

# IPA SERIES

## BATTERY PORTABLE PASSIVE INTERMODULATION 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 can be operated via remote control with any WiFi enabled phone, tablet or laptop computer. 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.



### FEATURES

- Rugged and reliable; designed with tower climbers in mind
- Fully configurable frequencies, powers and IM products
- Remote control possible with handheld device, eg tablet, cell phone
- Simple to operate touch screen interface
- Extensive reporting capabilities
- Spectrum monitor, frequency sweep and time trace modes
- RTF compatible
- Battery powered
- Two models available A Series 0.1 to 20W, D series, 1 W to 40W

### TECHNICAL SPECIFICATIONS

SYSTEM	
Measurement method	Reverse (reflected) PIM, 3rd, 5th and 7th order (iPA-0707D and iPA-0850A) Reverse (reflected) PIM, 3rd, 5th, 7th and 9th order (other models)
Residual PIM	< -117dBm/-160dBc maximum (<-125dBm/-168dBc typical) at 2 x 20W
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, 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 maximum, aging ± 1ppm maximum after first year
Power per tone (adjustable)	All A series Models 0.1 to 20W (+20 to +43dBm in 1dB increments) iPA-0600D 100mW to 40W (+20 to +46dBm in 1dB increments) iPA-0707D 1 to 40W (+30 to +46dBm in 1dB increments)
Power accuracy (per tone)	± 0.5dB maximum
RECEIVER	
Receive band (100kHz steps)	See model table
Measurement noise floor	< -128dBm
Measurement range	-50dBm to -128dBm
ELECTRICAL	
Battery power	25.9 VDC, 2600 mAh, 67Wh Lithium Ion battery packs (removable)
Battery operating time	Depends on usage, 2 hr minimum per battery pack
Battery charger	Output: 29.4 VDC, 1.2 Amp

MECHANICAL	
Dimensions H x D x W	369 x 160 x 240mm   14.5 x 6.3 x 9.4in
Weight	12kg   26lbs
ENVIRONMENTAL	
Temperature range	-10°C to +45°C   +14°F to +113°F
Ingress protection	IP54. IP67 when enclosed in optional hard case
Operational humidity	5% to 95% RH non-condensing
Storage temperature range	-10°C to +60°C   +14°F to +140°F
Mechanical shock	40G shock rating

## ORDERING INFORMATION

MODELS					
	DESCRIPTION	TX1 RANGE	TX2 RANGE	RX RANGE (PIM)	RTF MODULE *
iPA-0600D	600MHz	617-630 MHz	640-652 MHz	663-698MHz	RTF-1000
iPA-0707D	700MHz LOW/HIGH	728-731.5MHz	741-764MHz	698-716MHz 776-802MHz	RTF-1000
iPA-0703A	APT700 LTE	758-768MHz	778-803MHz	703-748MHz	RTF-1000
iPA-0790A	LTE 800	791-796MHz	808-821MHz	832-862MHz	RTF-1000
iPA-0850A	850MHz	869MHz	879-894MHz	824-849MHz	RTF-1000
iPA-0901A	EGSM900	925-935MHz	945-960MHz	880-915MHz	RTF-1000
iPA-1800A	DCS1800	1805-1812MHz	1825-1880MHz	1710-1785MHz	RTF-2000
iPA-1802A	DCS1800	1805-1830MHz	1840-1880MHz	1710-1785MHz	RTF-2000
iPA-1921A	Dual Band PCS/AWS	1930-1950MHz 1930-1950MHz	1970-1990MHz 2110-2155MHz	1850-1910MHz 1710-1755MHz	RTF-2000
iPA-2100A	UMTS (3rd & 7th)	2110-2130MHz	2150-2170MHz	1920-1980MHz 2050-2090MHz	RTF-2000
iPA-2600A	LTE 2600	2620-2630MHz	2650-2690MHz	2500-2570MHz	RTF-2600
Notes	Specifications subject to change without notice.				
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.				
3.	Tablet to control the iPA is not included. <a href="#">System requirements - Kaelus Unify and iPA Software</a>				
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.				

## WHAT'S IN THE BOX?

PART NUMBER	DESCRIPTION	QUANTITY
<a href="#">R29-4382</a>	AC ADAPTOR FOR IPA	1
<a href="#">R92-0287</a>	IPA BATTERY	1

## ACCESSORIES

ORDERING INFORMATION	
<a href="#">ACE-1000A</a>	PIM Instrument self-calibration tool
Highly recommended accessory	
<a href="#">RTF</a>	Range To Fault PIM and Return Loss fault location tool (Refer ordering table for model details)
<a href="#">iAK-0060A</a>	Portable PIM Accessory Kit



iPA Rugged hoist position



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



PIM Instrument self-calibration tool



iPA shown with RTF PIM and Return Loss fault location tool