IXA SERIES

BATTERY PORTABLE PASSIVE INTERMODULATION ANALYZER

The Kaelus iXA Series Passive Intermodulation (PIM) analyzer is a dual-port, battery powered PIM Test Analyzer. It supports multiple test scenarios such as testing at the top of the tower, the base of the tower, rooftop, in-building for DAS systems and external PIM Finding.

No other PIM tester has ever been integrated to this level! The iXA includes a network of electronic switches to change from one-port to two-port measurement seamlessly. In addition, with integrated Range-to-Fault (RTF) on each port, the user can first troubleshoot the system for internal PIM. Then, without reconnection, the user can progress with the external PIM process, making the entire process much more efficient.

With integrated RTF on each port, the user can collect four times more range-to-fault data than the standard 1-port PIM Finder solution. Thus, the user can easily locate and swiftly eliminate the strongest PIM source.

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
- Inbuilt Range-to-Fault (RTF) on both ports
- Battery powered
- Dual-port 40W mode for optimum external PIM Finding

The iXA is a highly integrated unit, including:
- a network of electronic switches to seamlessly change between one-port and two-port measurement
- Integrated RTF on each port

Consequently, no RF reconnection is required to switch between one-port testing, two-port testing and RTF measurement on either port, making the PIM measurement process much more efficient.
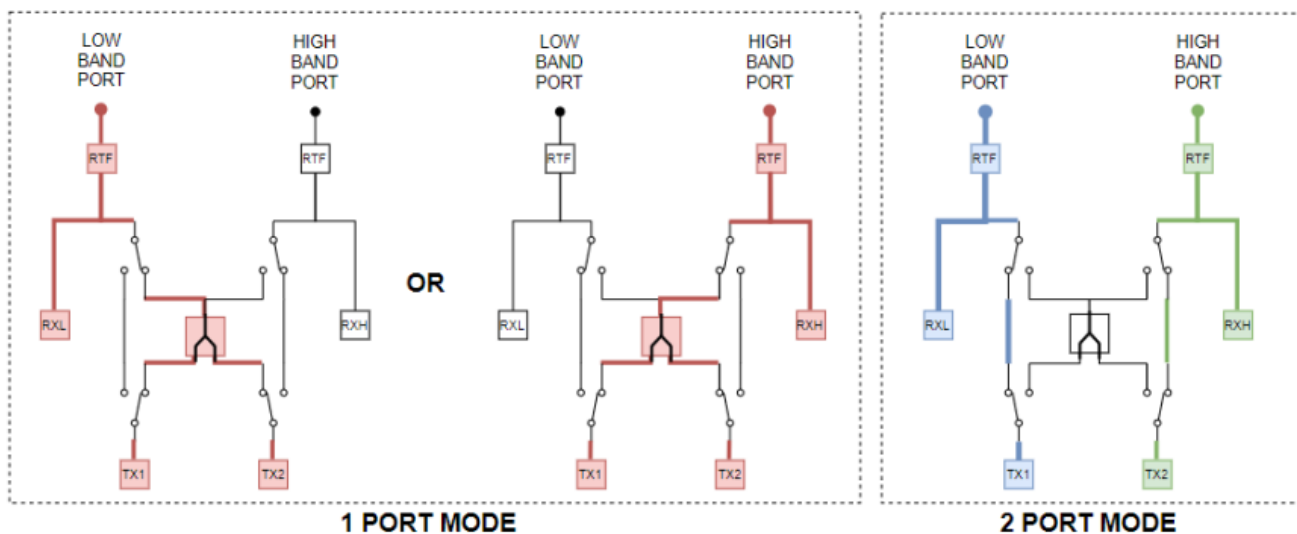
The RTF measurement is optimized for external PIM Finding:
- The internal RF filters provide full RX frequency sweeping ranges, thus the Distance to PIM resolution is maximized.
- The RTF measurement can be performed as two "one-port" measurements and two "two-port" measurements seamlessly. The user can collect four times more range-to-fault data than the standard 1-port PIM Finder solution.
Thus, the user can easily locate and swiftly eliminate the strongest PIM source.

Contact Us: +1 303 768 8080 | +61 (0) 7 3907 1200 | www.kaelus.com

TECHNICAL SPECIFICATIONS

SYSTEM - 1 PORT MODE	
Measurement method	Reverse (reflected) PIM, 3rd, 5th and 7th order.
Residual PIM	<-123dBm/-166dBc maximum (<-128dBm/-171dBc typical) @2x43dBm
Power per tone (adjustable)	0.5W to 20W (+27 to +43dBm in 1dB increments)

SYSTEM - 2 PORT MODE	
Measurement method	Reverse (reflected) PIM, 3rd, 5th and 7th order.
Cross band Residual PIM (*)	<-123dBm/-166dBc maximum (<-128dBm/-171dBc typical) @2x46dBm
Power per tone (adjustable)	1W to 40W (+30 to +46dBm in 1dB increments)
Note: (*) 25dB Port to Port isolation assumed	

SYSTEM	
Interface ports	2x 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 Kaelus Unify app compatibel with iOS and Android devices, free download from Apple Store and Google Play Store.
Return loss alarm	Automatic detection and shut down when high RL is detected
Compliance	IEC-62037

TRANSMITTER	
Transmit frequencies	See model table
Frequency increment	100kHz
Frequency accuracy	± 5ppm maximum, aging ± 1ppm maximum after first year
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, 3450 mAh, 90Wh Lithium Ion battery packs (removable)
Battery operating time	Depends on usage, 3 hr minimum per battery pack
Battery charger	Output: 29.4 VDC, 1.2 Amp

MECHANICAL	
Dimensions H x D x W	397 x 205 x 240mm | 15.6 x 8 x 9.4in
Weight	19kg | 42lbs

ENVIRONMENTAL	
Temperature range	-10ºC to +45ºC | +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)
iXA-0707A	700MHz LOW/HIGH	728-740MHz	741-764MHz	692-716MHz 776-800MHz
Notes	Specifications subject to change without notice.			
1.	Dual Battery charger for standalone charging sold separately.			
2.	Tablet to control the iXA is not included. System requirements - Kaelus Unify and IPA Software			
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.			

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WHAT'S IN THE BOX?		
PART NUMBER	DESCRIPTION	QUANTITY
R29-4382	AC adaptor for iPA / iXA	1
ASSY108321	High capacity battery	1

ACCESSORIES		
PART NUMBER	DESCRIPTION	NOTES
ACE-1000A	PIM Instrument self-calibration tool	Highly recommended accessory
ASSY108321	High capacity battery	
PIL-0005A	Low Passive Intermodulation (PIM) Load	
CIS-0001A	Passive Intermodulation (PIM) Source	Required for RTF calibration
R92-0443	Battery Cradle	
R18-0836	Rugged, Low PIM cable assembly, 2.7 meters (8'10"), 7/16 DIN (M) to 7/16 DIN (M)	
ASSY121959	Rugged, Low PIM cable assembly, 2.7 meters (8'10"), 7/16 DIN (M) to 4.3-10 (M)	

BUNDLES		
PART NUMBER	DESCRIPTION	NOTES
iAK-0150A	iXA Premium Accessory Kit	Ruggedized case to transport iXA Includes Low PIM Load, PIM source, wrenches, cables and adaptors Heavy! 33kg | 72.7lbs
iAK-0160A	iXA Accessory Kit light	Ruggedized case only to transport iXA Lighter weight for travel: 25kg | 55lbs
iAK-0140A	iXA Softcase Accessory Kit	Bagpack to carry the accessories Includes Low PIM Load, PIM source, wrenches, cables and adaptors

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