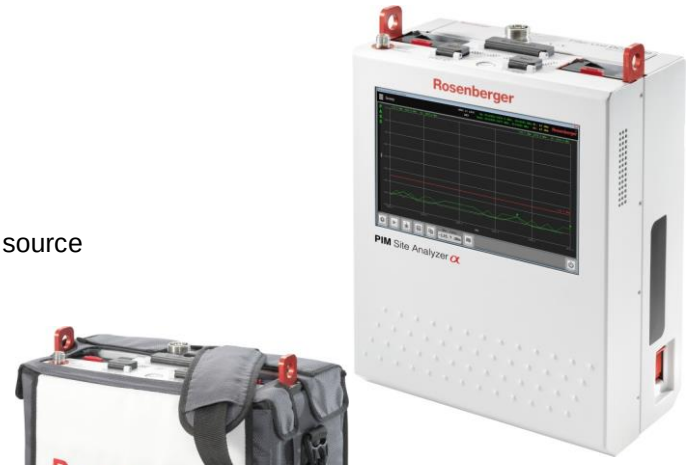
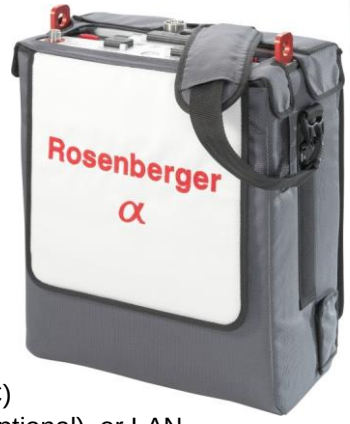
TECHNICAL DATA SHEET	Rosenberger
PIM SITE ANALYZER α **BASE UNIT**	**IM-B-BU-0727**

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
- 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 operation (optional external 110/230V AC)
- Remote control via WiFi with waterproof tablet (optional), or LAN
- CPRI PIM Tests (HW ready, option for later SW release)

General

Display	12.1” Touch screen, readable in direct sunlight
Dimensions	410 × 327 × 173 (L×W×H)
Weight	< 13.4 kg, including batteries
RF Ports	
Filter	7/16 DIN (F) Test port (4.3/10 DIN on request),
Base Unit	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 (ext.)
Battery Life	120 min (typical use, non-pulsed CW measurement)
Frequency Stability	± 2.5 ppm

PIM Analyzer RF (Base Unit)

IM Order	3^{rd}, 5^{th}, 7^{th}, 9^{th}, 11^{th}, 13^{th}, 15^{th}, 17^{th}
Output Power	26 – 49 dBm equals 23 – 46 dBm at Testport
Residual PIM	< -125 dBm (< -168 dBc @ 2x +43 dBm) <- 130 dBm (< -173 dBc @ 2x +43dBm) typ.
PIM vs. Distance	
Accuracy / Resolution	< 0.3m , all bands Depends on number of PIM sources and accuracy of cable velocity factor
Range	down to -120dBm PIM, 0 – 150m
Frequency range (seamless)	698 … 2700 MHz
Filter Units	Changeable to frequency bands

RF_35/08.06/5.0

PIM Analyzer CPRI (SW Option)

Fiber interface	CPRI up to Rate 7 SFPs field replaceable
IM Order	3rd, 5th ,7th
Carrier types	LTE5, LTE10, LTE20, (LTE15 on request)
PIM Range	-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

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	Out: Depends on Filter (7/16 or 4.3/10), In: N-Type
Supply	1 × DC magnetic connector

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Accessories

	Part Number	Description
Useful α Accessories	IM-B-ACSRY-Bag-BU	Carrying bag for Base Unit
	IM-A-ACSRY-Bat	Battery Pack
	IM-B-ACSRY-Backpack	Backpack for accessories
	IM-B-ACSRY-Case-BU	Transportation case for Base Unit
α Spare Parts	60S101-KIMN1	7/16 Testport Saver for use on α Filter
	60S164-K00N1	4.3/10 Testport Saver for use on α Filter
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 (7/16 DIN Type)
	64S110-KxxN1	-110dBm standard adapter (band specific) included with every filter unit (4.3/10 DIN Type)
	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
Super Flex Test Cables	IM-Cable-716m-716m-3000	Test Cable 7/16 male / 7/16 male 3.0m
	IM-Cable-716m-4310m-3000	Test Cable 7/16 male / 4.3/10 male 3.0m
	IM-Cable-4310m-4310m-3000	Test Cable 4.3/10 male / 4.3/10 male 3.0m

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Part Number designation

IM-B-BU-*xxxx* — *Base Unit*

xxxx:	0727:	700-2700MHz Broadband Power Amplifier & Receiver

IM-B-FI-*xxxx* — *Filter Unit 7/16 Test port*

xxxx:	700/B12-14:	LTE700LU	(ETSI Band12 to 14)
	700/B28:	APT700	(ETSI Band28)
	800/B20:	DigDiv	(ETSI Band20)
	850/B5:	AMPS (CDMA 800)	(ETSI Band5)
	900/B8:	EGSM	(ETSI Band8)
	1400/B11+21	LTE1400	(ETSI Band11 & 21)
	1800/B3:	DCS	(ETSI Band3)
	1900/B2+4:	PCS + AWS	(ETSI Band2 & 4)
	2100/B1:	UMTS	(ETSI Band1)
	2600/B7:	UMTS II / LTE II	(ETSI Band7)

IM-B-FI-xxxx-G — *Filter Unit 4.3/10 Test port*

xxxx:	700/B12-14-G:	LTE700LU	(ETSI Band12 to 14)
	700/B28-G:	APT700	(ETSI Band28)
	800/B20-G:	DigDiv	(ETSI Band20)
	850/B5-G:	AMPS (CDMA 800)	(ETSI Band5)
	900/B8-G:	EGSM	(ETSI Band8)
	1400/B11+21-G	LTE1400	(ETSI Band11 & 21)
	1800/B3-G:	DCS	(ETSI Band3)
	1900/B2+4-G:	PCS + AWS	(ETSI Band2 & 4)
	2100/B1-G:	UMTS	(ETSI Band1)
	2600/B7-G:	UMTS II / LTE II	(ETSI Band7)

IM-A-SWO-*xxxx* — *Software option*

xxxx:	CPRI	CPRI Measure and Cancel PIM over CPRI Fiber

IM-B-ACSRY-*xxxx* — *Accessory*

xxxx:	Case-BU:	Transport Case BaseUnit, Energy Supply,
	Bag-BU:	Transport Bag

Order Number Example

IM-B-BU-0727	Base unit with broadband amplifier 700 -2700 MHz, receiver, fiber CPRI unit
IM-A-BU-Bat	Single Battery Pack
IM-B-FI-700/B12-14	Filter Insert for LTE700 Lower and Upper band (ETSI Band12, 13 & 14), 7/16
IM-B-FI-900/B8-G	Filter Insert for EGSM900 (ETSI Band8), 4.3/10
IM-B-ACSRY-Bag-BU	Transport Bag for Base Unit

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