

PIM Analyser for antenna and filter testing



AceAxis creates IPR and technology to build, test and analyse the telecoms networks of the future. With over 20 patents and pending patents for PIM, AceAxis is investing in lowering the cost of PIM test.

Today's cellular networks are becoming even more complex and difficult to manufacture. With the growth in 8x8 and 64x64 passive products the cost of test for PIM needs to be reduced. AceAxis's new PIM Analyser offers class-leading performance and size for a multi-band PIM test solution.

AceAxis offers two software options:

1. PIM Location: Enables the location of PIM to be established within the device under test (DUT). This unique capability will significantly lower the cost of repair and provide invaluable feedback into the design and manufacturing process for filters and antennas.
2. Multi-band/Multi-port Antenna Test: Connecting multiple units together allows all bands in a multi band/multi-port antenna to be validated saving considerable factory test time, increasing throughput and allowing new measurements such as cross-band PIM to be evaluated.

Product features

- PIM test solution for manufacturing and R&D
- 3U form factor box (Bench or Rack mount)
- Wide band PA that supports bands from 700MHz to 2.7GHz
- Test Modes PIM vs Time, PIM Locate
- Measures Intermodulation products: IM3,5,7,9
- Measurement of forward and reverse* PIM
- Testing with modulated carriers for accurate and representative measurement of PIM
- Support for 3GPP bands and bandwidths within the operating range of the instrument
- Residual IM <-174dBc
- TX power +44dBm/carrier
- Low power consumption typical < 350W
- Product weight 18.5kg

Optional features

- Software option to measure PIM location within device under test (Filter or Antenna)
- Software option providing Multi Band/Multi port testing of antennas (simultaneous PIM measurements across different RF bands/ ports)

*utilizing optional duplexers

Electrical specifications (at 25°C unless otherwise specified)

Transmit specifications

Parameter	Value
Operating frequency bands	700MHz – 2.7GHz.
Transmit bandwidths (programmable)	1MHz to 60MHz
Frequency accuracy	2 ppm
Frequency Increments	100KHz
Power per tone	30dBm to 44dBm, total combined max power +48dBm
Reverse power protection	+48dBm, indefinitely

Receive specifications

Parameter	Value
Reverse IM	@2x44dBm, -34dBm to -130dBm, -78dBc to -174dBc*
Forward IM	@2x44dBm, -40dBm to -136dBm, -84dBc to -180dBc, Duplexer test* @2x44dBm, -34dBm to -130dBm, -72dBc to -168dBc, 2 port D.U.T*
Noise Floor	<140dBm typical (@300Hz) <-134dBm typical (@1200Hz) <-145dBm @30Hz
Dynamic Range (typical)	96 dB
Input Power	-20/0 dBm (usable/no damage)
Measurement Accuracy	±1.0 dB

*Dependent upon DUT Specification

Physical/Environmental and Electrical Specifications

Parameter	Value
Main Power	100V to 240V , 50/60Hz
Power Consumption	Typical 350W (700MHz to 2.7GHz)
Operating Temperature	-10°C to +50°C , forced air cooling
Compliance	ETSI EN 300 019-1-3 class 3.3 (Stationary use, weather protected location)
Physical dimensions	Bench unit : 518mm (Width), 158mm (Height), 373mm (Depth) Bench unit : 20.4Inch (Width), 6.22Inch (Height), 14.7Inch (Depth) Rack unit : 485mm (Width), 135mm (Height), 355mm (Depth) Rack unit : 19Inch (Width), 5.3Inch (Height), 14Inch (Depth) Weight : 18.5Kg , 41lbs (Bench unit), 17.5Kg 38.8 lbs (Rack unit)

Ordering Information

For filter testing

NIM 700-2700	Wideband PIM Test System
NIM Option 007F	PIM Location software for filters

For antenna testing

NIM 700-2700	Wideband PIM Test System
NIM Option 007A	PIM Location software for Antenna
NIM Option 009A	Multi Band/Multi port software for PIM Test System

Filters for antenna testing and reverse PIM Test

NIM Option 700L	Duplexer, LTE 700, TX 728-759, RX 698-716
NIM Option 700H	Duplexer, LTE 700, TX 728-759, RX 776-788
NIM Option 800	Duplexer, LTE 800, TX 791-821, RX 832-862
NIM Option 850	Duplexer, LTE 850, TX 869-896, RX 824-851
NIM Option 900E	Duplexer, GSM, 900, TX 925-960, RX 880-915
NIM Option 1800	Duplexer, DCS/GSM, 1800, TX 1805-1880, RX 1710-1785
NIM Option 1900	Duplexer, PCS 1900, TX 1930-1990, RX 1850-1910
NIM Option 2000-CDMA	Duplexer, CDMA 2000, TX 2010-2025, RX 1900-1920
NIM Option 2100-AWS	Duplexer, AWS 2100, TX 2110-2155, RX 1710-1755
NIM Option 2100-UMTS	Duplexer, UMTS 2100, TX 2110-2170, RX 1920-1980/2160

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