

IPA SERIES

Battery Portable Passive Intermodulation Analyzer



IPA Passive Intermodulation (PIM) Analyzer

The iPA Series Passive Intermodulation (PIM) analyzer is the first battery powered PIM Test Analyzer versatile enough to support multiple test scenarios such as testing at the top of the tower, base of tower, roof top and in-building for DAS systems. This IEC compliant 20W, rugged, battery operated design includes a tablet computer in a ruggedized case for remote control. This allows hands-free dynamic testing that is safe and convenient. Add the optional Range to Fault (RTF) module to quickly identify the location of PIM and Return Loss sources.

Evolved from a design legacy of field proven analyzers, this PIM Analyzer enables network operators to improve site performance by finding and eliminating sources of passive intermodulation at the cell site. An intuitive touch screen interface is also available for local control, performing tests and quickly generating site reports.



PRODUCT FEATURES

- Rugged and reliable; designed with tower climbers in mind
- 7 inch tablet computer included for remote control of device
- Extensive reporting capabilities
- RTF compatible
- Fully configurable frequencies, powers and IM products
- Simple to operate touch screen interface
- Spectrum monitor, frequency sweep and time trace modes
- Battery powered

TECHNICAL SPECIFICATIONS |

SYSTEM

Measurement method	Reverse (reflected) PIM, 3rd and 5th order
Residual PIM	< -117dBm/-160dBc max (<-125dBm/-168dBc typ) (x2 @ 43dBm)
Interface ports	1x RF output (7-16 DIN female), 1x USB 2.0 Host, 1x USB 2.0 Slave, 1x SD, 1x monitor port (SMB female), 1x SMA-RP (Wi-Fi external antenna)
User interface	Local - touch screen display 4.3in (109mm) Remote - tablet computer (included), any Wi-Fi enabled user device with Web browser
Return loss alarm	Automatic detection and shut down when high RL is detected

TRANSMITTER

Transmit frequencies	See model table
Frequency increment	100kHz
Frequency accuracy	± 5ppm (max), aging ± 1ppm (max) after first year
Power per tone (adjustable)	+0.1 to 20W (+20 to +43dBm in 1dB increments)
Power accuracy (per tone)	± 0.5dB (max)

TECHNICAL SPECIFICATIONS CONTINUED |

RECEIVER

Receive band (100kHz steps)	See model table
Measurement noise floor	< -128dBm
Measurement range	-50dBm to -128dBm

ELECTRICAL

Battery power	25.9 VDC, 2500 mAH Li-ion battery packs (removable)
Battery operating time	Depends on usage, 2 hr min. per battery pack
Battery charger	Output: 29.4 VDC, 1.2 Amp

MECHANICAL

Dimensions/ Weight	14.5 x 9.4 x 6.3in (369 x 240 x 160mm)/ < 26lbs (12kg)
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ENVIRONMENTAL

Operating temperature range	-10°C to +45°C (+14°F to +113°F)
Storage temperature range	-10°C to +60°C (+14°F to +140°F)
Ingress protection (IP)	IP54. IP67 when enclosed in optional hard case
Relative humidity	5% to 95% RH non-condensing
Mechanical shock	40G shock rating

MODELS |

	DESCRIPTION	TX1 RANGE	TX2 RANGE	RX RANGE (PIM)	RTF MODULE *
iPA-0707A	700MHz LOW/HIGH	728-731.5MHz	741-764MHz	698-716MHz; 776-802MHz	RTF-1000A
iPA-0703A	APT700 LTE	758-763MHz	773-803MHz	703-750MHz	RTF-1000A
iPA-0790A	LTE 800	791-796MHz	808-821MHz	832-862MHz	RTF-1000A
iPA-0850A	850MHz	869MHz	879-894MHz	824-849MHz	RTF-1000A
iPA-0900A	GSM900	932.5-937.5MHz	949-960MHz	903-915MHz	RTF-1000A
iPA-0901A	EGSM900	925-935MHz	945-960MHz	880-915MHz	RTF-1000A
iPA-1800A	DCS1800	1805-1812MHz	1825-1880MHz	1710-1785MHz	RTF-2000A
iPA-1921A	Dual Band PCS/	1930-1950MHz	1970-1990MHz	1850-1910MHz	RTF-2000A
	AWS	1930-1950MHz	2110-2155MHz	1710-1755MHz	
iPA-2100A	UMTS (3rd & 7th)	2110-2130MHz	2150-2170MHz	1920-1980MHz; 2050-2090MHz	RTF-2000A
iPA-2600A	LTE 2600	2620-2630MHz	2650-2690MHz	2500-2570MHz	RTF-2600A



iPA rugged hoist position



iPA shown with iAK-0060A ruggedized transport case with full PIM testing accessories.

1- *Range to Fault is an optional accessory available for iPA test instruments which enables users to measure distance to return loss faults as well as distance to PIM faults. The RTF module is sold separately.

2- Dual Battery charger for standalone charging sold separately.

WARNING: Use of the portable PIM analyzer in a radiating mode, for example when connected to an antenna not enclosed in an anechoic environment, may be a violation of licensing regulations. Users should obtain permission in advance from any licensed operators that might be affected by these tests. Furthermore, radiating high RF power can pose a personnel risk.

Specifications subject to change without notice.