

MP5000

Wireless Test Station

PRODUCT BROCHURE

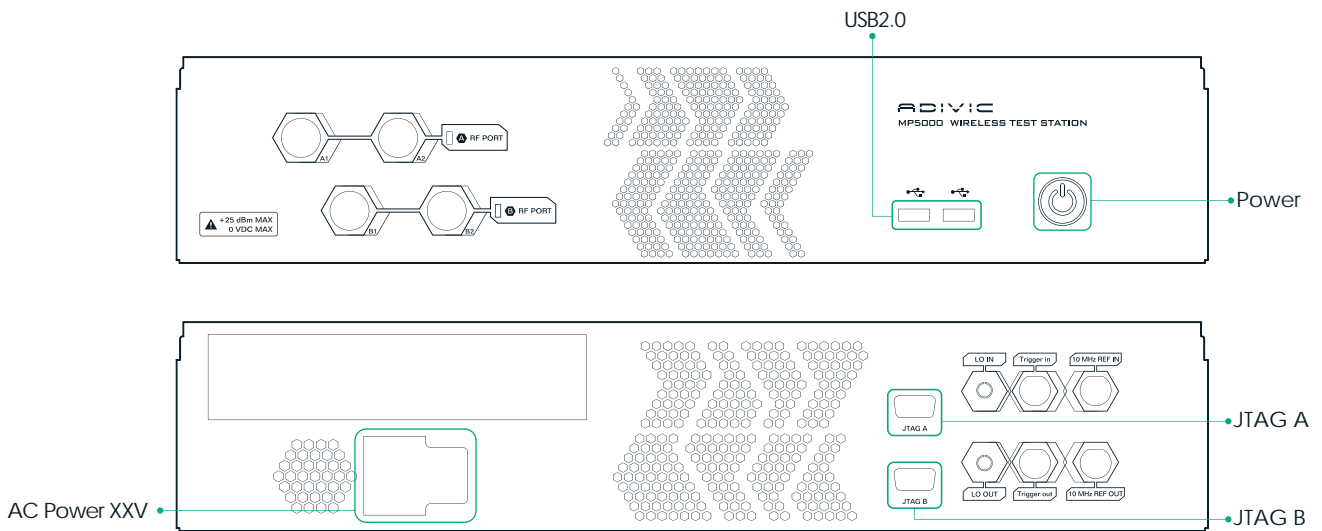
ADIVIC
— RF TEST & MEASUREMENT —

MP5000

Wireless Test Station

Features

1. Software Defined Radio(SDR) architecture with VSG/VSA in one box
2. Support 802.11ac, 802.11a/b/g/n standards
3. Support Bluetooth V1.x/V2.x/V3.x EDR/V4.x BLE
4. Signal measurement engine in box
5. User friendly GUI for R&D/QA applications
6. API for production automation programming
7. Turn-key production automation software support upon request



Mechanical
 Dimensions : L:480mm X W:425mm X H:89mm
 Weight : 12Kg



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MP5000 General Technical Specifications

>> RF Analyzer

Parameter	Specifications
Input Frequency Range	2150~2600 MHz, 4900~6000 MHz optional 300KHz~6GHz full band
RF Port number	2 Ports
IF bandwidth	120 MHz
Max input power	+30 dBm peak, +20 dBm average
Input power accuracy @(+20 to -75 dBm)	+/-0.75 dB (+/-0.5 dB Typ) +/-1.0 dB @ 0 °C ~ 50°C
Phase Noise	Phase noise <-100dBc: 1 KHz offset @2.4 GHz Phase noise <-95dBc: 1 KHz offset @5.8 GHz
LO Leakage (after self-calibration)	< -50 dBc
sideband image (IQ-imbalance) @after self-calibration	<-50dBc @ 2.4GHz, -10dBm <-50dBc @ 5.8GHz, -10dBm
Third order input inter-modulation distortion(IMD3)	< -70dBc@-10 dBm
Input Return loss	> 10 dB 2150~2600 MHz > 12 dB 4900~6000 MHz
ADC resolution	16 Bits
Sample rate	160 MS/s
Initial achievable accuracy	+/-50 ppb maximum (OCXO) @25 °C, after 60 minutes warm up
Temperature stability	+/-20 ppb maximum(OCXO) @0 °C ~50 °C
Aging	+/-1 ppb / day maximum (OCXO) +/-100 ppb / yr maximum (OCXO)
Operating Temperature	0 °C to 50 °C
Operating Voltage	100 V to 240 V
Warm-up time	> 30 minute

>> RF Generator

Parameter	Specifications
Output Frequency Range	4900~6000 MHz, 2150~2600 MHz optional 300KHz~6GHz full band
IF bandwidth	120 MHz
Max Output power@ CW	+10 dBm @ 2150~2600 MHz +7 dBm @ 4900 ~ 6000 MHz
Power Accuracy@(0 to -95 dBm)	+/-0.75 dB (+/- 0.5 dB Typ) +/-1.0 dB @ 0 °C ~ 50 °C
Phase Noise	Phase noise <-100 dBc: 1 KHz offset @ 2.4 GHz Phase noise <-95 dBc: 1 KHz offset @ 5.8 GHz
LO leakage(DC offset) @after self-calibration	< -50 dBc @ 2.4 GHz, -10 dBm < -50 dBc @ 5.8 GHz, -10 dBm
sideband image (IQ-imbalance) @after self-calibration	< -50 dBc @ 2.4 GHz, -10 dBm < -50 dBc @ 5.8 GHz, -10 dBm
Third order inter-modulation distortion(IMD3)	<-60dBc@-10dBm(two -13dBm Tone)
Return loss	> 10 dB 2150 ~ 2600 MHz > 12 dB 4900 ~ 6000 MHz
DAC resolution	16 Bits
Sample rate	960 MS/s
Initial achievable accuracy	+/- 50 ppb maximum (OCXO) @ 25 °C, after 60 minutes warm up
Temperature stability	+/- 20 ppb maximum (OCXO) @ 0 °C ~ 50 °C
Aging	+/-1 ppb / day maximum (OCXO) +/-100 ppb / yr maximum (OCXO)
Operating Temperature	0 °C to 50 °C
Operating Voltage	100 V to 240 V
Warm-up time	> 30 minute

* Test condition Temperature : 15 °C ~ 35°C

Voltage : 100 V to 240 V

MP5000

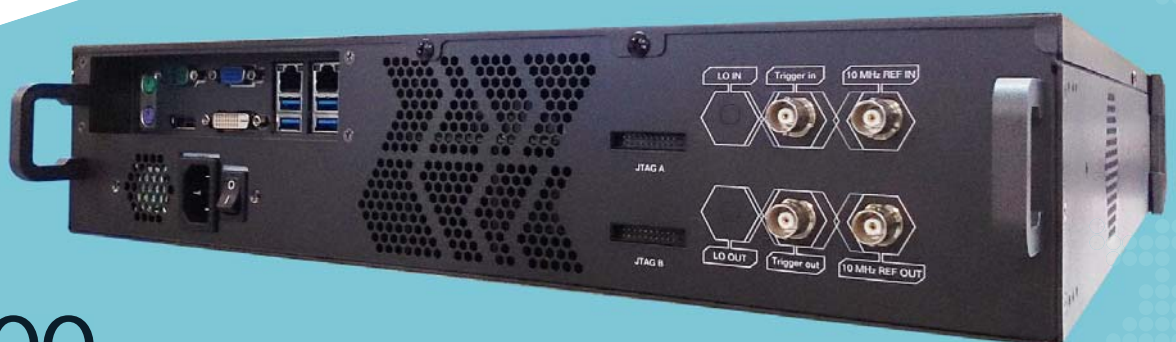
Wireless Test Station

The MP5000 deploys state of the art Software Defined Radio (SDR) architecture that allows full flexibility with all current and future Wifi / Bluetooth standards. Utilizing SDR future firmware upgrade will allow support for LTE and other wireless standards.

The MP5000 contains high quality VSA (Vector Signal Analyzer) & VSG (Vector Signal Generator) to provide a complete and versatile test environment. A highly informative GUI that's both intuitive and user-friendly allows easy test of wi-fi & bluetooth signal with a few clicks of a mouse.

Supported measurement items include EVM, power, frequency error, IQ imbalance, 20dB Bandwidth, FM Demodulator Output...etc.

The MP5000 comes fully programmed with test waveforms for wi-fi 802.11a/b/g/n/ac & Bluetooth V.1.x/2.x/3.x EDR/4.x BLE waveform to allow immediate testing of Duts. Moreover, a built-in waveform generator utility allows users to establish arbitrary Wi-Fi/Bluetooth testing signals. Automatic mass production turnkey software is also available upon request.



MP5000

Wireless Test Station

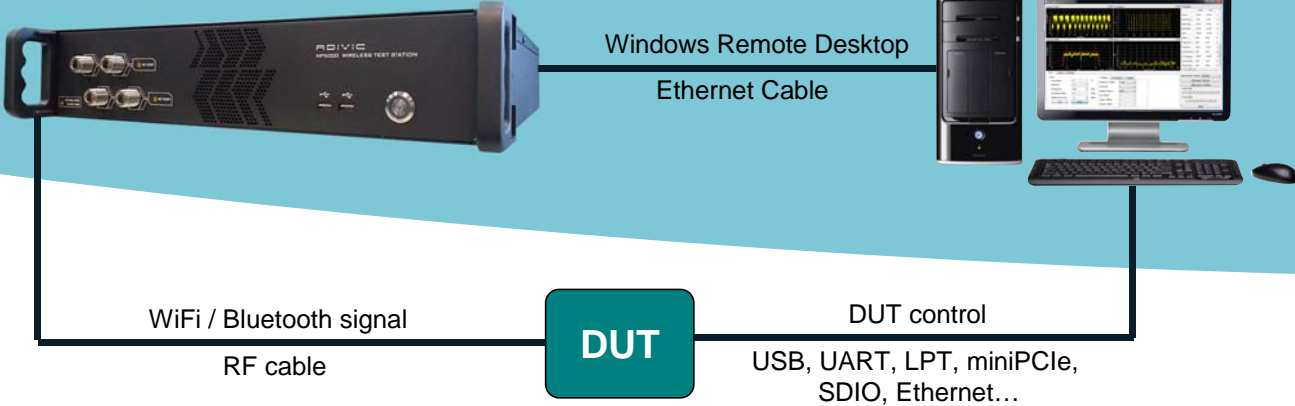


MP5000 R&D Graphic Program

MP5000 Full Test Setup for R&D/QA

MP5000 Wireless Test Station

Customer PC

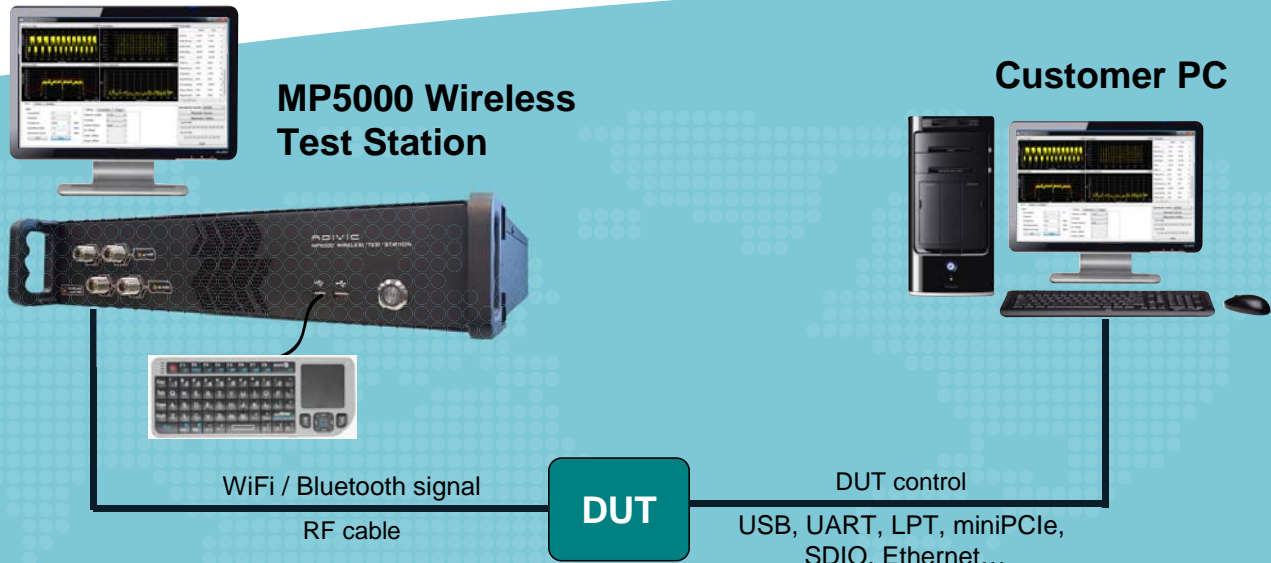


GUI application runs on the MP5000 Tester
Manage the GUI application thru Windows Remote Desktop
No need to install additional software package into your PC/NB

MP5000 Simple Test Setup for R&D/QA

MP5000 Wireless Test Station

Customer PC

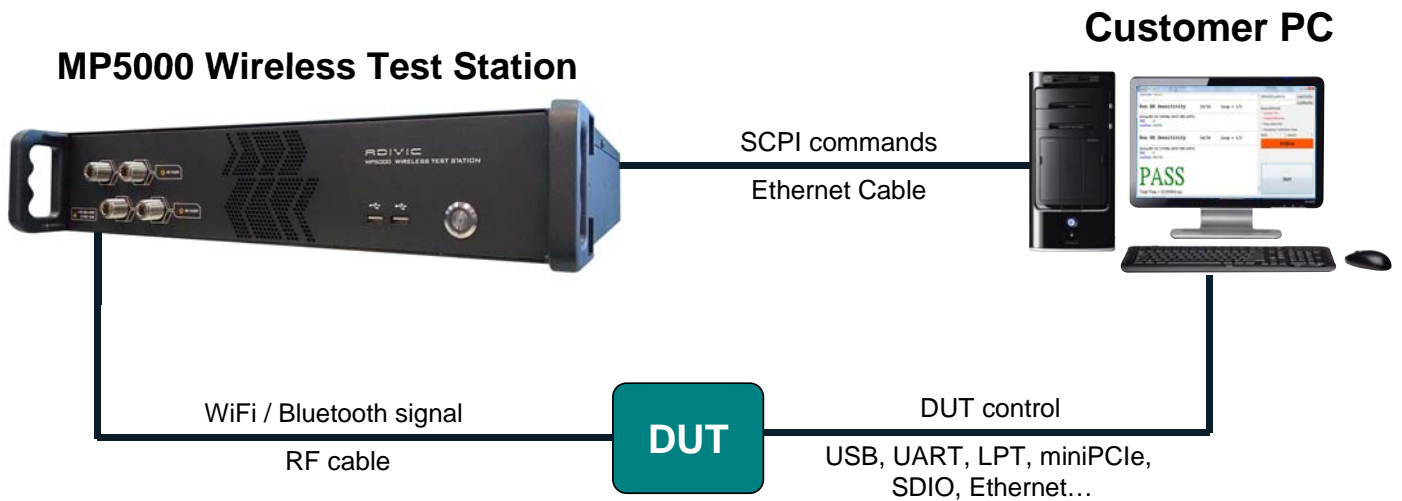


GUI application runs on the MP5000 Tester
Manage MP5000 as a PC

MP5000

Wireless Test Station

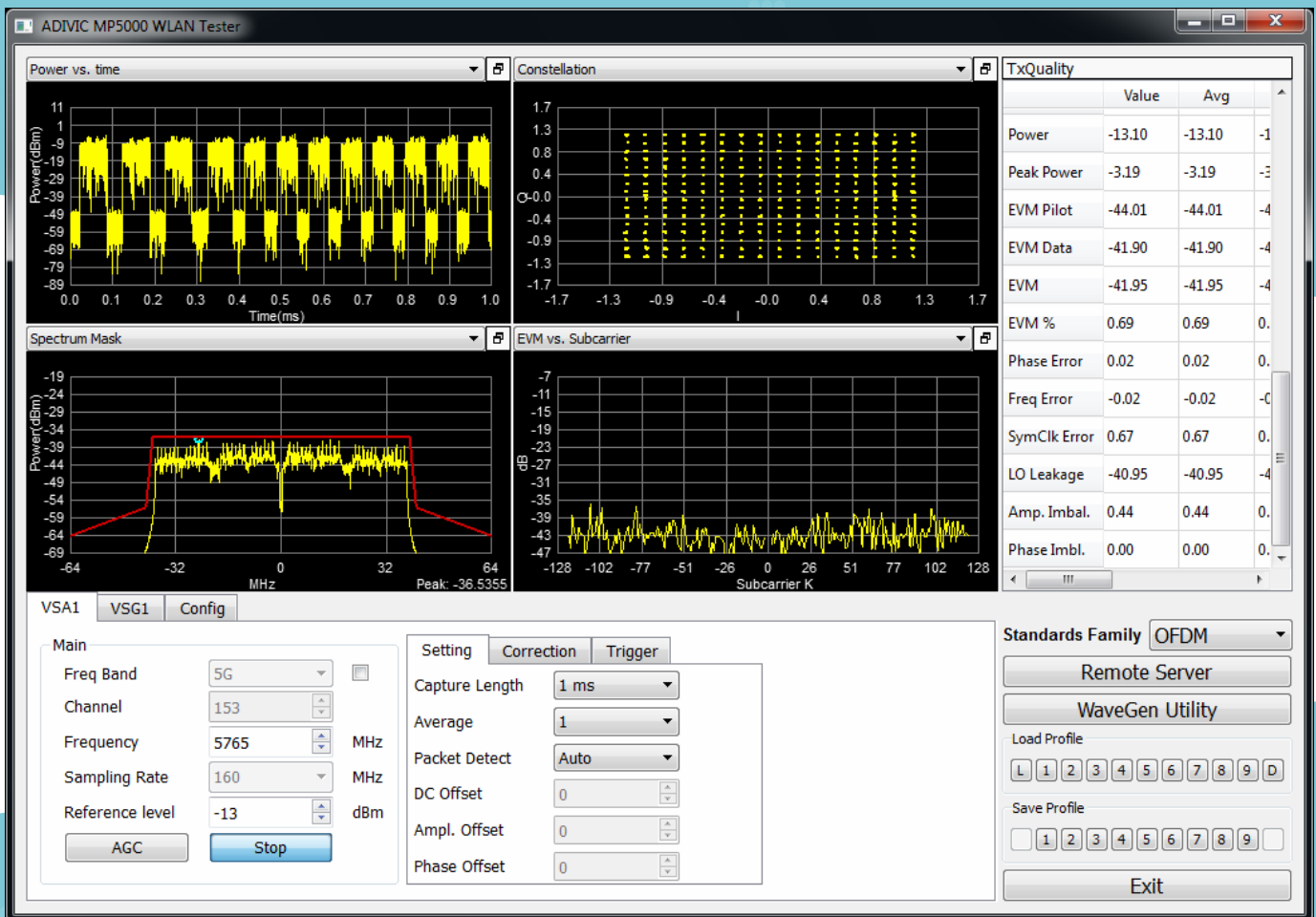
MP5000 Automated Test Setup for Mass-Production



VSA/VSG engines run on the MP5000 Tester
Mass-production software runs on the customer's PC



MP5000 GUI outlook (Wi-Fi)



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Wireless Test Station

MP5000 GUI outlook (Bluetooth)



MP5000 automated mass-production turnkey software

ADIVIC_MFG_Tool Version 3.16.0309

RF 2

Test Flow | WiFi_Spec. | BT_Spec.

OFDM TX Measurement 34/35

Setting: 802.11AC 5190Mhz MCS7 40M (ANT1)

Power	12.79 / 13.00 (dBm)	(+11.00).....o.....(+15.00)
EVM	-39.00 (dBm)	(-45.00)....o.....(-27.00)
Mask	Pass	
MaskError	0.00 (%)	(+00.00)o.....(+05.00)
FreqyError	-3.58 (ppm)	(-20.00)....o.....(+20.00)
PhaseError	0.59 (deg)	
SymClockError	-2.94 (ppm)	
LoLeakage	-42.99 (dB)	
ItemTime	1039.41 (ms)	

Close DUT 35/35

Close DUT Success

PASS

DUT1 Test Time = 31.71 Sec
DUT Init Time = 2.44 Sec
Total Test Time = 32.34 Sec

00:34056

RTL8812au

Pass = 467 Error = 11
97.70%

MAC :

SN :

Start

ADIVIC_MFG_Tool Version 3.16.0309

RF 2

Test Flow | WiFi_Spec. | BT_Spec.

BT TX Measurement 19/20

Setting: BDR_DataPattern: PRBS9_11110000_10101010_2480Mhz_DH5_

PowerLevel: 1

Power	-16.13 (dBm)	
InitFreqError	1.68 (kHz)	
BW_20dB	0.88 (MHz)	
Freq_Drift	-7.97 (kHz)	
Delta_F1_AVG	155.28 (kHz)	
Delta_F2_Max	139.57 (kHz)	
Delta_F2F1_Ratio	0.94	
ItemTime	5198.89 (ms)	

Close DUT 20/20

Close DUT Success

PASS

DUT1 Test Time = 42.72 Sec
DUT Init Time = 8.87 Sec
Total Test Time = 43.33 Sec

00:51436

BT_WL18xx

Pass = 461 Error = 10
97.88%

MAC :

SN :

Start

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