Data Sheet

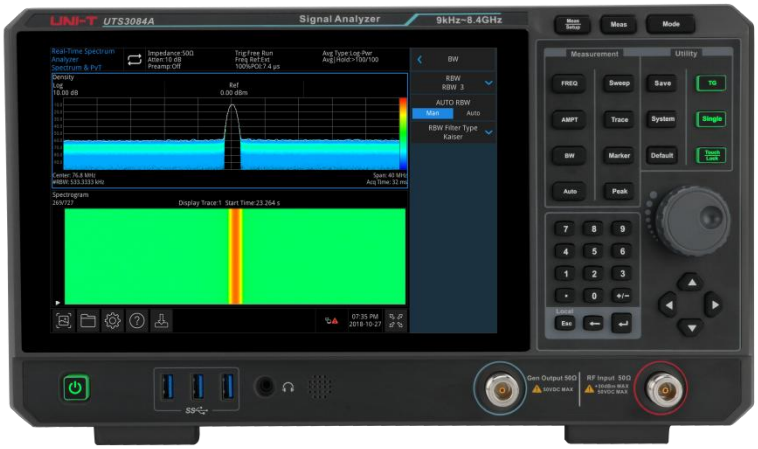
UTS3000A Series Signal Analyzer

V 1.0

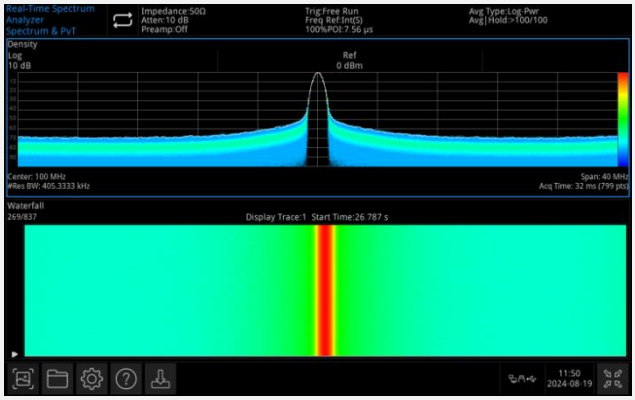
August 2024

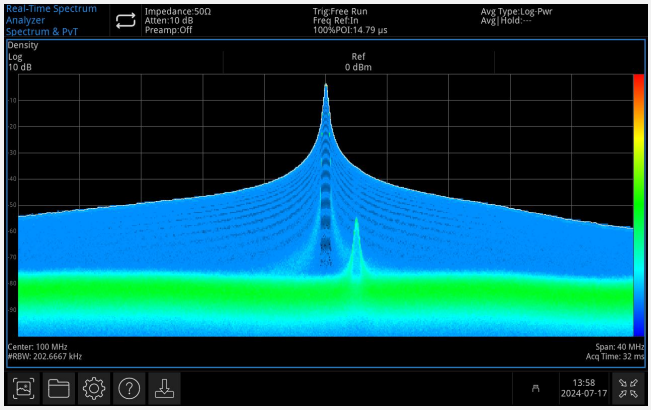
Product Features

- Frequency range: 9 kHz to 8.4 GHz (Max.)
- Displayed average noise level (DANL):-165 dBm/Hz (Typ.)
- Phase noise < -100 dBc/Hz (Offset phase noise: 10 kHz, Typ.)
- Full amplitude accuracy < 0.7 dB
- Sweep Points Up to 40,001
- Minimum resolution bandwidth (RBW): 1 Hz
- Supports tracking generator output and vector network Analysis
- Real-time spectrum Analysis mode provides display methods for both probability density spectrum and spectrum, allowing real-time visualization of measured results
- Various trigger mode and trigger template
- Max. Real-time bandwidth: 40 MHz (Option)
- Supports Advanced function of one key measurement (Option)
- Supports EMI Analysis function (Option)
- Supports Analog Demodulation Analysis (Option)
- Supports Vector Signal Analysis (Option)
- 10.1-inch 1280 × 800 multi-touch HD screen
- Supports SCPI (Standard Commands for Programmable Instruments)



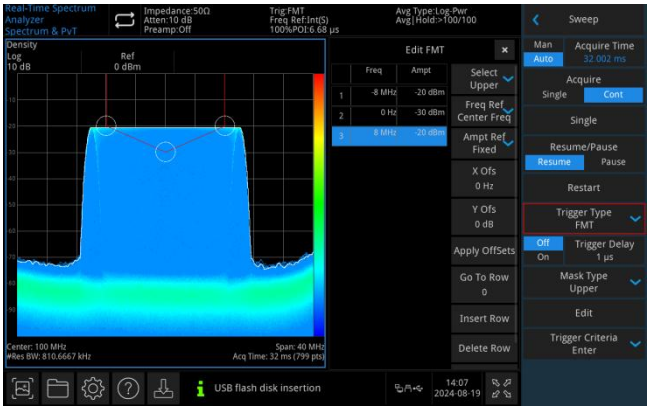
Real-time Frequency Sweep Analysis Mode





Use combined display with density spectrograms for continuous spectral display, visualizing the frequency occurrence of signals and capturing small signals in the presence of larger ones

Frequency Template Trigger

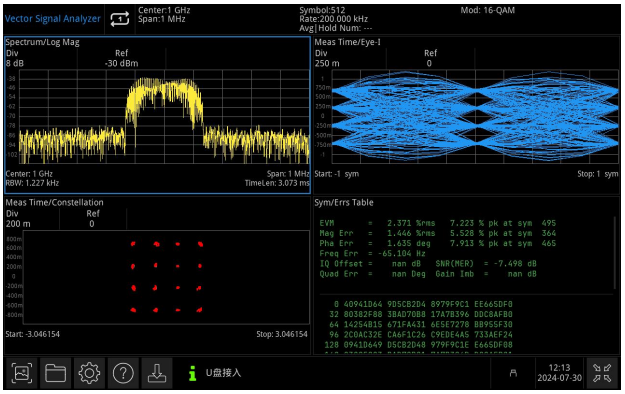


Use the frequency template trigger to generate the measurement of episodic or transient signals.

Excellent Selectivity

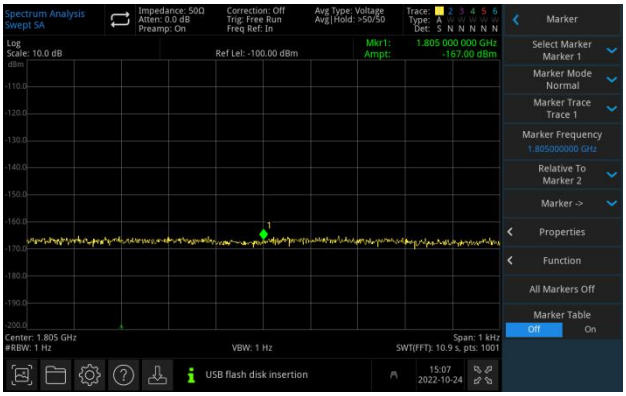
It has a strong capability to distinguish between signals with unequal adjacent amplitudes.

Signal Demodulation Analysis



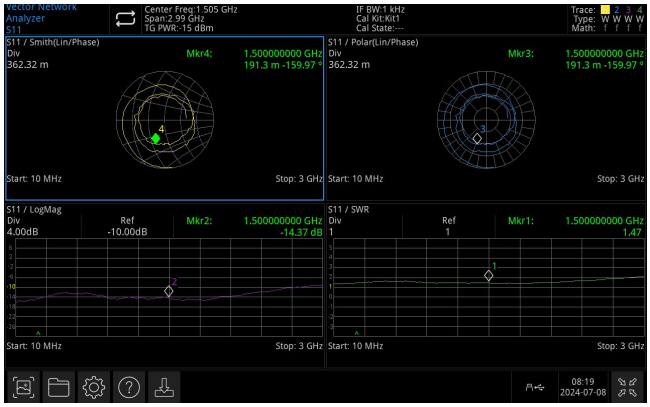
Provides AM, FM, and PM analog signal Analysis; Supports digital signal Analysis for ASK, FSK, PSK, QAM, MSK, DPSK, including EVM calculation.

Excellent Sensitivity to Test Weaker Signals



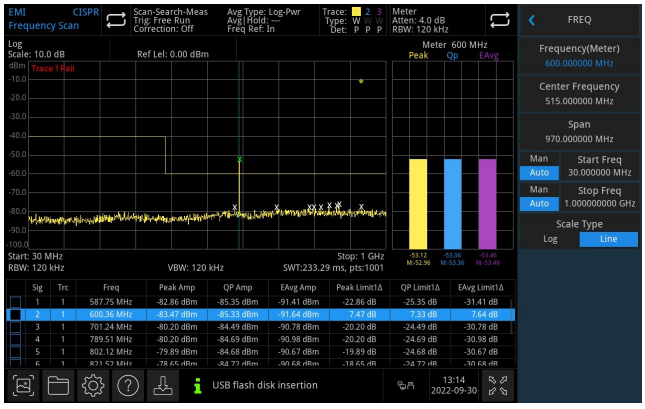
Weak signal testing can be significantly impacted by the noise floor of the spectrum analyzer. With a DANL as low as -165 dBm, UTS3000A series provides excellent sensitivity, enabling effective testing of weak signals.

Vector Network Analysis



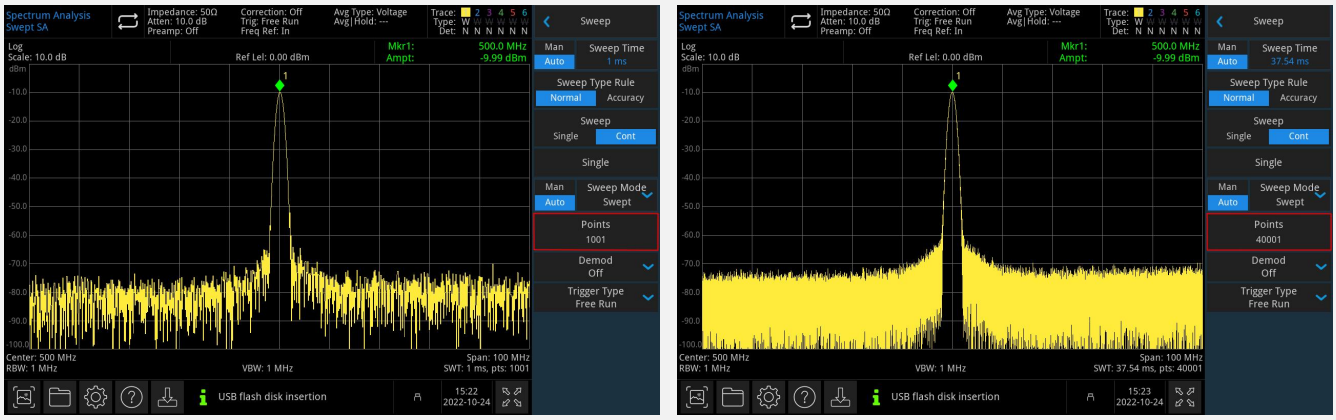
VNA mode allows for precise characterization of the network properties of measured components and circuit networks by measuring S11 and S21 parameters, with various display methods such as Smith charts and polar coordinates. The touch to based interface simplifies the measurement process, enabling users to achieve better results in less time.

EMI Pre-compliance and Conformance Test



Passing electromagnetic interference (EMI) performance testing early can prevent delays in bringing your product to market. To ensure a successful final EMI conformance test, conduct pre-compliance testing during product development. Identifying EMI issues early in the design cycle allows for in to house conducted and radiated emission testing, which can shorten the test cycle.

Sweep Point up to 40,001

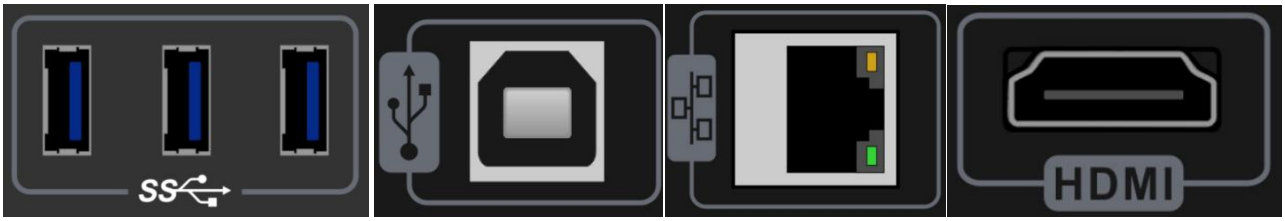


UTS3000A series provides up to 40,001 sweep points, offering higher frequency resolution and making it easier to capture hard-detect signals.

Multi-touch HD screen for quick operation

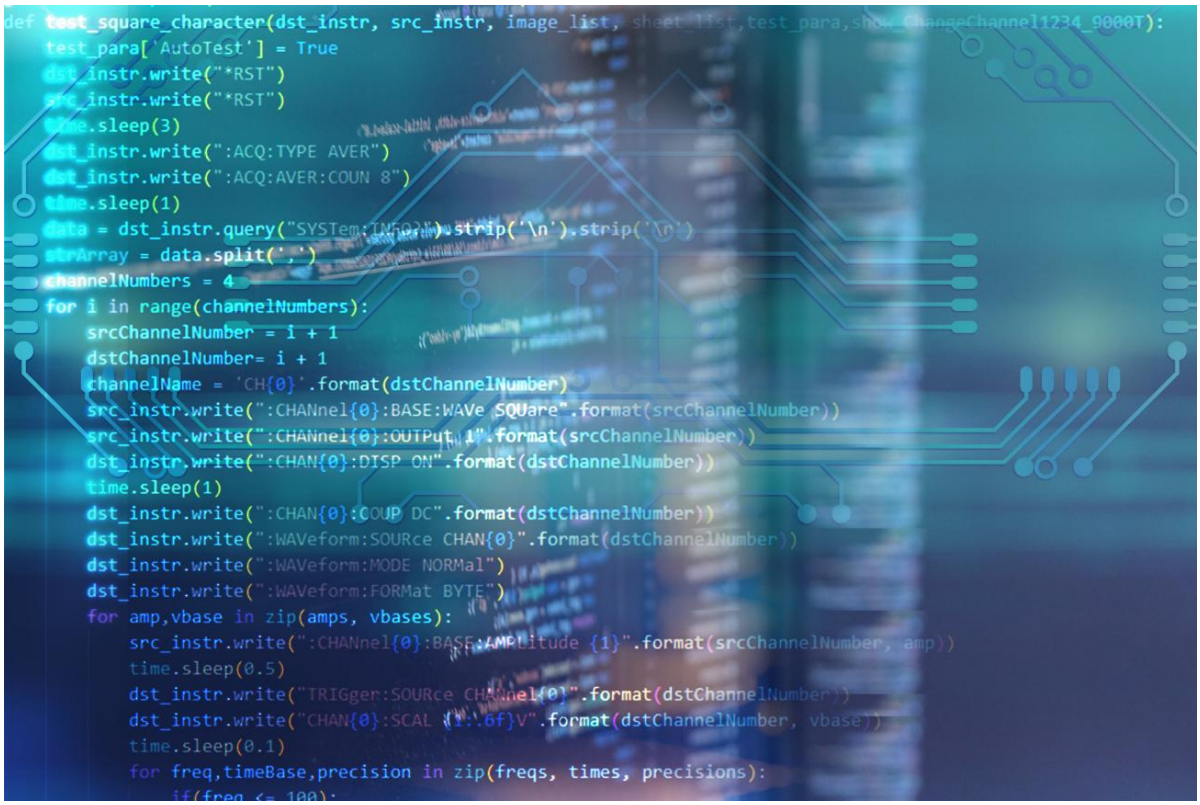
The 10.1-inch multi-touch HD capacitive screen offers quick menu settings and supports various gestures, including dragging, expanding, and zooming on traces. This user to friendly interface enhances human to computer interaction, addressing issues of cumbersome and complex operations.

Various Interfaces



UTS3000A series offers multiple connection options, enhancing flexibility and convenience.

Multiple Control Method

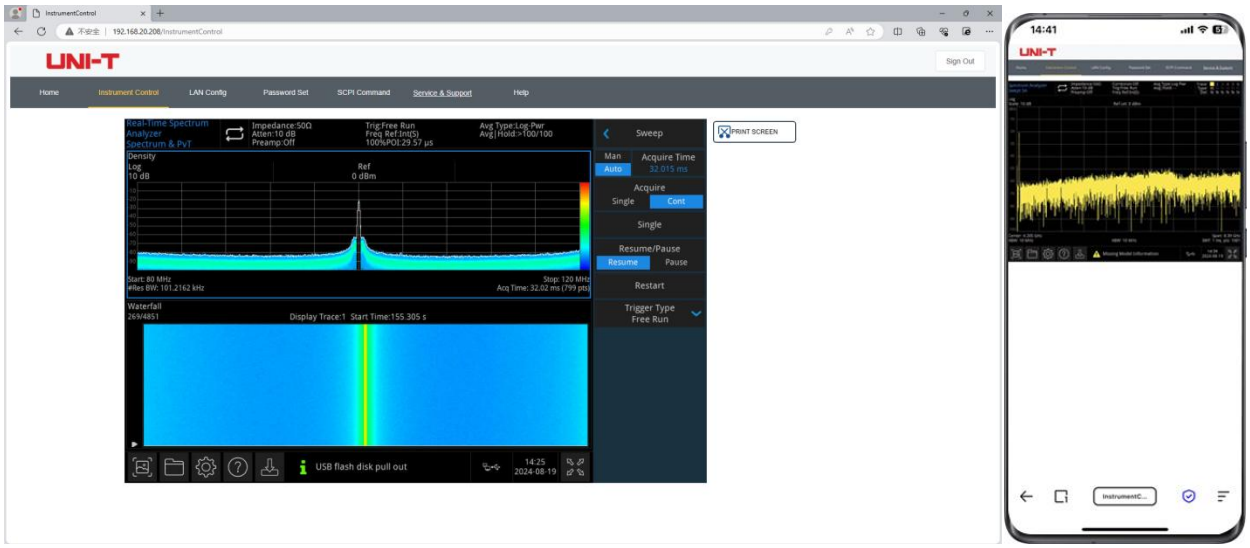


The instrument can be controlled using SCPI commands or through secondary development.

Instrument Management (Free Software provided by UNI-T)

Install the instrument management software on a PC via LAN or USB flash drive to control the instrument.

WebServer



Supports SCPI remote control, remote viewing, and control of exported trace data, as well as other operations. It enables online browsing and use and supports access from both PCs and mobile phones.

Definitions and Conditions

"**Specifications**" describes the performance of the parameters covered by the product warranty. Unless otherwise noted, these specifications apply within the temperature range of 20°C to 30°C. "**Typical Value**" (Typ.) refers to additional performance information that is not covered by the product warranty. When performance exceeds specifications, 80% of units can demonstrate this performance with a 95% confidence level over a temperature range of 20°C to 30°C. Typical performance does not account for measurement uncertainty. "**Nominal Value**" (Nom.) refers to the expected performance or describes product performance useful in applications but not covered by the product warranty.	The analyzer can meet its specifications under the following conditions: The instrument should be within its calibration cycle and warmed up for at least 30 minutes. If the analyzer has been stored within the allowable storage temperature range but outside the allowable operating temperature range, it must be placed within the allowable operating temperature range for at least two hours before use.

Product Function and Model Comparison Table

	UTS3084A	UTS3060A	UTS3036A
Spectrum Analyzer	●	●	●
Real-time spectrum Analyzer	●	●	●
Vector network Analyzer	●	●	●
Tracking generator	●	●	●
I/Q Analyzer	○	○	○
EMI	○	○	○
Analog demodulation	○	○	○
Vector signal Analyzer	○	○	○
Advanced measurement	○	○	○

Note: ● Standard, ○ Option, × Not Available

Frequency and Time Specification

Frequency			
Model	**UTS3084A**	**UTS3060A**	**UTS3036A**
Frequency range	9 kHz to 8.4 GHz	9 kHz to 6 GHz	9 kHz to 3.6 GHz
Resolution	1 Hz		
10 MHz Internal Frequency Reference			
Reference frequency	10.000000 MHz		
Accuracy	± [(Time since last calibration × Frequency aging rate)+ Temperature stability + Initial calibration accuracy]		
Achievable Initial Calibration	< 1 ppm		
Temperature stability	< 1 ppm	5 to +45°C, take 25°C as reference	
Frequency aging rate	0.5 ppm/First year, 3 ppm/Twenty years		
Frequency Readout Accuracy (start, stop, center, and marker)			
Marker resolution	Span / (Sweep point -1)		
Marker frequency uncertainty	± (Marker frequency x Frequency reference accuracy + 1 % x Span + 10 % x RBW+Marker resolution)		
Marker mode	Normal, DeltaΔ, Fixed		
Marker function	Marker Noise, Band Power, Band Density, N dB, Counter		
Counter resolution	1 Hz		
Uncertainty of frequency counter	±[Marker frequency x Frequency reference accuracy+Counter resolution]		
Frequency Span			
Range	0 Hz, 100 Hz to 8.4 GHz	0 Hz, 100 Hz to 6 GHz	0 Hz, 100 Hz to 3.6 GHz
Accuracy	Swept	± [0.25%*Span +Span / (Sweep point -1]	
	FFT	± [0.10%* Span +Span / (Sweep point -1)]	
Sweep time and Trigger			
Sweep time range	1 ms to 4000 s (Span≠0)	1 µs to 4000 s (Span=0)	
Sweep type rule	Normal, accuracy		
Sweep mode	Swept, FFT		
Sweep/Measurement	Continuous, single		
Sweep Trigger	Free Run, External, Video		
External trigger input	5V TTL, rising edge/falling edge		
Resolution Bandwidth (RBW)			
Range (-3.01 dB	1 Hz to 10 MHz, step with 1-3-10		

bandwidth)		
Selectivity	< 4.8:1 (Nom.)	-60 dB: -3 dB
Bandwidth accuracy	< 5% (Nom.)	
Video Bandwidth (VBW)		
VBW range	1 Hz to 10 MHz, step with 1-3-10	
VBW uncertainty	< 5%	

Amplitude Accuracy and Range

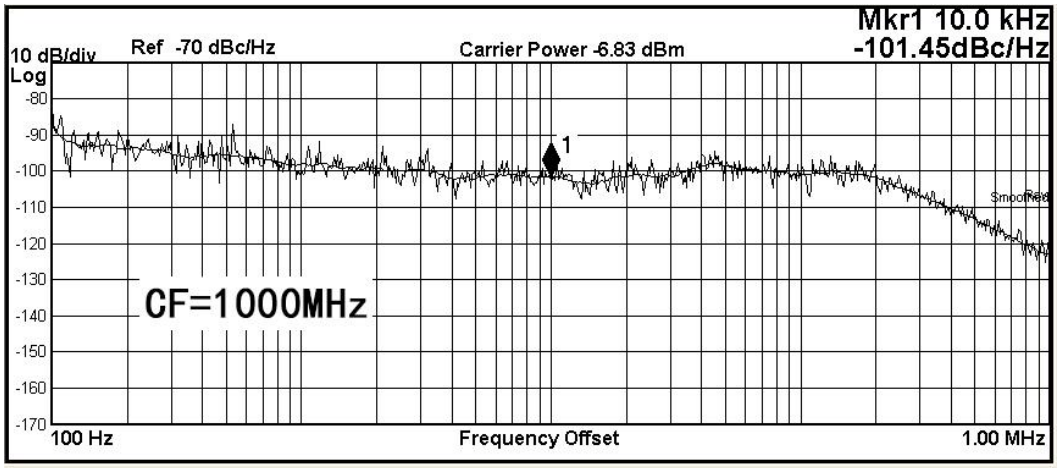
Amplitude Range		
Range	10 MHz to maximum frequency: DANL to +30 dBm	
Reference level	-100 dBm to +30 dBm, step with 1 dB	
Preamp	20 dB (Nom.), 100 kHz to 3.6 GHz (6 GHz, 8.4 GHz)	
Input attenuation	0 to 51 dB, step with 1 dB	
Maximum Damage Level		
DC voltage	50 VDC	Max.
Maximum continuous wave RF power	≤+30 dBm	Input attenuation >20 dB
Display Range		
Log scale	1 dB to 200 dB	
Linear scale	0 to reference level	
Scale units	dBm, dBmV, dBμV, V, W	
Sweep (trace) point range	40,001	
Number of traces	6	
Detection mode	Peak, negative peak, sample, normal, average	
Trace type	Refresh, trace average, max. hold, and min. hold	
Frequency Response		
20°C to 30°C, 30% to 70% RH., Input attenuation 20 dB, relative to 50 MHz		
Preamp off	9 kHz to 3.6 GHz	± 0.6 dB; ± 0.3 dB (Typ.)
	3.6 GHz to 8.4 GHz	± 0.8 dB; ± 0.6 dB (Typ.)
Preamp on	100 kHz to 3.6 GHz	± 1.0 dB; ± 0.8 dB (Typ.)
	3.6 GHz to 8.4 GHz	± 1.2 dB; ± 1.0 dB (Typ.)
Error and Accuracy		
Resolution bandwidth switching uncertainty	Relative to a 10 kHz RBW, logarithmic resolution ± 0.2 dB, linear resolution ± 0.01 (Nom.)	
Input attenuation switching	20°C to 30°C, fc=50 MHz, Preamp off, relative to 20 dB	

uncertainty	attenuation, input attenuation: 1 to 51 dB
	± 0.5 dB
Absolute amplitude accuracy	20°C to 30°C, fc=50 MHz, RBW=1 kHz, VBW=1 kHz, peak detection, input attenuation: 20 dB
	± 0.4 dB, input signal level: -20 dBm, Preamp off
	± 0.5 dB, input signal level: -40 dBm, Preamp on
Total absolute amplitude accuracy	20°C to 30°C, fc>100 kHz, input signal level: -50 dBm to 0 dBm, RBW=1 kHz, VBW=1 kHz, peak detection, input attenuation: 20 dB, Preamp off, 95% reliability
	± (0.4 dB + Frequency response)
Input voltage standing wave ratio (VSWR)	< 1.8 (Nom.)

Dynamic Range Specifications

1 dB Gain Compression Point		
	20°C to 30°C, fc≥ 50 MHz, input attenuation 0 dB, Preamp off	
	> - 5 dBm (Nom.)	
Displayed Average Noise Level (DANL)		
20°C to 30°C, input load, 0 dB RF attenuation, RBW=1 Hz, sample or average detection, trace average > 50		
Preamp off	100 kHz to 500 kHz	-120 dBm (Nom.)
	500 kHz to 1 MHz	-125 dBm, -128 dBm (Typ.)
	1 MHz to 10 MHz	-130 dBm, -132 dBm (Typ.)
	10 MHz to 200 MHz	-145 dBm, -150 dBm (Typ.)
	200 MHz to 1.5 GHz	-145 dBm, -148 dBm (Typ.)
	1.5 GHz to 3.2 GHz	-143 dBm, -146 dBm (Typ.)
	3.2 GHz to 4.5 GHz	-142 dBm, -145 dBm (Typ.)
	4.5 GHz to 6.2 GHz	-140 dBm, -143 dBm (Typ.)
	6.2 GHz to 7.5 GHz	-138 dBm, -143 dBm (Typ.)
	7.5 GHz to 8.4 GHz	-139 dBm, -141 dBm (Typ.)
Preamp on	100 kHz to 500 kHz	-135 dBm (Nom.)
	500 kHz to 1 MHz	-140 dBm, -145 dBm (Typ.)
	1 MHz to 10 MHz	-150 dBm, -153 dBm (Typ.)
	10 MHz to 200 MHz	-162 dBm, -166 dBm (Typ.)
	200 MHz to 1.5 GHz	-162 dBm, -165 dBm (Typ.)

	1.5 GHz to 3.2 GHz	-160 dBm, -162 dBm (Typ.)
	3.2 GHz to 4.5 GHz	-157 dBm, -160 dBm (Typ.)
	4.5 GHz to 6.2 GHz	-155 dBm, -158 dBm (Typ.)
	6.2 GHz to 7.5 GHz	-158 dBm, -160 dBm (Typ.)
	7.5 GHz to 8.4 GHz	-155 dBm, -158 dBm (Typ.)
Spurious Responses		
Second harmonic distortion (SHI)/	20°C to 30°C, Preamp off, signal input -30 dBm, 0 dB RF attenuation	
	fc≥ 50 MHz	-65 dBc/+35 dBm
Third-order intermodulation (TOI)	20°C to 30°C, Preamp off, signal input -20 dBm, 0 dB RF attenuation, fc≥ 50 MHz	
	+10 dBm; +13 dBm (Nom.)	
Input related spurious	20°C to 30°C, mixer level -30 dBm	
	< -60 dBc	
Residual response	20°C to 30°C, input port 50 Ω, input attenuation 0 dB	
	< -90 dBm	
Phase Noise		
20°C to 30°C, Fc=1 GHz, RBW=1 kHz, VBW=10Hz, sample detection, trace average > 50		
Offset		
10 kHz	-96 dBc/Hz, -100 dBc/Hz (Typ.)	
100 kHz	-96 dBc/Hz, -100 dBc/Hz (Typ.)	
1 MHz	-110 dBc/Hz, -112 dBc/Hz (Typ.)	



Freq Offset	Trace1	Trace2	Trace3
100 Hz	-80.40 dBc/Hz	-84.70 dBc/Hz	---
1.00 kHz	-99.72 dBc/Hz	-97.88 dBc/Hz	---
10.0 kHz	-101.61 dBc/Hz	-101.45 dBc/Hz	---
100 kHz	-101.85 dBc/Hz	-100.88 dBc/Hz	---
1.00 MHz	-118.57 dBc/Hz	-122.65 dBc/Hz	---

Tracking Generator Specifications

Output frequency			
Model	**UTS3084A**	**UTS3060A**	**UTS3036A**
Range	100 kHz to 6 GHz	100 kHz to 6 GHz	100 kHz to 3.6 GHz
Frequency resolution	10 Hz		
Output power level			
Range	-40 dBm to 0 dBm		
Resolution	0.5 dB		
Output flatness	Relative to 50 MHz		
	± 3 dB		
Maximum safe reverse input level			
Average total power	30 dBm		
AC coupling	± 50 VDC		

Vector Network Analyzer

Measurement Settings			
Model	**UTS3084A**	**UTS3060A**	**UTS3036A**
Frequency range	100 kHz to 6 GHz	100 kHz to 6 GHz	100 kHz to 3.6 GHz
Measurement type	Reflection (S11), transmission (S21)		
IF BW (Intermediate Frequency Bandwidth)	100 Hz to 1 MHz		
Measurement point	101 to 10,001, default 201		
Trace type	Trace memory, trace operation, refresh, trace average, max. hold, and min. hold		
Marker number	10		
Mechanical calibration parts	Open, Short, Load, Through, Custom		
S21 Measurement			
Port output power	0 dBm to -40 dBm (Nom.)		
Trace format	Linear amplitude, logarithmic amplitude, real part, and imaginary part		
Amplitude range	-500 G to 500 G		
Amplitude resolution	Logarithm: 0.5 ndB Linear: 0.01 μ		
Dynamic range	S21, RBW=10 kHz, reference position=0, logarithmic amplitude, Average=50		
	80 dB (Nom.)		

S11 Measurement	
Port output power	0 dBm to -40 dBm (Nom.)
Trace format	Logarithmic amplitude, linear amplitude, phase, group delay, standing-wave ratio (SWR), real part, imaginary part, extended phase, and positive phase; Smith chart (linear/phase, logarithm/phase, real part/ imaginary part, R+jx, and G+jb); Polar coordinate diagram (linear/phase, logarithm/phase, and real part/ imaginary part)
Amplitude range	-500G to 500G
Amplitude resolution	Logarithm: 0.5 ndB Linear: 0.01 μ
SWR range	-500 G to 500 G
Direction after calibrated	S11, logarithmic amplitude, Average=50
	> 40 dB (Nom.)

Real-time Spectrum Analyzer

Frequency and Time Accuracy			
Real-time Analyzer Bandwidth	10 MHz		
	40 MHz (Option UTS3000A-B40)		
Min. Signal Duration for 100% POI at the Full-Scale Accuracy	Maximum Span, default window: Kaiser		
	6.68 μs		
Detection mode	Peak, negative peak, sample, and average		
Number of traces	12		
RBW filter type	Hanning, Blackman-harris, rectangle, flat top, Kaiser, Gaussian		
Display trace	Normal, Density, Spectrogram, PvT, PvT Spectrum, PvT Spectrogram, Powergram, Powergram Spectrogram		
Resolution bandwidth	Provides 6 RBW options for each window, except the rectangle window		
	Kaiser window		
	Span	Min. bandwidth	Max. bandwidth
	40 MHz	133.3324 kHz	4.2716 MHz
	25 MHz	66.6662 kHz	2.1358 MHz
	10 MHz	33.3331 kHz	1.0679 MHz
	1 MHz	3.3333 kHz	106.7894 kHz
	100 kHz	333.3309 Hz	10.6789 kHz

Max. sampling rate	51.2 Msa/s					
FFT rate	146,253/s (Nom.)					
Number of Markers	10					
Amplitude resolution	0.01dB					
Frequency point	799					
Acquisition time	Max. Sample rate, > 62.422 μs					
Min. Signal Duration for 100% POI at Different RBWs						
	Duration time (μs)					
Span	RBW1	RBW2	RBW3	RBW4	RBW5	RBW6
40 MHz	29.57	14.79	7.56	6.68	6.68	6.68
25 MHz	43.95	21.95	11.8	7.58	6.72	6.72
10 MHz	76.8	38.36	20.23	11.8	7.58	6.72
1 MHz	684.38	342.19	172.66	88.28	46.09	25
Amplitude						
Amplitude flatness (Normal spectrum)	± 0.6 dB (Nom.)					
SFDR	< -60 dBc (Typ.)					
Probability Density Display						
Probability range	0 to 100% (with a step of 0.1%)					
Min. span	5 kHz					
Duration	32 ms to 10 s					
Spectrogram						
History Depth	10,000					
Dynamic Range Covered by Bitmap Color	200 dB					
PVT						
Min. Acquisition time	62.422 μs					
Max. Acquisition time	100 s					
Trigger						
Trigger source	Free run, external trigger, power (time), FMT					
Frequency Mask Template Trigger (FMT)						
Trigger delay	0 s to 500 ms					
Mask type	Upper, Lower, and Both					
Trigger resolution	0.5 dB (Nom.)					
Trigger Criteria	Enter, Leave, Inside, Outside, Enter-Leave, Leave-Enter					

Analog Demodulation Analyzer (Option)

Demodulation		
Frequency range	2 MHz to 8.4 GHz	
Carrier power accuracy	± 2 dB	
Input power	-30 dBm to +20 dBm	Auto attenuation
Carrier power resolution	0.01 dBm	
AM		
Modulation frequency	20 Hz to 100 kHz	
Accuracy	1Hz (Nom.)	Modulation frequency < 1 kHz
	< 0.1% modulation frequency (Nom.)	Modulation frequency ≥ 1 kHz
Depth	5 to 95%	
Accuracy	± 4% (Nom.)	
FM		
Modulation frequency	20 Hz to 100 kHz	
Accuracy	1Hz (Nom.)	Modulation frequency < 1 kHz
	< 0.1% modulation frequency (Nom.)	Modulation frequency ≥ 1 kHz
Frequency offset	1 kHz to 400 kHz	
Accuracy	± 4% (Nom.)	
PM		
Modulation frequency	20 Hz to 100 kHz	
Accuracy	1 Hz (Nom.)	Modulation frequency < 1 kHz
	< 0.1% modulation frequency (Nom.)	Modulation frequency ≥ 1 kHz
Phase offset	0.2 to 6.28 rad	
Accuracy	± 4% (Nom.)	

Vector Signal Analyzer (Option)

Measurement Function	
Modulation type	ASK: 2ASK, 4ASK, 8ASK, and 16ASK
	FSK: 2FSK, 4FSK, 8FSK, and 16FSK
	MSK: Type1, Type2
	PSK: BPSK, QPSK, OQPSK, and 8PSK

	BPSK, QPSK, 8BPSK; DQPSK, D8PSK, π/4-DQPSK, π/8-D8PSK, and OQPSK
	QAM: 16, 32, 64, 128, and 256
Measurement symbol length	10 to 4,096
Symbol point/over-sampling rate	4, 6, 8, 10, 12, 14, 16, 20
Symbol rate	1 ksps to Analyzer bandwidth /symbol point
Filter	
Measurement Filter type	No Filter, RRC, Gaussian, EDGE, CDMA and Rectangular
Reference Filter type	Raised Cosine, RRC, Gaussian, EDGE, CDMA, and Rectangular
Filter length	2 to 128
Alpha/BT	0.05 to 1
Display	
Data	IQ measurement time domain, IQ measurement time
	IQ reference time domain, IQ reference frequency domain
	Symbol error statistics, error vector time domain, and error vector frequency domain
	Time domain, IQ amplitude error, and IQ phase error
Format	logarithmic amplitude, linear amplitude, real part, and imaginary part
	IQ diagram, constellation diagram, I (eye diagram), and Q (eye diagram)
	Phase diagram, Phase extension diagram, and phase tree-like diagram
Symbol Error Statistics	
PSK/DPSK/MSK/QAM	EVM (rms EVM, peak EVM), and Magnitude error
	Phase error, IQ offset, Carrier offset, and SNR Quadrature error
	Gain imbalance (not support for MSK)
ASK	ASK Error, ASK depth, and carrier offset
FSK	FSK Error, Magnitude error, FSK deviation, and carrier offset

I/Q Analyzer (Option)

Frequency	
Frequency range	50 Hz to 8.4 GHz
Resolution Bandwidth (Spectrum Measurement)	
Range	1 Hz to 10 MHz

Window shape	Flat top, Hanning, Gaussian, Blackman, Blackman to Harris		
Analyzer Bandwidth			
Standard	100 Hz to 40 MHz		
Frequency Response for Medium Frequency (demodulation and FFT response related to the center frequency, 20°C to 30°C)			
Center frequency (GHz)	Span (MHz)	Max. error	RMS (Nom.)
≤ 3.0	≤ 10	± 0.4 dB	0.03 dB
Intermedium Frequency Phase Linear Degree (Average Phase Linearity Offset, Nom.)			
Center frequency (GHz)	Span (MHz)	Peak-to-peak	RMS (Nom.)
≤3.0	≤10	0.5°	0.2°
3.0 < f≤7.5	≤10	0.5°	0.4°
Data Acquisition (standard 40 MHz intermedium frequency path) Time Recording Length			
IQ analyzer	8,000,000 IQ sampling pair		
Sampling rate	51.2 MSa/s		
ADC resolution	14 bits		

EMI (Option)

EMI Resolution Bandwidth	
Resolution Bandwidth (-6dB)	200 Hz, 9 kHz, 120 kHz, and 1 MHz
Resolution bandwidth uncertainty	<5% (Nom.)
EMI Detector	
EMI detector	Peak, Negative , Quasi Peak, EMI Average, Average
EMI Main Functions	
Main Functions	EMI measurement standard:CISPR
	View: Scan table, Meter, Signal table
	Meter control
	Avg settings
	Limit: AS-NZS, BellCore, DEF-STAN, DO-160, EN, FCC, GB9254, MIL-461, VCCI and Custom
	Signal table settings

	Scan table settings
	Scan Sequence: Scan, Search, Scan-Search-Meas, Scan-Search, Search-Meas, Measure
	Sig Detector
	Output port

Advanced Measurement (Option)

Power Measurement	
Channel power	Channel power, power spectral density
Adjacent channel power (ACP)	Main channel power, lower power/ power ratio, higher power/ power ratio
Occupied bandwidth (OBW)	Occupied bandwidth, total power, transmit frequency error
Time domain power	Zero span time integrated power
Carrier noise ratio (CNR)	Carrier power, noise power, carrier noise ratio
Non-Linear Measurement	
Third-order intermodulation (TOI)	Based on dual-tone peak search
Harmonic Measurement	Max. harmonic 10
Spectrum Monitor	
Spectrogram	

Interface and Display

Common Interface	
RF input (front panel)	50 Ω, N-type female connector, (nom.)
Tracking generator (front panel)	50 Ω, N-type female connector, (nom.)
10 MHz reference input	10 MHz, > 0 dBm, 50 Ω, BNC-type connector, (nom.)
10 MHz reference output	10 MHz, -5dBm to +10 dBm, 50 Ω, BNC-type connector, (nom.)
External trigger input	TTL, BNC-type connector
HDMI	HDMI 1.4 display port
USB to Host	USB-A
USB to Device	USB-B
LAN	LAN (VXI-11), 10/100/1000 Base, RJ-45
Audio interface	3.5 mm

Remote Control	
Remote control interface	LAN, USB-TMC
Remote control capability	SCPI: USB-TMC, Socket, and VXI-11; Web Browser, Labview, and NI-AX; Device Manager (V2.5.0 and higher)
Display Screen	
Display screen	10.1-inch multi-touch HD screen
Display resolution	1280×800, RGB Vertical pixel

General Specification

Specification		
Power voltage	100 to 240 VAC (fluctuation:± 10%)	100 to 120 VAC (fluctuation: ± 10%)
Frequency	50/60 Hz	400 Hz
Operational Environment		
Temperature range	Operating: 0°C to +40°C	
	Non-operating: -20°C to +70°C	
Cooling method	Fan-forced cooling	
Humidity range	Operating: Below +35°C, ≤ 90% RH.; Non-operating: +35°C to +40°C, ≤ 60% RH.	
Altitude	Operating:Below 3000 meters; Non-operating: Below 15, 000 meters	
Pollution degree	2	
Operating environment	Indoor	
Machinery specification		
Dimensions	378 mm × 218 mm× 120 mm (W×H×D)	
Weight	4.96 kg	
Calibration cycle	One year	
Regulation and Compliance		
EMC	EMC (2014/30/EU), IEC 61326-1:2021/EN61326-1:2021, IEC 61326-2-1:2021/EN61326-2-1:2021	
Conducted Emission (CE)	CISPR 11/EN 55011	CLASS B group 1, 150 kHz to 30 MHz
Radiation disturbance	CISPR 11/EN 55011	CLASS B group 1, 30 MHz to 1 GHz
ESD	IEC 61000-4-2/EN 61000 -4-2	4.0 kV (Contact)), 8.0 kV (Air)
RF electromagnetic field	IEC 61000-4-3/EN 61000	0 V/m (80 MHz to 1 GHz);

immunity	-4-3	3 V/m (1.4 GHz to 2 GHz); 1 V/m (2.0 GHz to 2.7 GHz)
Electrical fast transients/bursts (EFT)	IEC 61000-4-4/EN 61000-4-4	2 kV (AC input)
Surge	IEC 61000-4-5/EN 61000-4-5	1 kV (Live line to zero line) 2 kV (Live/zero line to ground)
RF continuous conducted immunity	IEC 61000-4-6/EN 61000-4-6	3 V, 0.15 to 80 MHz
Voltage dips and short interruptions	IEC 61000-4-11/EN 61000 -4-11	Voltage dips: 0% UT during 1 cycle; 40% UT during 10/12 cycles; 70% UT during 25/30 cycles Short interruption:0% UT during 250/300 cycles
Safety Specification		
	EN 61010-1:2010+A1:2019 EN IEC61010-2-030:2021+A11:2021 BS EN61010-1:2010+A1:2019 BS EN IEC61010-2-030:2021+A11:2021 UL 61010-1:2012 Ed.3+ R:19 Jul2019 UL 61010-2-030:2018 Ed.2 CSA C22.2#61010-1:2012 Ed.3+U1;U2;A1 CSA C22.2#61010-2-030:2018 Ed.2	

Accessories, Options and Warranty Period

	Description	Order No.
Models	Signal spectrum analyzer, 9 kHz to 3.6 GHz	UTS3036A
	Signal spectrum analyzer, 9 kHz to 6.0 GHz	UTS3060A
	Signal spectrum analyzer, 9 kHz to 8.4 GHz	UTS3084A
Standard accessories	Power cable x1	
	USB data cable x1	UT-D14
Options		
Options	Advanced measurement	UTS3000A-AMK
	EMI measurement	UTS3000A-EMI
	Analog demodulation Analyzer	UTS3000A-AMA
	Vector signal Analyzer	UTS3000A-VSA

	I/Q Analyzer	UTS3000A-I/Q
Bandwidth options	Real-time Analyzer bandwidth B40	UTS3000A-B40
Calibration kit	Vector network Analyzer calibration kit (frequency range:DC to 9 GHz)	UT-3009F/M
UT-CK01 accessories kit	SMAJ-NJ-0.7M DC-6G cable x1	UT-W02-6 GHz
	NJ-NJ-0.7M DC-6G cable x1	UT-W01-6 GHz
	Adaptor SMA-N-KJ-T DC-6 GHz x2	UT-C01-6 GHz
	Adaptor N-BNC-JK DC-4 GHz x2	UT-C02-4 GHz
	Antennae 2400 MHz-2500 MHz x2	UTS-T01
	Antennae 824-960 MHz/1710-1990 MHz x2	UTS-T02
UTS-EMI01 Near-field probes kit	50 Ω-SMA-SMB cable x1	UT-W03
	Adaptor SMA-N-KJ-T DC-6 GHz x1	UT-C01
	Near field probe, frequency range: 30 MHz to 3 GHz, detection range 10CM x1	NFP-3G-P1
	Near field probe , frequency range: 30 MHz to 3 GHz, detection range 3CM x1	NFP-3G-P2
	Near field probe, frequency range: 30 MHz to 2 GHz, resolution 5mm x1	NFP-2G-P3
	Near field probe, frequency range: 30 MHz to 3 GHz, resolution 2mm x1	NFP-3G-P4

Note: For all main products, accessories, and options, please order from your local UNI-T distributor.

Options ordering and installation

1. **Purchase options:** Based on your requirements, please purchase the specified function options from Uni-t Sales Personnel and provide the serial number of the instrument that needs the option installed.
2. **Receive certificate:** You will receive the license certificate based on the address provided in the order.
3. **Register and obtain license:** Visit the Uni-t official website license activation session for registration. Use the license key and instrument serial number provided in the certificate to obtain the option license code and license file.
4. **Install the option:** Download the option license file to the root directory of a USB storage device, and connect the USB storage device to the instrument. Once the USB storage device is recognized, the Option Install menu will be activated. Press this menu key to begin installing the option.

Limited Warranty and Liability

Uni-T guarantees that the Instrument product is free from any defect in material and workmanship within three years from the purchase date. This warranty does not apply to damages caused by accident, negligence, misuse, modification, contamination or improper handling. If you need warranty service within the warranty period, please contact your seller directly. Uni-T will not be responsible for any special, indirect, incidental or subsequent damage or loss caused by using this device. For the probes and accessories, the warranty period is one year. Visit instrument.uni-trend.com for full warranty information.

Register your product to confirm your ownership. You will also get product notifications, update alerts, exclusive offers and all the latest information you need to know.

Headquarter

Uni-Trend Technology (China) Co., Ltd.

Addresses: No.6, Industrial North 1st Road, Songshan Lake Park, Dongguan City, Guangdong Province, China

Tel: (86-769) 8572 3888

Europe

UNI-TREND TECHNOLOGY EU GmbH

Addresses: Affinger Str. 12 86167 Augsburg Germany

North America

Uni-Trend Technology US INC.

Addresses: 3171 Mercer Ave STE 104, Bellingham, WA 98225

Tel: +1-888-668-8648