth
Input level range	$< +34$ dBm CW,cantinuuous input
Input level accuracy	400MHz to 6000MHz: ± 0.6 dB,input level > -50 dBm
	6000MHz to 8000MHz: ± 1.0 dB, input level > -50 dBm
Phase noise	
Carrier offset 1 MHz, single sideband	< -125 dBc,nom.
Carrier offset 100 KHz, single sideband	< -95 dBc,nom.

General Specifications

RF Connectors	1 Channel, 8 full duplex ports, N type
Dimension	Width=346 mm, Height=58.2 mm, Depth=390 mm, including handle and projection
Weight	Approx,7.5 Kg



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Sunyield Technologies CO.LTD, founded in 2011, is the earliest company in China to research near field multi-probes antenna measurement technology. Over the years has focused on the related areas technology innovation and market development, Sunyield service in the domestic most antenna manufacturer, and is committed to become the industry leading manufacturers.

website:



wechat:



For more details please visit us at: www.sunyield.com
or contact us at: [0755-82997688](tel:0755-82997688)

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