TECHNICAL DATA SHEET

Rosenberger

PIM RACK ANALYZER
BAND FILTER UNIT

IM-R-FI-xxxx-R

Main Features

- Outstanding PIM Performance
- Industrial 24/7 ready
  - Forced air cooled depending on usage
  - Easy to replace air filters
- Plug'N'Play System reconfiguration
  - Automatic detection in BaseUnit
  - Factory calibrated
- Wideband hybrid coupler design
- Spacesaving 3 HU height
- Field replaceable Testport
  - 7-16 DIN and 4.3-10 DIN

General

Dimensions (w/o connectors)	482.6 × 550 × 132.5mm (W×L×H) 19", 3 HU, depth 550mm
Weight	10 to 16 kg (depends on frequency band)
Internal Ports	3 × N, 2 × SMA, 2 × HSD
RF Port	Field replaceable Testport 7-16 DIN, 4.3-10 DIN (opt)

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	1G

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Compatibility / Supported Base Unit

The Filter unit must match into the BaseUnits frequency range:

Base Unit 0722	Filter Units 07, 08, …, 21
Base Unit 2127	Filter Units 21, …, 26

IM-R-FI-07/B12-14-R (LTE700 L+U)

ETSI Band	B12 - 14, B17
Transmit Path	
Range	728 – 764 MHz
Output Power	+45 dBm min.
Receive Path	
Range B12+17	698 – 716 MHz
Range B13+14	776 – 798 MHz
Residual PIM	< -128 dBm (< -171 dBc), referred to 2 × +43 dBm
Weight	15.5 kg

IM-R-FI-07/B28-R (APT700)

ETSI Band	B28
Transmit Path	
Range	758 – 803 MHz
Output Power	+45 dBm min.
Receive Path	
Range	703 – 748 MHz
Residual PIM	< -128 dBm (< -171 dBc), referred to 2 × +43 dBm
Weight	16.0 kg

IM-R-FI-08/B20-R (DigDiv800)

ETSI Band	B20
Transmit Path	
Range	791 – 821 MHz
Receive Path	
Range	832 – 862 MHz
Residual PIM	< -128 dBm (< -171 dBc), referred to 2 × +43 dBm
Weight	13.5 kg

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IM-R-FI-08/B5-R (AMPS850)

ETSI Band	B5
Transmit Path	
Range	869 – 894 MHz
Receive Path	
Range	824 – 851 MHz
Residual PIM	< -128 dBm (< -171 dBc), referred to 2 × +43 dBm
Weight	13.0 kg

IM-R-FI-09/B8-R (EGSM900)

ETSI Band	B8
Transmit Path	
Range	925 – 960 MHz
Receive Path	
Range	880 – 915 MHz
Residual PIM	< -128 dBm (< -171 dBc), referred to 2 × +43 dBm
Weight	13.0 kg

IM-R-FI-14/B11+21-R (LTE1400)

ETSI Band	B11 + 21
Transmit Path	
Range	1475.9 – 1510.9 MHz
Receive Path	
Range	1427.9 – 1462.9 MHz
Residual PIM	< -128 dBm (< -171 dBc), referred to 2 × +43 dBm
Weight	kg

IM-R-FI-18/B3-R (DCS1800)

ETSI Band	B3
Transmit Path	
Range	1805 – 1880 MHz
Receive Path	
Range	1710 – 1785 MHz
Residual PIM	< -128 dBm (< -171 dBc), referred to 2 × +43 dBm
Weight	11.5 kg

IM-R-FI-19/B2+4-R (PCS/AWS1900)

ETSI Band	B2 + 4
Transmit Path	
Range TX1	1930 – 2155 MHz
Range TX2 (B2 PCS)	1930 – 1990 MHz
Range TX2 (B4 AWS)	1930 – 2155 MHz
Output Power	+45 dBm min.
Receive Path	
Range (B2 PCS)	1850 – 1910 MHz
Range (B4 AWS)	1710 – 1755 MHz
Residual PIM	< -128 dBm (< -171 dBc), referred to 2 × +43 dBm
Weight	13.5 kg

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IM-R-FI-21/B1-R (UMTS2100)

ETSI Band	B1
Transmit Path	
Range	2110 – 2170 MHz
Receive Path	
Range	1920 – 2060 MHz
Residual PIM	< -128 dBm (< -171 dBc), referred to 2 × +43 dBm
Weight	12.0 kg

IM-R-FI-23/B30-R (WCS) (opt. on request)

ETSI Band	B30
Transmit Path	
Range	2345 MHz – 2360 MHz
Adjustable max. output power may be limited to +45dBm with this filter.	
It is recommended to use short connection cables and to use MPX position 1 - 6.	
Receive Path	
Range	2305 MHz – 2335 MHz
Residual PIM	-128 dBm (< -171 dBc), referred to 2 × +43 dBm
Weight	kg

IM-R-FI-26/B7-R (LTE II 2600)

ETSI Band	B7
Transmit Path	
Range	2620 – 2690 MHz
Receive Path	
Range	2500 – 2570 MHz
Residual PIM	< -128 dBm (< -171 dBc), referred to 2 × +43 dBm
Weight	12.5 kg

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Accessories

	Part Number	Description
Useful Accessories	IM-R-HWO-ExtCtrl	External Control/Signalling Interface
	IM-R-ACSRY-Fil-BU	10 air filter mats for BaseUnit (420x375x15mm, Polyolefin, Filter class G3, Flammability F1)
	IM-R-ACSRY-Fil-FI	25 air filter mats for FilterUnit (130x45x15mm, Polyolefin, Filter class G3, Flammability F1)
Spare Parts	60S101-KIMN1	7-16 Testport Saver for use on Filter
	60S164-K00N1	4.3-10 Testport Saver for use on 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	60Z150-001	Low PIM termination (19” Rack type, 3HU)
	60Z150-012	Low PIM termination (Benchtop type)
	60Z150-020	Low PIM termination (portable, with male & female ports)
Tools	60W000-002	32mm torque wrench
	53W010-000	18mm torque wrench
	99W057-000	Adjustable flat wrench
Corrugated 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-R-FI-*xxxx-yy* — *Base Unit*

xxxx:	0722:	700-2200MHz Broadband Amplifier & Receiver
	2127:	2100-2200MHz Broadband Amplifier & Receiver
yy:	150W:	150W Output Power

IM-R-MPX-*xxxx* — *Base Unit*

xxxx:	6way:	6-way Switch Matrix (connect up to 6 filters)
	11way:	11-way Switch Matrix (connect up to 11 filters)

IM-R-FI-*xxxx*-y — *Filter Unit 7-16 Test port*

xxxx:	07/B12-14:	LTE700LU	(ETSI Band12 to 14)
	07/B28:	APT700	(ETSI Band28)
	08/B20:	DigDiv	(ETSI Band20)
	08/B5:	AMPS (CDMA 800)	(ETSI Band5)
	09/B8:	EGSM	(ETSI Band8)
	14/B11+21:	LTE1400	(ETSI Band11 & 21)
	18/B3:	DCS	(ETSI Band3)
	19/B2+4:	PCS + AWS	(ETSI Band2 & 4)
	21/B1:	UMTS	(ETSI Band1)
	23/B30:	WCS	(ETSI Band 30)
	26/B7:	UMTS II / LTE II	(ETSI Band7)
y:	R:	Reflected PIM measurements (1 Port)	
	T:	Transmitted and Dual Port measurements (2 Port) (on request)	

IM-R-HWO-*xxxx* — *Hardware option*

xxxx:	ExtCtrl	External control interface to enable/disable Amplifiers and get RF-ON warning

IM-R-SWO-*xxxx* — *Software option*

xxxx:	available on request

IM-R-ACSRY-*xxxx* — *Accessory*

xxxx:	Fil-BU:	10 pcs Air Filter mats for Base Unit
	Fil-FI:	25 pcs Air Filter mats for Filter Unit

Order Number Example

IM-R-BU-0722-150W	Base unit with broadband amplifier 700 -2700 MHz, receiver, fiber CPRI unit
IM-R-MPX-6way	Single Battery Pack
IM-R-FI-07/B28-R	Filter Unit for APT700 (ETSI Band 28)
IM-R-FI-19/B2+4-R	Filter Unit for EGSM900 (ETSI Band 2+4)
IM-R-ACSRY-Fil-BU	Filter Mats for Base Unit

Draft	Date	Approved	Date
Kaindl B.	2018-06-21	Kaindl B.	2018-08-21

Rev.	Engineering change number	Name	Date
a00	18-s052	Benjamin Kaindl	2018-11-08

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