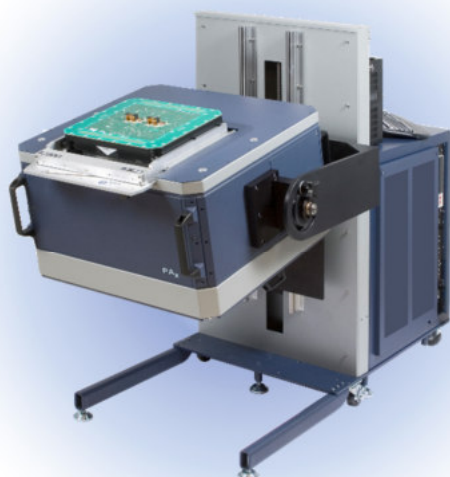


PAX-ac PLUS TEST SYSTEM

Market Leading ATE System for High Volume RF PA & FEM Test



Applications:

The RF instrumentation on the PAX-ac is suited for a broad range of devices used in wireless communications including 802.11ac, 802.11ax, LTE-A, HSPDA, WCDMA, GSM, Edge, WCDMA, Bluetooth standards up through BT5.0, plus a variety of other standards for:

- Multiband RF Power Amplifiers
- RF Front End Modules
- RF Analog System in Package devices
- Other RF discrete devices

Features:

The PAX-ac provides:

- Single-site and multi-site cost effectiveness
- DragonRF test technology for PA and FEMs
- Production ready, proven capabilities
- Largest commercially available OSAT installed base
- Minimal facility cost structure
- Maximum production efficiency

The PAX-ac Plus test system has been specifically developed to address the test challenges of advanced front-end RF devices used in 4G Cellular, WLAN, and 5G Wireless applications. These new devices require ever more demanding RF test capabilities covering large bandwidths at a lower cost of test. The PAX-ac delivers uncompromised RF performance in a low cost system for testing RF Power Amplifiers and FEMs for next generation standards including 802.11ac, the emergent 802.11ax standard, and LTE-advanced, including Rel13 and Rel14, with contiguous & non-contiguous channel requirements.

PAX-ac PLUS TEST SYSTEM

PAX-ac Test System Features

Compact footprint

DragonRF Subsystem:

- Up to 32 Universal RF Ports
- 200 MHz IF bandwidth
- Large, correlated modulation library
- Coherent and low noise architecture
- DSP instruments with real time processing
- Dynamic Range Enhancement (DRE) feature
- Optional Low Jitter Clock

RF Source and Measure:

- 6 GHz Source & 8 GHz Measure standard

Suite of DC, Digital and Time Measurement Instruments

Unison test software environment

Full system calibration including RF Auto Calibration kit

Low Power Single Phase facility requirements

Integrated Manipulator standard

DragonRF Subsystem

RF Instrumentation

The PAX-ac includes, DragonRF, which offers 16 or 32 universal vector RF ports and provides 6 GHz modulated source, 8 GHz measure with less than 1 ms settling time, and up to 8 parallel Intermediate Frequency (IF) paths each with an analog bandwidth exceeding 200 MHz. Leveraging our extensive wireless modulation and demodulation library, DragonRF comes with the complete set of tools to test the entire range of cellular LTE & LTE-A with contiguous and non-contiguous channel arrangements, GSM, Edge, GPRS, HSDPA, HSUPA, and WCDMA.

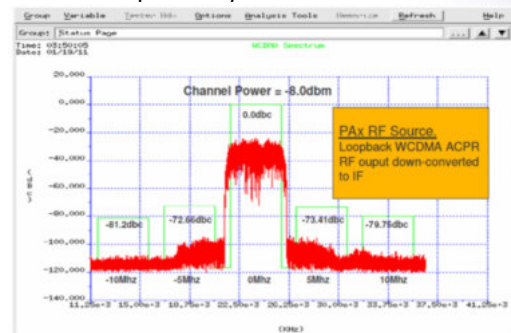
DragonRF Configuration Flexibility	
RF Ports	16 32
IF Paths	2 2 4 4 8
RF Sources	1 2 2 3 4

Also included in the extensive library are connectivity standards including BT, BT EDR, BT4.0, BT5.0, GPS, 802.11a/b/g/n/ac/p/ax and in addition, requirements for emerging IoT standards.

Dynamic Range Enhancement (DRE) Feature

Dynamic Range >90 db using the DRE feature

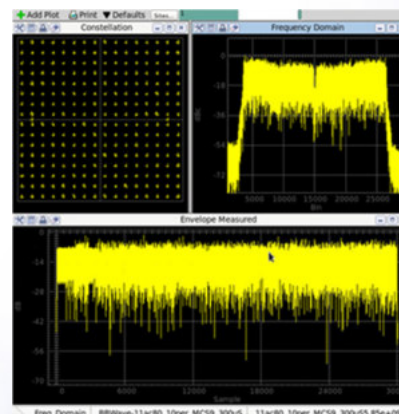
- Faster test time
- Faster correlation to bench data
- Improved yield



802.11 AC

802.11 AC @ 80 MHz

WLAN testing continues to drive requirements to new horizons and the PAX-ac will deliver with extensive inherent test capabilities. Single pass measurements are made quickly with a 200 MHz IF path and state of the art DSP instrumentation. Fast test times of wide bandwidth signals correlate quickly to bench equipment with the PAX-ac to facilitate fast time to market and on time deliveries. EVM measurements can be correlated to below -50 dB.



PAX-ac PLUS TEST SYSTEM

1 General

- 1.1 **Instrument Slots:** 20
- 1.2 **Digital Pin Count:** up to 256
- 1.3 **Thermal Management:** Air cooled
- 1.4 **Prober and Handler Interfaces:** standard interfaces available for all probers and handlers
- 1.5 **Instrumentation:** broad range of DC, RF, DSP, and time measurement instrumentation
- 1.6 **Test Head Dimensions:**
26.5" H x 32.5" W x 21" D
67 cm H x 82 cm W x 53 cm D
- 1.7 **Test Head Weight:** 350 lbs (159Kg)
- 1.8 **Total System Weight:** 1,100 lbs (500kg)
- 1.9 **System Dimensions (including Test Head, Mainframe & Integrated Manipulator):**
66.5" W x 53.5" T x 26.25" D
169 cm W x 136 cm T x 68 cm D
- 1.10 **Electrical Requirements:** single phase 208 VAC, ±10%
- 1.11 **Ethernet:** required
- 1.12 **Other Facility Requirements:** no compressed air or chilled water requirements
- 1.13 **Manipulator:** integrated manipulator is standard. Full featured manipulator is optional.

2 DragonRF Subsystem

- 2.1 **DragonRF:**
Frequency: 10 MHz to 8 GHz
Resolution/ Range: -130 to +16 dBm
Low Jitter Clock Option:
Frequency: 1 MHz to 6 GHz
Resolution/ Range: +10 to -20 dBm
- 2.2 **SWG-HSB:**
Resolution/ Range: 16 Bits
Max Sample Rate: 250 Ms/s
- 2.3 **Hummingbird:**
Resolution/ Range: 16 Bits +DRE
Max Sample Rate: 400 Ms/s

3 DC Instrumentation

- 3.1 **HCOVI:**
Max Current: 1 A, ganged to 8 A per card
Max Voltage: -2 V to +8 V
- 3.2 **QFVI:**
Max Current: 5 A pulsed, 1.5 A continuous
Max Voltage: ±60 V
- 3.3 **HCOVI:**
Max Current: 1 A
Max Voltage: -2 to +8 V
- 3.4 **PA-DPS1:**
Max Current: 2 A / 8 A
Max Voltage: -2 V to +16 V

4 Digital Instrumentation

- 4.1 **FX2 Digital:**
Max Data Rate: 400 Mbps / 400 MHz clock
Max Voltage: -2.0 V to 6.5 V

5 Software

- 5.1 **Test Software Environment:** Unison
- 5.2 **Operating System:** high speed PC-based controller using a Linux operating system

6 Optional Instrumentation

- 6.1 **Time Measurement Instrumentation:**
Quad Time Measurement Processor (QTMP)
- 6.2 **Calibration:** X-Series System & RF Auto Calibration Kit

All specifications are subject to change without notice.

