

PIM SITE ANALYZER α BASE UNIT

IM-A-BU-0727

Main Features

- Broadband RX & TX base model 698-2700 MHz with field replaceable band filter units
- Outstanding PIM performance (typ. < -130dBm)
- PIM location accuracy < 0.3m, all bands
- Continuous wave signal (no pulse), conformity with IEC 62037 – 1, full power to PIM source
- No calibration on Site
- Intuitive Software Operation
- Automated Report Generation
- Integrated Spectrum Analyzer
- Antenna Isolation Measurements
- DTF measurement
 - PIM vs. Distance
 - VSWR vs. Distance
- Measurement Modes
 - Passive Intermodulation:
 - PIM vs. Frequency
 - PIM vs. Time
 - VSWR/Return loss under high RF power
 - RF Spectrum Analyzer
 - Isolation Measurement
- Battery and AC 110/230V operation
- Remote control via WiFi with waterproof tablet (included), or LAN
- CPRI PIM Tests (HW ready, option for later SW release)



General

Display

12.1" Touch screen, readable in direct sunlight

Dimensions

490 × 445 × 185 (L×W×H)

Weight

22 kg

RF Ports

Filter

Base Unit

7/16 DIN (F) Test port (4.3/10 DIN on request),
P-SMP interconnect to Filter, N-Type (F) Isolation
SMP (M) 10MHz Reference input

User Interface Ports

2×USB, LAN

Power Supply

Battery Powered or AC Mains supply

Battery Life

120 min (typical use, non-pulsed CW measurement)
200 min (typical use, battery save mode)
30 min (continuous operation non-pulsed CW at +43dBm)
± 2.5 ppm

Frequency Stability

PIM Analyzer RF (Base Unit)

IM Order

3rd, 5th, 7th, 9th, 11th, 13th, 15th, 17th

Output Power

26 – 49 dBm

Residual PIM

equals 23 – 46 dBm at Testport
< -125 dBm (< -168 dBc @ 2x +43 dBm)
< -130 dBm (< -173 dBc @ 2x +43dBm) typ.

PIM vs. Distance

Accuracy / Resolution

< 0.3m , all bands

Range

Frequency range (seamless)

Depends on number of PIM sources
and accuracy of cable velocity factor
down to -120dBm PIM, 0 – 150m

Filter Units

698 ... 2700 MHz
Changeable to frequency bands

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PIM Analyzer CPRI (SW Option)

Fiber interface

CPRI up to Rate 7

IM Order

SFPs field replaceable

Carrier types

3rd, 5th, 7th

PIM Range

LTE5, LTE10, LTE20, (LTE15 on request)

-130 dBm noise floor (depends on RRH NF & Bandwidth)

Isolation Measurement RF

Frequency

Downlink frequency band of filter unit

RF Output

+23 - 46 dBm

RF Input

+27 dBm max operating

+30 dBm max no damage

+50 VDC max no damage

Isolation

0 – 60 dB

Accuracy

1.5 dB

Resolution

0.1 dB

VSWR / Return Loss RF

Frequency

Downlink frequency band of filter unit

VSWR

1.10 – 20.00

Return Loss

1.00 – 25.00 dB

Distance to VSWR fault

Accuracy / Resolution

0.2 m (typ)

Depends on number of mismatch sources

and accuracy of cable velocity factor

Range

0 – 150 m

Spectrum Analyzer RF

Frequency

Uplink frequency band of filter unit

Resolution Bandwidth

120 Hz to 20 MHz RBW

Noise Floor

-135 dBm DANL at 1 kHz

Amplitude Accuracy

± 1.0 dB typ, ± 1.5 dB max

RF Input

-40 dBm max operating

+10 dBm max no damage

Environmental

Operating Temperature Range

-10°C to + 40°C

Storage Temperature Range

-20°C to +80°C

Relative Humidity

5% to 95% RH non-condensing

Mechanical shock

40G

User Interfaces

Keyboard/USB-Memory

2 × USB A connector

Remote Control

1 × LAN, WiFi (802.11abgn), 1 × Micro-USB B connector

Reference

1 × SMP 10 MHz

CPRI

2 × SFP

Isolation

Port 1: 7-16 Port 2: N-Type

Supply

1 × DC magnetic connector / 1x AC IEC C13

Accessories

**PIM SITE ANALYZER α
BASE UNIT****IM-A-BU-0727**

	Part Number	Description
Useful α Accessories	IM-A-ACSRy-Bag-BU	Carrying bag for Base Unit
	IM-A-ACSRy-Bag-ACSRy	Carrying bag for two Filters, Batteries, Jumper test cables and Tools
	IM-A-ACSRy-Bag-Trolley	Transportation Trolley for both accessory bags
	IM-A-ACSRy-Case-BU	Transportation case for Base Unit
α Spare Parts	60K408-800N1	7/16 Testport Saver for use on α Filter
	64K401-800B1	4.3/10 Testport Saver for use on α Filter
	IM-A-ACSRy-Bat	Battery Pack
Low PIM Adaptors	60S101-KIMN1	7/16 Male to 7/16 Female adapter
	60S101-SIMN1	7/16 Male to 7/16 Male adapter
	60K101-KIMN1	7/16 Female to 7/16 Female adapter
	60S153-KIMN1	7/16 Male to N Female adapter
	53S160-KIMN1	7/16 Female to N Male adapter
	60S164-K00N1	7/16 Male to 4.3/10 Female adapter
	60S164-S00N1	7/16 Male to 4.3/10 Male adapter
	60K164-S00N1	7/16 Female to 4.3/10 Male adapter
PIM Standards	60S110-KxxN1	-110dBm standard adapter (band specific) included with every filter unit
	xx: 07 LTE700; 08 DigDiv AMPS; 09 EGSM; 18 DCS; 19 PCS/AWS;	
	21 UMTS; 26 LTE2600; other frequencies on request	
Low PIM Terminations	60Z150-020	Low PIM termination (portable, with male & female ports)
	60Z150-012	Low PIM termination (Benchtop type)
Tools	60W000-002	32mm torque wrench
	53W010-000	18mm torque wrench
	99W057-000	Adjustable flat wrench
Test Cables	LC02-186-4000	Test Cable 7/16 male / 7/16 male 4.0m
	LC02-186-1500	Test Cable 7/16 male / 7/16 male 1.5m
	LC02-188-4000	Test Cable 7/16 male / N male 4.0m
	LC02-188-1500	Test Cable 7/16 male / N male 1.5m
	SLJ12SP-60M64M-2.0m-00	Test Cable 7/16 male / 4.3/10 male 2.0m
	SLJ12SP-64M64M-2.0m-00	Test Cable 4.3/10 male / 4.3/10 male 2.0m

PIM SITE ANALYZER α BASE UNIT

IM-A-BU-0727

Part Number designation

IM-A-BU-xxxx

xxxx: 0727:
BU:

Bat:
PU:

Base Unit

700-2700MHz Broadband Power Amplifier & Receiver
Battery Unit Battery Starter Kit with 3 Batteries &
Charge cable
Spare Battery 99Wh (3pcs needed)
AC Power Unit

IM-A-FI-xxxx

xxxx: 700/B12-14:
800/B20:
850/B5:
900/B8:
1800/B3:
1900/B2+4:
2100/B1:
2600/B7:

Filter Unit 7/16 Test port *

LTE700LU (ETSI Band12 to 14)
DigDiv (ETSI Band20)
AMPS(CDMA 800) (ETSI Band5)
EGSM (ETSI Band8)
DCS (ETSI Band3)
PCS + AWS (ETSI Band2 & 4)
UMTS (ETSI Band1)
UMTS II / LTE II (ETSI Band7)

* for 4.3 / 10 Test port please order part no. 64K401-800B1

IM-A-SWO-xxxx

xxxx:

Software option

CPRI Measure and Cancel PIM over CPRI Fiber interface

IM-A-ACSRY-xxxx

xxxx: Case-BU:
Bag-BU:

Accessory

Transport Case BaseUnit, Energy Supply,
Transport Bag

Order Number Example

IM-A-BU-0727	Base unit with broadband amplifier 700 -2700 MHz, receiver, fibre CPRI unit
IM-A-BU-BU	Battery Starter kit with Battery insert & 3 Batteries
IM-A-FI-700/B12-14	Filter Insert for LTE700 Lower and Upper band (ETSI Band12, 13 & 14)
IM-A-FI-900/B8	Filter Insert for EGSM900 (ETSI Band8)
IM-A-ACSRY-Bag-BU	Transport Bag for Base Unit

While the information has been carefully compiled to the best of our knowledge, nothing is intended as representation or warranty on our part and no statement herein shall be construed as recommendation to infringe existing patents. In the effort to improve our products, we reserve the right to make changes judged to be necessary.

Draft	Date	Approved	Date	Rev.	Engineering change number	Name	Date
C. Entsfellner	2015-03-08	C. Entsfellner	2016-07-18	300	16-1877	Kaindl B.	2016-11-14
Corporate Headquarters Rosenberger Hochfrequenztechnik GmbH & Co. KG P.O. Box 1260 D-84526 Tittmoning Germany Tel. +49 8684 18-0					Rosenberger Site Solutions, LLC P.O. Box 4268, Lake Charles, LA 70606 Ph.337.598.5250 Fax: 337.598.5290 rlss@rlss.us www.RosenbergerOnline.us		Page 4 of 4