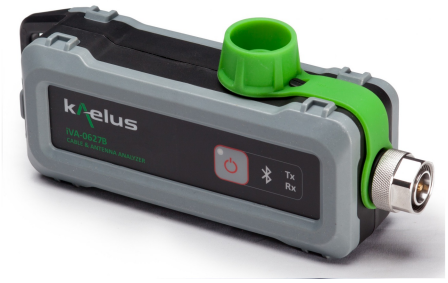
IVA SERIES

CABLE AND ANTENNA ANALYZER

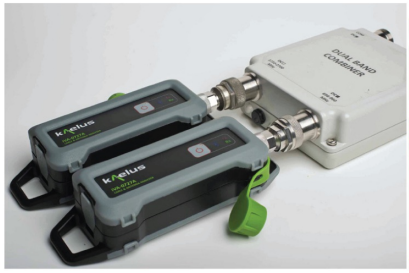
The iVA series Cable & Antenna Analyzer is an exciting new product from Kaelus that enables users to accurately measure and locate VSWR/return loss faults in their RF infrastructure. The wireless connectivity allows unprecedented measurement flexibility and opens up new & important possibilities in sweep testing and multi-port testing.The iVA is a rugged battery operated module that can be remotely controlled with any Bluetooth-enabled tablet, smart phone, laptop computer or any of our iPA series Portable Passive Intermodulation analyzers.



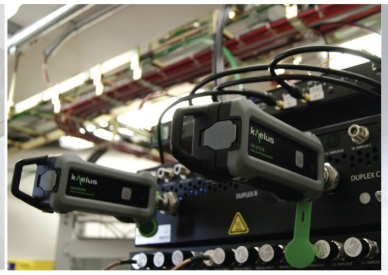
FEATURES

- Reinventing site certification sweep testing, dramatically reducing test time on site
- Directly measure insertion loss and isolation when using multiple iVAs. Measure calculated insertion loss with a single iVA and an RF short
- Accurately measure swept VSWR/return loss and Distance-to- Fault in RF path
- Simple and robust Bluetooth connection to a tablet PC or connect with USB or Bluetooth to a laptop computer
- Connect directly to the device under test; eliminates the need for a phase stable cable in most cases
- Uses the Kaelus customer-proven iPA reporting workflow & tagging features to facilitate a faster, simpler and more efficient workflow
- With the Kaelus iPA controlling the iVA, your RL data can be combined with your PIM data into a single report. Reports are combined and completed on-site with no post-processing required
- Simple to operate, highly intuitive software user interface with the unique ability to generate and complete the test report onsite
- Geotag each test point, insert a Google Maps® snapshot directly into the report
- Handy Spectrum Monitor mode for interference checking
- Stimulus mode allows iVA to be used as a signal generator. Can be configured to cycle through a number of frequencies, with a user-defined dwell time at each frequency
- N Type or 4.3-10 Connector options available

Only hand tighten the iVA connector to max 0.7Nm (6.2 in-lbs).
Damage caused by over torquing of iVA RF connector will NOT be covered by warranty.



Multi-Port Testing



Isolation Testing

Antenna Testing

TECHNICAL SPECIFICATIONS

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

KEY SPECIFICATIONS	
iVA analysis modes	Return loss, VSWR, Cable loss, Distance-to-fault (DTF), Transmission loss, Isolation, Spectrum monitor,
Frequency range	560MHz - 2750MHz
Minimum frequency increment	1kHz all modes
Number of measurement points	1 to 2191

ELECTRICAL - DC POWER CONSUMPTION	
Return loss mode	4.7W
Transmission mode	4.7W
Spectrum monitor mode	3.7W
Standby (Idle)	0.6W
Battery	Lithium-Ion 3.6V, 2350 mAh, 8.5Wh
Battery charging method	USB-compatible power source connected to USB port of iVA
Battery operating time	8 Hours at typical usage factor

IVA ANALYSIS MODE - RETURN LOSS	
Sweep speed	4ms per frequency point
RF Output power	0dBm ± 3dB
Return loss dynamic range	40dB
VSWR Dynamic range	1 - 100:1
Cable loss measurement range*	0 - 20dB
Return loss measurement accuracy	Applies over the temperature range −10°C to +45°C, with less than 5°C deviation from calibration temperature.
0 - 10dB	± 0.4dB
10 - 20dB	± 0.6dB
20 - 30dB	± 1.5dB
30 - 40dB	± 4.0dB
Calibrated directivity	43dB typical
Interference immunity	+10dBm at 500kHz offset from stimulus frequency
System impedance	50ohms
	* Cable loss can be measured either as a 1-port measurement, with the far end of the cable terminated in an open or short circuit, or directly measured for increased accuracy as a 2-port measurement using a second iVA

Return Loss Trace

DTF Trace

IVA ANALYSIS MODE - SPECTRUM MONITOR	
Sweep speed	2ms per frequency point
Measurement range	
Low power range	-35 to -115dBm (software default)
High power range	+20 to -50dBm
Receiver noise figure (low power range)	15dB
Resolution bandwidth	20kHz
Displayed average noise level (RBW = 20kHz)	-115dBm low power range, -50dBm high power range
Measurement accuracy	±3dB
Maximum input power without damage	+23dBm
Input IP3 (low power range)	+18dBm
Interference immunity	
Low power range	−25dBm at 500kHz offset from stimulus frequency (software default)
High power range	−5dBm at 500kHz offset from stimulus frequency
Return loss at iVA test port	10dB minimum / 15dB typical

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STIMULUS MODE	
Number of carriers	
Minimum	1
Maximum	Unlimited
Dwell time	
Minimum	500ms
Maximum	Unlimited
RF output power	0dBm ± 3dB

INSTRUMENT CONTROL	
User interface	USB or Bluetooth supported user device with iVA application software installed
Supported Devices	iPA Portable PIM Analyzer Tablet computer (iOS & Android) Smartphone (iOS & Android) PC, Windows 7,8 & 10 running .NET verson 4 or later
Communications interface to iVA	Bluetooth and USB 2.0
Bluetooth antenna	Integrated into housing
Maximum input power on RF port	+23dBm maximum, DC voltage ±30V

MECHANICAL	
Dimensions H x D x W	52 x 69.5 x 216mm | 2.06 x 2.73 x 8.51in
Weight	0.68kg | 1.5 lbs
Connector 1	RF test port iVA-0627A: Type N male, 50 ohms iVA-0627B: 4.3-10 male, 50 ohms
Connector 2	USB 2.0 Mini-B (for charging and connection to iPA or PC)
Mechanical Shock & Vibration	MIL-PRF-28800F Class 2, ETS 300 019-2-1, -2, -7

ENVIRONMENTAL	
Temperature range	-10°C to +55°C | +14°F to +131°F (operational)
Ingress protection	IP54
Altitude	4600m | 15,000ft maximum
Compliance	EMC- EN 61326-1:2013, EN 61326-2-1:2013, EN 55022:2010 “Class A” EN 61000-4-2, 4-3, 4-4, 4-5, 4-6, 4-11 Safety- EN 61010-1:2012, EN 61010-030:2012
Operational humidity	5% to 95% RH non-condensing
Storage temperature range	-20°C to +60°C | -4°F to +140°F

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
iVA-0627A-NC	iVA Cable & Antenna Analyzer System, Type N male connector with Neoprene Soft Case
iVA-0627A-HC	iVA Cable and Antenna Analyzer System, Type N male connector with Hard Case
iVA-0627A-BK	iVA Cable & Antenna Analyzer System,Type N male connector with Basic Accessory Kit
iVA-0627A-SK-02	iVA Cable & Antenna Analyzer System, Type N male connector with Standard Accessory Kit
iVA-0627A-PK-02	iVA Cable & Antenna Analyzer System, Type N male connector with Premium Accessory Kit
Note: Change A to B for 4.3-10 Connector	Eg. iVA-0627B-NC iVA Cable & Antenna Analyzer System, 4.3-10 male connector with Neoprene Soft Case

HOW TO ORDER

Kaelus offers our customers a variety of channels to fit their network and delivery requirements:
Contact our customer service team at +1.303.768.8080 or toll free at +1.800.498.1352 for technical support, unit pricing and availability.

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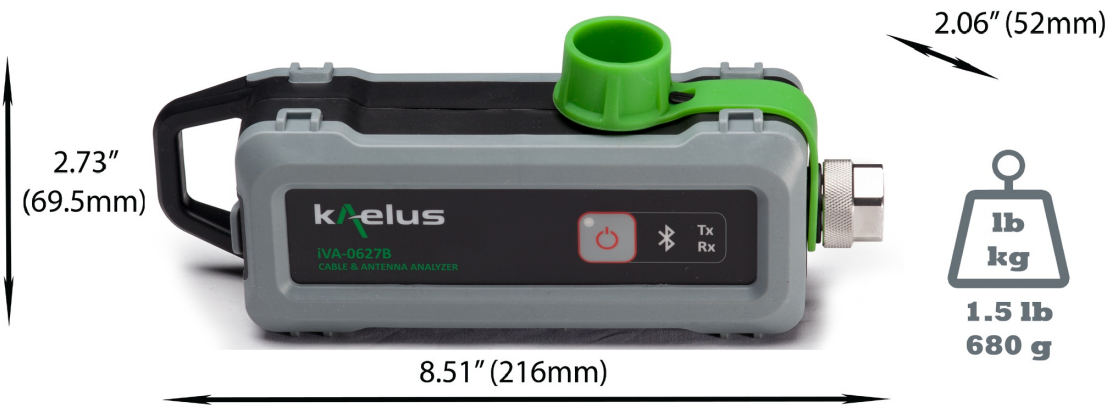
MECHANICAL INTERFACE



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