



RAPIDTEK

RAPIDTEK TECHNOLOGIES INC.



RF COMPONENTS & TEST ACCESSORIES PRODUCT LINE CARD

From precision RF interconnects to complete test paths
and satellite RF solutions.

DC TO 110 GHz

COMPONENTS

CONNECT ROUTE TEST



RF COMPONENTS - TEST ACCESSORIES

SATELLITE RF

● RF Connector / Adaptor

1.0 mm, 1.35 mm, 1.85 mm, 2.4 mm, 2.92 mm, 3.5 mm,
SMA, N, SMP, SMPM, SMPS

● RF Attenuator / Terminator

Fixed attenuation and RF termination solutions

● RF Coaxial Cable

High-frequency cable assemblies for RF measurement and communication

● Standard Antenna

Horn, Vivaldi, Coupler and Dipole antenna solutions

● RF Divider

1-to-2, 1-to-4 and 1-to-8 way RF dividers

● RF Waveguide

Rectangular waveguide and waveguide-to-coax adaptor products

● RF Tools

RF connector torque wrenches

● RF Switch / Switch Matrix / SSD Switch

Single switches, switch boxes, matrix and customized routing

● RF Up / Down Converter - Testing

Frequency conversion for Wi-Fi 6E/7, Ku, Ka and mmWave testing

● Shielding Box - OTA

Cupid, Apollo, Zeus and Titan OTA shielding boxes

● Shielding Box - Conductive / Fixture

Conductive shielding boxes and customized test fixtures

● LEO Satellite User-Terminal Antenna Module

Tx, Rx and hybrid phased-array antenna modules

● UHF Radio Module for CubeSat

UHF satellite TT&C / CubeSat radio module

● K / Ka Band Radio Module for CubeSat

Integrated SDR / RF communication payload

● RF Up / Down Converter - UT

Satellite user-terminal up / down converter modules

RF Connector / Adaptor

- Frequency range from a few MHz to 110 GHz; 50 ohm RF interconnect solutions.
- Interfaces: 1.0 mm 110 GHz; 1.35 mm 90 GHz; 1.85 mm 67 GHz; 2.4 mm 50 GHz; 2.92 mm 40 GHz; 3.5 mm 34 GHz; SMA/N 18 GHz; SMP 40 GHz; SMPM 65 GHz; SMPS 100 GHz.
- Straight, right-angle, bulkhead, panel-mount, end-launch, PCB-mount and cable-connector configurations.

RF Attenuator / Terminator

- Attenuators cover 10 MHz to 67 GHz with attenuation values up to 50 dB.
- 50 ohm terminators for RF port termination and reflection control; interfaces include SMA/N, 2.92 mm, 2.4 mm and 1.85 mm.
- Designed for signal-level adjustment, impedance matching and RF test applications.

RF Coaxial Cable

- RF cable assemblies for VNA, component test, communications, satellite and aerospace use; frequency coverage up to 110 GHz.
- Families include RPHF-310, RPHF-3614/3613, RPHF-312/314/320/220, RPLL-242/240, RPSFL-5013, RPSF-116L/1511 and RPSRD-6014.
- Options span super-flex, low-loss, high-frequency, semi-flex and semi-rigid cable constructions.

Standard Antenna

- Wideband antenna portfolio approximately 0.6 GHz to 67 GHz for OTA and antenna measurement.
- Horn, Vivaldi, coupler and dipole antenna types; single-port and dual-port configurations.
- Applications include EIRP substitution, source/receive antenna measurement and horizontal/vertical polarization testing.

RF Divider

- Power-divider solutions for 1-to-2, 1-to-4 and 1-to-8 channel distribution.
- Performance up to 40 GHz; power handling below 35 W as specified in the catalogue.
- High isolation, ultra-wideband operation for laboratory testing and antenna applications.

RF Waveguide

- Waveguide and waveguide-to-coax adaptor portfolio up to 110 GHz.
- Bands: WR62 12.4-18; WR51 15-22; WR42 17.6-26.7; WR34 22-33; WR28 26.5-40; WR22 33-50; WR19 40-60; WR15 50-75; WR12 60-90; WR10 75-110 GHz.
- For test setups, instrumentation, transceivers and RF sub-assemblies.

RF Tools

- Preset torque wrenches for precise RF connector tightening and repeatable measurement setup.
- Supported interfaces include 1.0 mm, 1.85 mm, 2.4 mm, 2.92 mm, 3.5 mm, SMA and N series.
- Break-over and click-type designs; catalogue states minimum 5,000-cycle durability.

RF Switch / Switch Matrix / SSD Switch

- RF switching and routing solutions for automatic test and signal monitoring, up to 52 GHz.
- Single switch, expansion paths, multi-switch boxes, full-access matrices and customized combinations.
- Configurations include SPDT, DPDT and SP3T-SP12T; control I/O options include RS232, GPIB, USB and Ethernet.

RF Up / Down Converter - Testing

- Extends sub-6 GHz testers for Wi-Fi 6E/7, UWB, Ku, Ka and mmWave conductive/OTA testing.
- Catalogue options include 6-20 GHz, 20-30 GHz, 30-48 GHz and 60-90 GHz converter ranges.
- Applications cover 3GPP n257/n258/n259/n260/n261, Ku/Ka/U-band and V-band testing.

Shielding Box - OTA

- OTA RF shielding boxes for AP router, smartphone, tablet and notebook test.
- Product sizes: Cupid (Small), Apollo (Medium), Zeus (Large), Titan (Extra Large).
- Isolation specified at >70 dB from 0.6-12 GHz; multiple I/O filter configurations available.

Shielding Box - Conductive / Fixture

- Conductive RF test boxes for Wi-Fi, LTE, Bluetooth and production-line testing with customized fixtures.
- Families: Thor (Medium), Hulk (Large), Iron Man (Medium lifting type).
- Isolation >80 dB at 0.4-2.6 GHz and >70 dB at 2.6-6.0 GHz; AC100-220 V, automatic air-pressure operation.

LEO Satellite User-Terminal Antenna Module

- Ku-band phased-array user-terminal modules with 32 x 32 = 1024 antenna elements and fast beam steering.
- FT1024KU1 Tx: RF 14-14.5 GHz, EIRP up to 45 dBW; FR1024KU1 Rx: RF 10.7-12.7 GHz, G/T up to 11.5 dB/K.
- HD1024KU1 hybrid Tx/Rx version integrates up/down conversion and supports half-duplex operation.

UHF Radio Module for CubeSat

- Half-duplex satellite TT&C transceiver designed for CubeSat applications.
- RF 370-470 MHz; transmit power 1-5 W; 2.4-19.2 kbps Tx/Rx data rate.
- 1-26 programmable channels in 300 Hz steps; FSK/GFSK modulation.

K / Ka Band Radio Module for CubeSat

- Integrated communication payload combining SDR, up/down converter, PA and LNA for bidirectional CubeSat links.
- Tx 18.5-19.5 GHz; Rx 28.0-29.5 GHz; output power >5 W; max operation bandwidth 200 MHz.
- IF range 100 MHz-5 GHz; front-end operation band can be adjusted by design.

RF Up / Down Converter - UT

- RPC-R14I4V2 series full-duplex satellite user-terminal converter with two independent conversion channels.
- Up: RF 14-14.5 GHz, IF 4-4.2 GHz (customizable for L-band); Down: RF 10.7-12.7 GHz, IF 1.8-2.2 GHz.
- Individual LO adjustment plus embedded temperature sensor and power detector.