aceaxis

Power Amplifier Tester

Product Fact Sheet

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, 1U
Power supply ratings: AC supply (standard) Power consumption	230V/50Hz (or 115V/60Hz) <50W
Transmitter	
Exciter Power Control Range	35dB
Maximum output power (per carrier)	+5dBm
Receiver	
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

Graphical DPD Correction Information
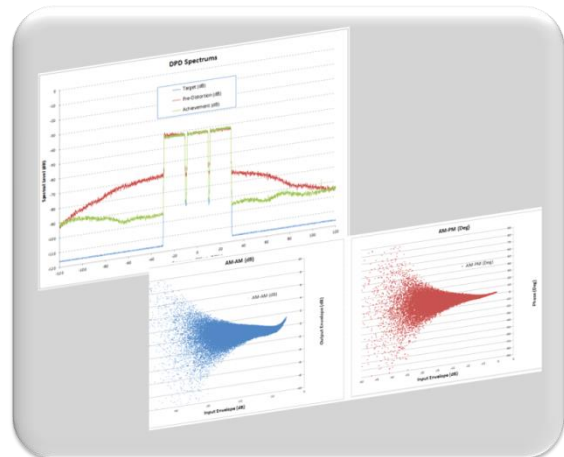
Correction achieved plus Correction performed

Other AceAxis Test & Measurement Solutions

ART Advanced Radio Tester

Slash Infrastructure Manufacturing Test costs with this integrated test solution

PINT Passive Intermodulation Tester

Detect service degradation due to cell site intermodulation problems remotely

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AceAxis Limited
County Park
Swindon
SN1 2NR
United Kingdom

+44 (0)1793 490 235
info@aceaxis.co.uk

www.aceaxis.co.uk