

Power Amplifier Tester



Target markets:

- Power Amplifier Designers
- Manufacturing Test for Cellular Infrastructure
 - DPD Reference Design developers
- Semiconductor Vendor Device Characterization

Product description:

The AceAxis Power Amplifier Tester (PAT) gives power amplifier designers and system integrators the confidence that the linearity of their transmitter line-ups will meet the demands of today's most challenging radio protocols.

PAT closes the loop around your Power Amplifier design, and then finds the optimal pre-distortion to meet your customer needs. PAT applies a range of linearisation methods, to find the best solution within the constraints of your system.

An in-built modulated signal source provides the stimulus to the components under test. Samples are then taken from sensitive points in the line-up. A powerful digital pre-distortion control system then analyses and corrects for non-linearities, to produce a linearised output signal. As well as displaying the corrected spectrum, the non-linearities corrected for are displayed in the form of AM-AM and AM-PM drive-up curves. This data is also made available in tabular form, for importing into system modelling tools.

The PAT provides an observable bandwidth of 240MHz. In a 60MHz instantaneous bandwidth application, this enables correction up to 4th order intermodulation products.

PAT allows the line-up's performance to be assessed under the control of both ideal and representative RRH linearisation algorithms.

As non-linearities can still occur after the linearised power stages, additional feedback paths using observation receivers enables detection and correction right through to the antenna interface

The ART is available with a range of supporting software to enable quickly deployment and integration into your test environment.

Main Features and Benefits:

- Graphical Measurements of
 - CCDF
 - AM-AM Distortion
 - AM-PM Distortion
- Linearisation Methods
 - Ideal 'Circular' correction
 - Realisable 'Axis DPD' correction:
 - User Control of number & positions of bins, taps & cross-terms
 - Memory-less option
- Applied Pre-Distortion data outputs
 - Cross-term coefficients
 - Memory terms
- Simulated Traffic Scenarios
 - Static composite signals, e.g. 3GPP Test Models
 - Dynamic conditions e.g. low/high traffic switching

General Specifications

Frequency range	700MHz to 2.7GHz
Number of transmit / receive paths	1*Transmitter line-up Exciter 2*Feedback receiver paths
Gigabit serial data interface	CPRI (option - TBA)
Physical Dimensions	19" rack mount, IU
Power supply ratings: AC supply (standard)	230V/50Hz (or 115V/60Hz)
Power consumption	<50W
<i>Transmitter</i>	
Exciter power control range	35dB
Maximum output power (per carrier)	+5dBm
<i>Receiver</i>	
Capture window	1ms (circular) 100ms (Axis DPD)
Dynamic range	-10...+10dBm

Software Compatibilities & Environment

Operating system	Microsoft windows 7 (32 bit)
Optional remote control	SCPI command set
Data output	Microsoft Excel 2010 compatible