



RTX2300 MODULAR TEST UNIT

General Description

The RTX2300 Modular Test Unit is designed for functional test of wireless products (Bluetooth, GSM, Wi-Fi, etc.) and is highly integrated and designed for a broad variety of applications.

The tester can basically be setup as a shielded environment for the wireless DUT with customized fixture and with the general purpose instrumentation integrated into the modular test unit. In combination with an external RF tester like e.g. RTX2011 or Agilent 8960, the setup is completed to do PCBA- or final-test of wireless device.

The unit is operated through the USB control interface which can be controlled by the customers ATE application or manually by the RTX2300 Windows based MMI.

The unit is easily customized due to the customization area which allow the customer to add e.g. additional measurement channels, propriety interface, etc.

The pneumatic fixture can, due to the optional connector blocks in the shielded area, be replaced within few seconds and is highly recommend for high mix production.



Functionality

Controller and instrumentation

The integrated controller in the RTX2300 handled the control, monitoring functions and instrumentation control.

The modular and integrated instrumentation does cover a programmable PSU for the DUT, a digital volt meter for AC/DC measurements, audio signal generator / filter and a signal and relay switch matrix.

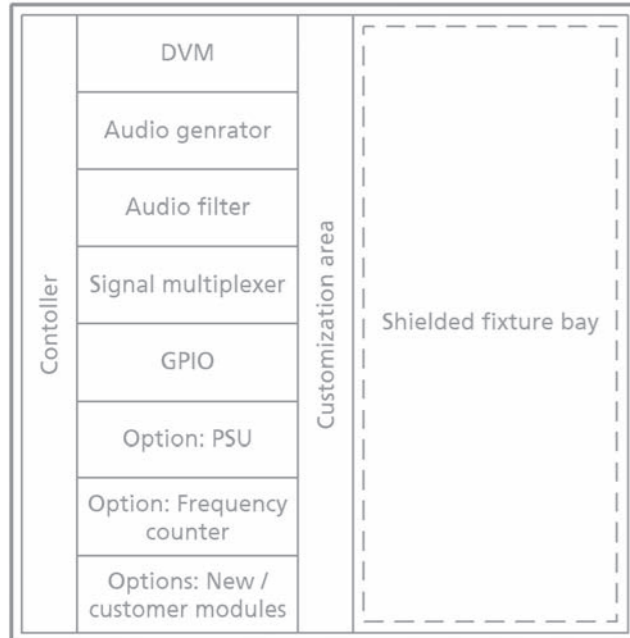
Options

RTX offer a variety of options for customization of the RTX2300. The options cover a programmable PSU module, frequency counter module and various interfaces standards to the DUT.

E.g. Battery simulator to stimulate for the DUT charger circuitry, RF switch for signal switching, etc.

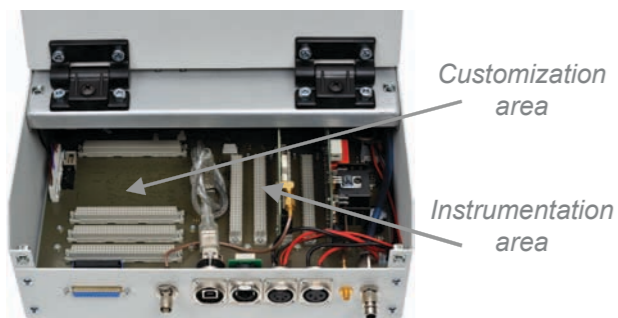
Please lookup the option and configuration sheet in this datasheet for further details.

Main blocks in RTX2300



Rear panel and customization area

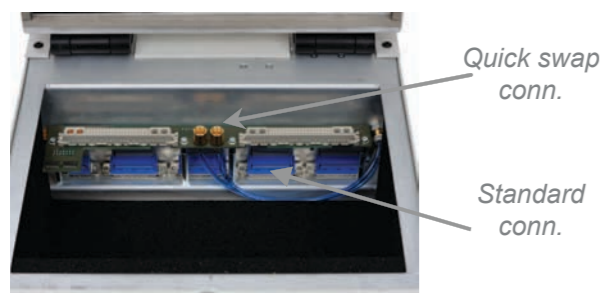
The rear panel provides the connection to the external equipment, pneumatics and the RTX2300 power unit. The 25 pin Dsub provides the connection to addition external measurement equipment.



RTX2300 rear-panel

Fixture bay

The fixture bay is prepared with the interfaces to the RTX2300 functionalities and external RF equipment. The signal lines are filtered and can be accessed either at the standard connectors in the bottom part of the fixture bay or the optional Quick Swap connectors.



RTX2300 Fixture bay.

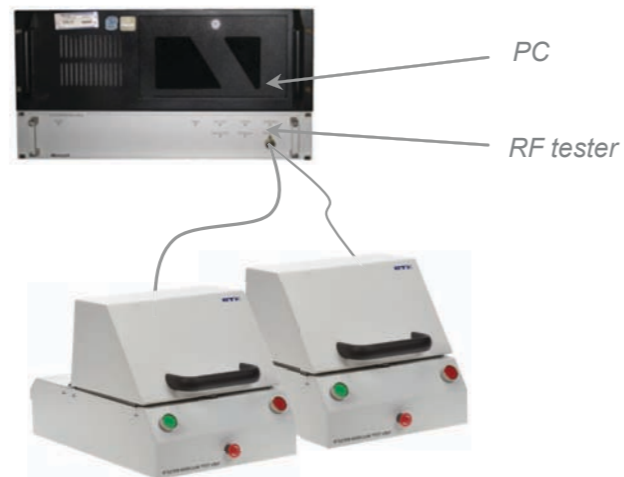
Applications

RTX2300 is a versatile test unit which can be used for a broad variety of ATE applications for Wireless products.

It can be used in single slot application for low volume and high mix or used as dual slot to reduce the handling time and utilize the parallel test approach.

In combination with a RF / Communication tester it is easy to setup a complete ATE system for PCBA- or final-test of wireless devices. The system is flexible and can easily be configured for various wireless standards by changing the RF / Communication tester.

For application where the measurement capabilities in the RTX2300 does not cover the total requirements, external equipment can be applied and the signals will simply be routed from the RTX2300 rear-panel and to the external equipment.



Example: Dual slot application for PCBA test

The RTX2300 is very suitable for dual slot and combined applications where the parallel instrumentation provides minimum test-time and enabling the application to utilize the expensive RF equipment to its limits.

Instrumentation (Basic unit)	
DVM	+/- 10V DC 12 bit resolution 8 channels +/- 5V AC p-p
Tone generator	50 Hz -14 KHz 1 output: 3,5V RMS 2 outputs: 1V RMS
Audio filter	20 Hz -14 KHz 3V RMS
Signal multiplexer	8 Channels
GPIO	16 GPO 8 GPI 2 DAC

Instrumentation (Options)	
PSU w.sense	0-10V 2A / 10-14V 1A 10 mV step Current measurement 2A DC and peak. Current limiter 0-2 A
Frequency counter	50 MHz 1ppm* *Internal reference. Imp. 50 Ohm / High.
Frequency counter High stability	50 MHz 0,1ppm* *Internal reference. Imp. 50 Ohm / High.

Interfaces (Basic unit)	
USB to DUT (1)	USB
USB to DUT (2)	UART Auto level detection

Rear-panel (Basic unit)	
RTX2300 control interface	USB 2.0
Clock IN/OUT	10 MHz 50Ω Require Frequency counter module is installed.
RF IN/OUT	50 Ω 10 MHz – 2.5 GHZ
External equipment	25 pin D-sub
RTX2300 supply	+ 12 V
External DUT supply	2 source + 2 sense

General data (Basic unit)	
Isolation	>60 dB
Max DUT size	200*150 mm
Pneumatic	6 bar
Operating temperature range	+15°C to + 35°C
Storage temperature range	20°C to + 60°C
Operating humidity	Up to 95% relative humidity at 40°C (non-condensing)
Power supply	100 V to 250 V AC 50 Hz to 60 Hz
Power consumption	Typical: 5 – 10 W Maximum: 60 W
Dimensions (WxHxD)	300 mm x 285 mm x 516 mm
Weight	8.0 kg (Basic unit)



OPTIONS AND ORDERING DETAILS

RTX no.	RTX2300	Description	Std. / Opt.
95102300	RTX2300 basic unit	Basic RTX2300 unit with USB control interface, standard modules, shielded lid and fixture bay.	Standard
95102310	RTX2300 basic unit w/o shield	Basic RTX2300 unit with USB control interface, standard modules, NO shielded and fixture bay.	Option
RTX no.	Instrumentation	Description	
70031183	Programmable PSU	Modular programmable PSU with external sense for supplying the DUT in the RTX2300 and is capable of supplying 0-10V 2A or 10-14V 1A.	Option
70031184	Frequency counter 50MHz / 1 ppm	Modular frequency counter for DUT freq. measurements in the RTX2300 and is capable of measuring frequency up to 50Mhz. Including reference clock In/Output.	Option
70031185	High Stability Frequency counter 50MHz / 0.1 ppm	Modular frequency counter for DUT freq. measurements in the RTX2300 and is capable of measuring frequency up to 50Mhz. High stability reference oscillator. Including reference clock In/Output.	Option
70031186	Battery simulator	Battery simulator for stimulating the charger circuitry on the DUT. Programmable sink current.	Option
70031187	RF Switch 4	RF switch with 4 channels.	Option
70031188	RF Switch 8	RF switch with 8 channels.	Option
RTX no.	DUT Interface	Description	Std. / Opt.
Included	USB	USB interface to DUT.	Standard
Included	UART	UART w. level converter to DUT	Standard
70031189	SPI	SPI interface to DUT	Option
70031190	I2C	I2C interface to DUT	Option
RTX no.	Rear panel	Description	Std. / Opt.
Included	RF connection	RF connection from Fixture bay to rear panel.	Standard
95203200	RJ 45	RJ 45 connection from rear panel and to fixture bay.	Option
RTX no.	Fixture interface	Description	Std. / Opt.
95203201	Quick swap kit (SC+CC)	Quick swap kit for "Standard Connector Block" and "Custom Connector Block" in Fixture bay.	Option
RTX no.	Fixture kits	Description	Std. / Opt.
95203202	Standard fixture kit. Pneu. cylinder Ø6	Standard fixture kit with all base materials for a fixture and including Ø6 pneumatic cylinder.	Option
95203203	Standard fixture kit. Pneu. cylinder Ø8	Standard fixture kit with all base materials for a fixture and including Ø 8 pneumatic cylinder.	Option
95203204	Standard fixture kit. Pneu. cylinder Ø10	Standard fixture kit with all base materials for a fixture and including Ø10 pneumatic cylinder.	Option
95203205	Standard fixture kit No pneu. Cylinder.	Standard fixture kit with all base materials for a fixture.	Option
95203206	Quick swap kit (SC+CC)	Quick swap kit for "Standard Connector Block" and "Custom Connector Block" on Fixture.	Option

RTX2300 MODULAR TEST UNIT DATASHEET V2.0

Your RTX Distributor:



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