

iQA Series

Passive Intermodulation Analyzer



Passive Intermodulation (PIM) Analyzer

The iQA series Passive Intermodulation (PIM) Analyzer is a field test instrument used to measure and quantify basestation construction quality using passive inter-modulation (PIM) as the performance metric.

Available in a number of technologies and carrier powers, the Summitek PIM Analyzers have been endorsed by network operators worldwide.

Features

- Rugged, reliable construction suitable for field use
- Integrated polycarbonate transit case
- Simple to operate touch screen interface
- Fully configurable frequencies, powers and IM Product
- Threshold alarm
- Internal report generation
- Full-band transmit and receive



Technical Specifications

System

Measurement Method	Reverse (reflected) PIM , 3rd, 5th , 7th and 9th order
Residual PIM	< -110 dBm/-153dBc max (<-115 dBm/-158dBc typ.)
PIM Measurement Accuracy	± 1.5 dB (max)
User Interface Ports	2x USB, x1 LAN 1x RF Output (7-16 DIN female) 1x Monitor Port (Type-N female)
Display	8.4 in (213 mm) touch screen display

Transmitter

Transmit Frequencies	See version table
Frequency Increment	50 kHz
Frequency Accuracy	± 5 ppm (max), aging ± 1 ppm (max) after first year
Power Per Tone (adjustable)	2x 20W (+33 to +43dBm)
Power Accuracy (per tone)	± 0.5 dB (max)

Receiver

Receive Band (50kHz steps)	See version table
Measurement Noise Floor	< -128 dBm/-171 dBc typ.
Measurement Range	-50 dBm to -128 dBm

Electrical

Mains Power	115-230V, 50/60Hz AC
Power Consumption	650 W

Mechanical

Dimensions	19 x 18 x 12 in (500 x 457 x 305mm)
Weight	< 50 lbs (22.7kg)
Cooling	Forced Air

Environmental

Operating Temperature Range	-10°C to +40°C
Storage Temperature Range	-20°C to +60°C
Ingress Protection (IP)	IP20 (with lid open) IP21 (with lid closed)
Relative Humidity	5% to 95% RH non-condensing
Mechanical shock	40G shock rating
MTBF	75,000hrs

Versions

	Description	TX Range	RX Range (PIM)
iQA-850A	850 MHz	869-894 MHz	824-849 MHz
iQA-900A	GSM900	935-960 MHz	890-915 MHz
iQA-1800A	DCS1800	1805-1880 MHz	1710-1785 MHz
iQA-1900A	PCS1900	1930-1990 MHz	1850-1910 MHz
iQA-1921A	Dual Band PCS/AWS	1930-1990 MHz/ 2110-2155 MHz	1710-1755 MHz/ 1850-1930 MHz
iQA-2100A	UMTS (special band)	2110-2170 MHz	2050-2090 MHz



Vertical orientation for easy access to user interface.



Self contained, ruggedized transport case.

WARNING: Use of the portable PIM test units 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 have permission in advance, from any licensed operators that might be affected by these tests. Furthermore, radiating high RF power can pose a personnel risk.