Rosenberger

Passive Intermodulation Analyzers

PIM Test Solutions for all Applications

INTERCONNECT

About Rosenberger

Rosenberger, a leading global electronics manufacturer headquartered in Germany, provides innovative high-frequency, high-voltage, and fiber optic solutions. With worldwide sales and production facilities, the company develops both standardized and customized connectivity technologies for demanding applications.

Our products are trusted across industries such as telecommunications, data centers, test and measurement, automotive, medical, industrial electronics, and aerospace. Additionally, our CNC machining division manufactures precision components for automotive, commercial vehicles, shipbuilding, and mechanical engineering.

Since its founding in 1958, Rosenberger has been committed to innovation and top quality. As a family-owned business, we value long-term relationships with customers and employees.

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Passive Intermodulation Under Control

Passive Intermodulation (PIM) is a critical quality factor for modern high-frequency connections – especially in mobile communication networks, antenna systems, or test and measurement technology. Nonlinear effects, even at the smallest component level, can significantly impair signal quality. Rosenberger addresses this challenge with in-depth system expertise, integrated manufacturing processes, and unique test infrastructure.

Rosenberger Stands for PIM Excellence

Consistent quality assurance, decades of experience, and innovative strength make Rosenberger one of the world’s leading suppliers of low-PIM RF components. For our customers, this means: measurably better system performance, fewer disruptions, and higher network availability.

Material and Manufacturing Expertise

Rosenberger relies on uncompromising material selection: only ultra-pure metals, durable galvanic coatings, and optimized manufacturing steps. All critical production processes – from machining and electroplating to final assembly – are carried out in-house. This ensures that even the smallest component irregularities, which could potentially cause PIM, are eliminated.

- Cleanroom production for particularly sensitive components
- Automated assembly with inline inspection
- Special surface treatments for PIM optimization

Testing Expertise at the Highest Level

As a pioneer in PIM measurement, Rosenberger operates one of the industry's most advanced test environments – including its own PIM test chamber for both serial and development testing. Every relevant product is tested under real-world conditions.

- PIM testing according to IEC 62037 or customer-specific specifications
- In-line testing systems integrated into series production
- Test environments from -55 °C to +125 °C to ensure reliability under extreme conditions

Development and Simulation Expertise

Rosenberger designs RF components systematically optimized for PIM – from mechanical structure and material selection to electrical performance. State-of-the-art simulation tools (EM and multi-body simulation, structural optimization) enable precise prediction of PIM risks already in the design phase.

- Multiphysics simulation of PIM effects
- Co-design of connectors and housings
- Validation through in-house test series and field testing

Integrated System Solutions

Whether RF connectors, cable assemblies, filters, splitters, or complete test systems – Rosenberger offers a fully PIM-optimized product portfolio. Our customers benefit from a deeply integrated modular platform consistently designed for low intermodulation.

- Complete solutions for base stations and active antenna systems
- PIM test equipment for R&D, production, and field services
- Plug-and-play components with guaranteed PIM performance

Industry Expertise and Partnership-Driven Project Management

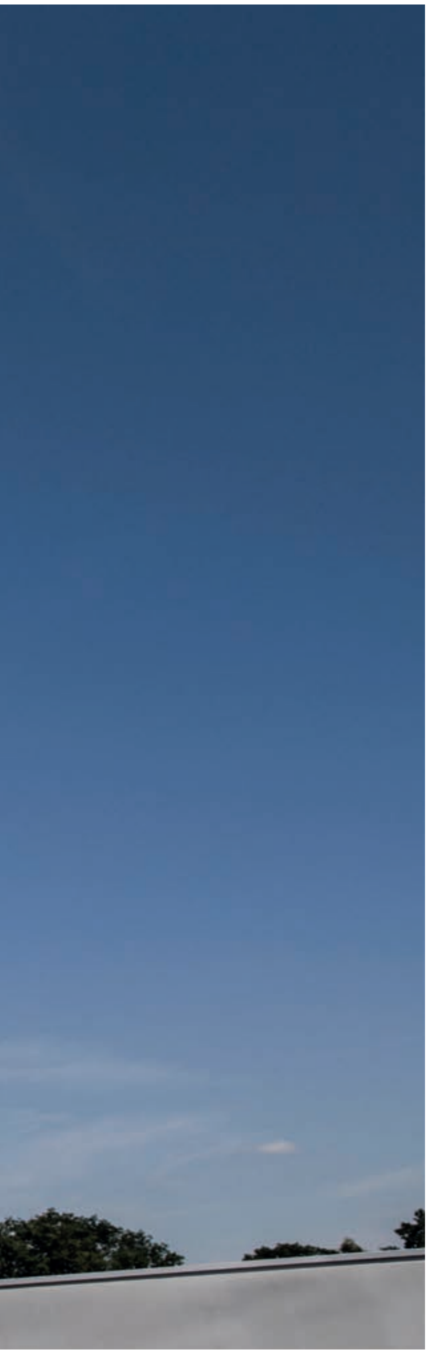
Rosenberger is a trusted partner for numerous OEMs and network operators. Our strength lies not only in technology, but also in the ability to efficiently implement customer projects worldwide – from feasibility studies and prototyping to global series production.

- Application consulting & co-engineering
- Fast implementation of customer-specific requirements
- Global logistics and service solutions

Passive Intermodulation in Mobile Communications

The Challenge of High-Speed Data Transmission

With the exponential growth of global mobile communications, high-speed data transmission has become a vital expectation. To meet this demand, the efficiency of network infrastructure must be optimized at every level. One critical factor that can severely compromise this performance is Passive Intermodulation (PIM) – a non-linear distortion phenomenon that can drastically degrade network quality and negatively impact key performance indicators (KPIs).



Rosenberger's Expertise in PIM Management

As a global leader in RF connectivity solutions, Rosenberger brings deep expertise in both the manufacture of low-PIM components and the development of state-of-the-art PIM test and measurement (T&M) systems.

Our portfolio addresses all application scenarios:

- Research & development (R&D)
- Test labs
- Production line quality control
- On-site network testing

PIM Analyzer Products

Site Testing

- PIM Site Analyzer α
- 2-port PIM Test Solution

Testing in Production Environments

- PIM Rack Analyzer
- Multi-Port & Multi-Frequency Test Solutions

Test Lab and Product Design Environments

- PIM Desktop Analyzer

Passive Intermodulation PIM Analyzer & Backgrounds

Passive Intermodulation (PIM) is a non-linear distortion that occurs when two or more high-frequency signals interact within a passive component – such as a cable, connector, antenna system, or splitter. This interaction produces so-called intermodulation products, which are typically unwanted signals of the 3rd, 5th, or 7th order. These signals can fall into adjacent receiver channels and cause interference. In modern mobile networks – characterized by dense frequency planning, high-power transmitters, and highly sensitive receivers – such interference presents a serious and growing challenge.

In modern mobile networks with dense frequency planning, high-power transmitters, and highly sensitive receivers PIM interference poses a serious and growing concern.

The causes of Passive Intermodulation are diverse and often difficult to predict. Common contributors include:

- Low-quality components in the RF transmission path
- Loose or contaminated connectors
- Corroded or dirty contact surfaces
- Use of magnetic or ferromagnetic materials
- Environmental factors, such as a rusty metal roof near the antenna system

Even apparently minor issues – like poor solder joints or microscopic debris – can generate significant intermodulation effects.

Due to the wide range of influencing factors, PIM cannot be accurately calculated or reliably simulated. As a result, proper evaluation and root cause analysis require practical, real-world measurements using specialized test equipment.

Rosenberger PIM Analyzers

Rosenberger's PIM analyzer systems are designed with the following key features:

- Excellent self-intermodulation performance
- High-power signal output to simulate realistic test conditions
- Highly sensitive and fast receiver unit capable of detecting even weak intermodulation products

These instruments allow for precise analysis of 2nd, 3rd, 5th and 7th order intermodulation products in a wide range of passive components, including RF cables and connectors, antenna systems, filter combiners and splitters.

With Rosenberger's PIM test solutions, mobile network operators, equipment vendors, and component manufacturers can quickly identify PIM-related issues, pinpoint root causes, and implement targeted corrective actions. This is a critical step in maintaining high-quality, reliable mobile communication networks.

Physical Background

Intermodulation occurs when two or more signals mix on a non-linear device and create undesired output at other frequencies.

In a communications system, this means that signals in one channel may cause interference with adjacent channels.

Considering that an input signal contains two frequencies, intermodulation can be indicated as follows:

$f_{IM} = mf_1 \pm nf_2$

f_1 and f_2 are carrier frequencies,

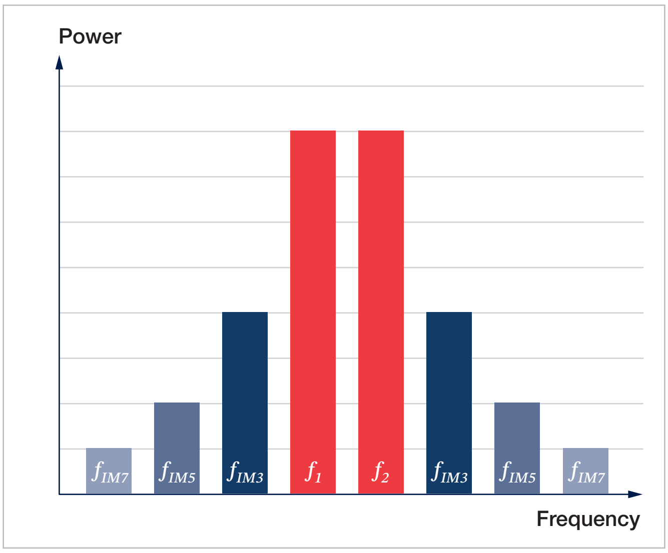
f_{IM} is the intermodulation frequency,

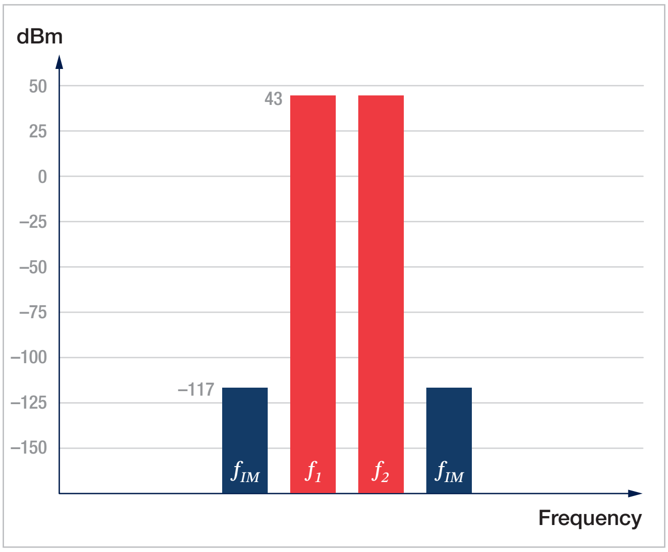
m and n is the order of f_{IM}.

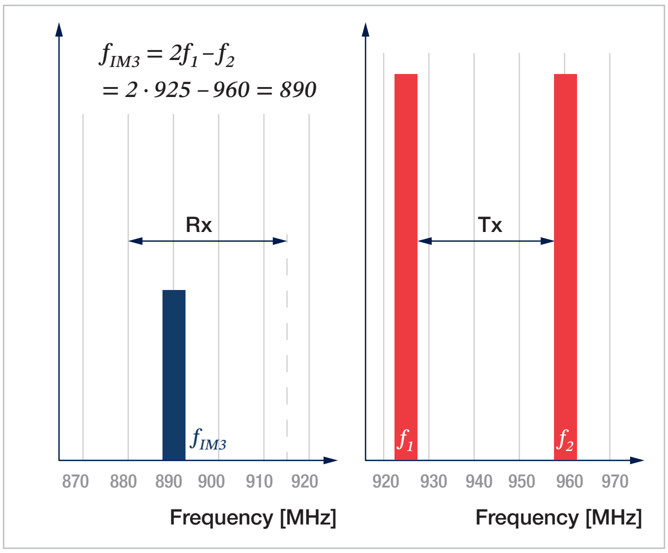
For example, when $f_{IM} = 2f_1 - f_2$, f_{IM} is called the 3rd order intermodulation frequency. Commonly, the 3rd, 5th and 7th order intermodulation signals will be considered. The 3rd order intermodulation signal always represents the worst case condition of unwanted signals generated since it is closest to the carriers and has the highest amplitude.

Intermodulation is normally specified in terms of dBm or dBc. For example, +43 dBm (20 W) is a typical input power level f_1 and f_2 specified for device under test (DUT). If the allowable intermodulation level f_{IM} for DUT is required to be –117 dBm, thus the specification is –117 – 43 = –160 dBc.

IEC-62037 is an international standard for RF connectors, cable assemblies and cable intermodulation level measurement. It defines the intermodulation level, test principle and test procedure. In IEC standard chapter 6, it requires that the residual intermodulation of an analyzer should be at least 10 dB below the specified value of DUT. In the above example, the residual intermodulation of the analyzer should be less than –170 dBc. The lower the self-intermodulation, the more accurate the test results obtained.







Site Testing

Broadband. Precise. Future-proof.

The Rosenberger portable and multifunctional broadband PIM Site Analyzer α provides the best alternative of performing the most precise and efficient PIM tests on site.

The versatile Rosenberger 2-port PIM testing solution combines the functionality of a traditional one port test system with a new 2-port test system to distinguish internal PIM-sources from external PIM-sources.

PIM Analyzer α

The Rosenberger PIM Site Analyzer α consists of a single master unit with band-specific, interchangeable filter units, since the form factor of the filter units is the same.

Take out one filter unit, e.g., 900 MHz, and replace with another filter unit, e.g., 1800 MHz, without any calibration of the filter unit, potential adaptors, test cable, or operational mode(s). Future-proof plug and play concept covering 700 to 2700 MHz (600 MHz optional).

Benefits

- Broadband base unit 700 to 2700 MHz (600 MHz optional) with field interchangeable, band-specific filter units
- Stressed PIM tests – continuous wave (CW) signal simulates real operating conditions of the base station (according to IEC 62037-1)
- Outstanding PIM performance < –125 dBm (< –130 dBm @ 2×43 dBm typical)
- No on-site calibration
- Accuracy of < 0.3 m for PIM distance to fault (DTF) measurement
- Future-proof for upcoming bands
- Upgrade for 600 MHz and IM2 application

Features

- In-built WiFi for remote control via optional Android tablet
- Operation via batteries or external power supply
- VSWR/return loss measurements
- Antenna isolation measurement
- Integrated spectrum analyzer
- 12" touchscreen
- Intuitive software operation

Fast and easy interchangeable band filter units

Specifications

IM order	2^{nd}, 3^{rd}, 5^{th}, 7^{th}, 9^{th}, 11^{th}, 13^{th}, 15^{th}, 17^{th}
Output power at test port	23–46 dBm
Residual PIM	< –125 dBm (< –168 dBc @ 2×43 dBm), < –173 dBc typical
PIM and RL/VSWR vs. distance accuracy resolution	< 0.3 m depends on number of PIM sources and accuracy of cable velocity factor
DTF range	Down to –120 dBm PIM, 0–150 m
Frequency range (seamless)	700–2700 MHz (600 MHz optional)
Filter units*	Interchangeable frequency band(s) 600 optional, 700, 800, 850, 900, 1400, 1800, 1900, 2100, 2300, 2600 MHz

* Other frequency bands on request
For detailed specifications see datasheet: www.rosenberger.com/pia

Continuous Wave (CW) PIM Site Testing

Rosenberger's CW-PIM Testing provides a highly precise method for detecting passive intermodulation – ideal for mobile network operators and equipment manufacturers. Unlike conventional pulse-based testing, CW generates continuous power without interruptions, accurately simulating the real operating conditions of a Base Transceiver Station (BTS). As rising quality demands, the rollout of 5G, co-location, and aging infrastructure increase PIM issues, reliable detection is becoming critical.

Our CW-based PIM Site Analyzer solution ensures that even the smallest faults become visible – unlike the pulse method, where weaknesses often remain undetected. Only continuous loading with ≥ 2×20 W allows components to be tested under realistic conditions – a requirement that pulse equipment cannot fulfill.

Testing in Production Environment

Exceptionally modular. Precise. Efficient.

Rosenberger rack analyzers are designed to make PIM tests in production or test lab environments exceptionally modular, precise, and efficient.

Rack Analyzer

Rosenberger Rack Analyzers are designed to make PIM tests in production or test lab environments exceptionally modular, precise and efficient. The budget-friendly broadband base unit (control unit) concept offers maximum flexibility thanks to the option of connecting up to 6 filter units to one base unit. An optional integrated DTF measurement enables faster fault-finding by accurately identifying the source of PIM.

With the plug-and-play filter concept, intuitive software operation, and easy-to-replace filters, it is possible to create a significant reduction in production downtime caused by changes in test frequencies or maintenance and servicing work.

Benefits

- Frequency range from 300 to 6000 MHz
- Outstanding up/down sweep time
- Software defined receiver with very high performance
- Cascadable filter units with easily changeable filters
- High quality and cost effective

Features

- Distance to PIM source integrated with high resolution (software option)
- Very low residual PIM < –173 dBc typical
- Field exchangeable test ports
- Remote control via LAN with SCPI comands

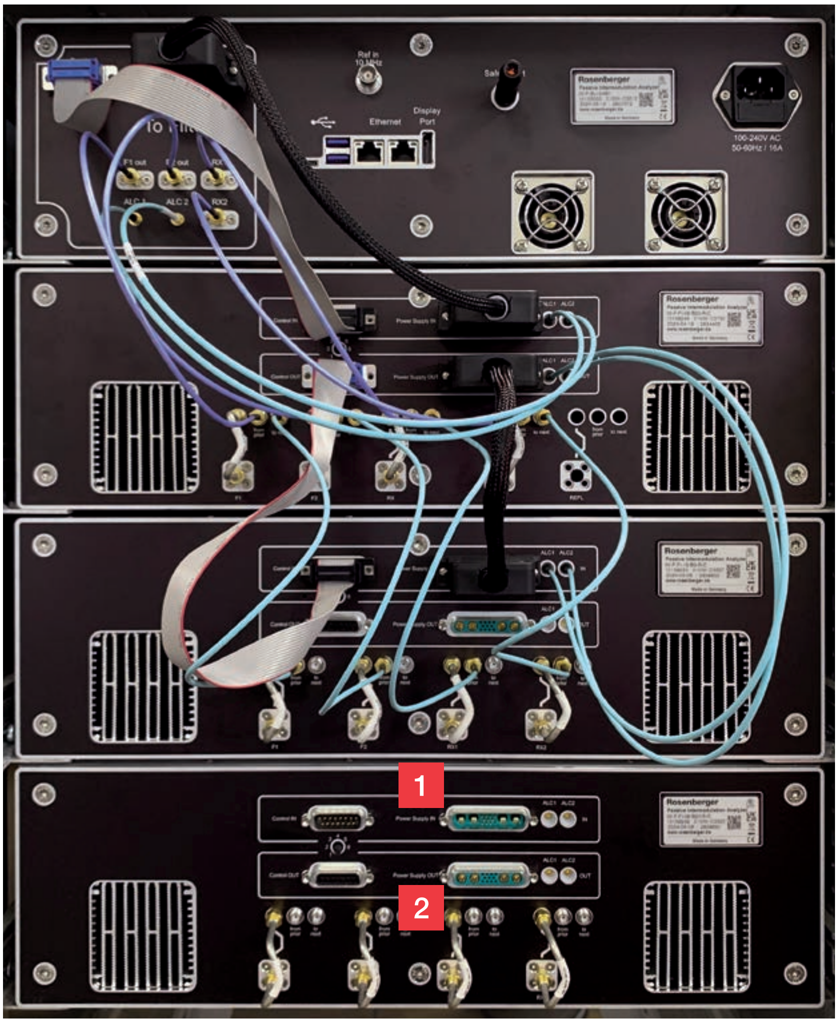
Base unit (control unit) with 9" touchscreen

Filter unit with changeable filters

Specifications

Frequency range	300 – 6000 MHz (seamless)
IM order	2nd, 3rd, 5th, 7th
Output power at test port (filter unit)	2× 23 – 46 dBm, high power option 49 dBm
Residual PIM	< –128 dBm (< –171 dBc @ 2×43 dBm) < –130 dBm (< –173 dBc @ 2×43 dBm) typical
Distance to PIM source	< 0.3 m single source, < 2.0 m multi source, depends on frequency band > –140 dBm, 0 – 700 m
Exchangeable test port adaptors	7-16 and 4.3-10
Measurement mode	2-tone, sweep, manual, DTF, RL/VSWR, Spectrum
Options	Distance to PIM, spectrum analyzer, broadband VNA

For detailed specifications see datasheet: www.rosenberger.com/pia



1 Filter input
2 Filter output

Testing in Production Environment

Time saving during measurement. Less reconnecting of cables.

Field exchangeable testport either 7-16 or 4.3-10

The multi-port and multi-frequency test solutions can help to significantly reduce PIM test time in production lines. Multi-port capability allows testing of up to 4 (optionally 8) ports in the same frequency band in parallel.

Multi-Port & Multi-Frequency Test Solutions

Rosenberger's multi-port, multi-frequency PIM test solution enables precise analysis of intermodulation characteristics for antennas, transmission lines. connectors, jumpers, filters, combiners, splitters, and other passive components across all major mobile frequency bands (LTE 600, LTE 700, LTE 2600, AMPS, Dig.Div., EGSM, DCS, PCS, WiMAX, UMTS).

This test solution is designed for the use in production lines to measure the reversed 2nd, 3rd, 5th, 7th, 9th, 11th, 15th and 17th order intermodulation products. The control unit of the test solution is equipped with a system controller and a receiver. The test solution is controlled by the supported remote software. The filter unit is equipped with high-power amplifiers and low PIM triplex filters.

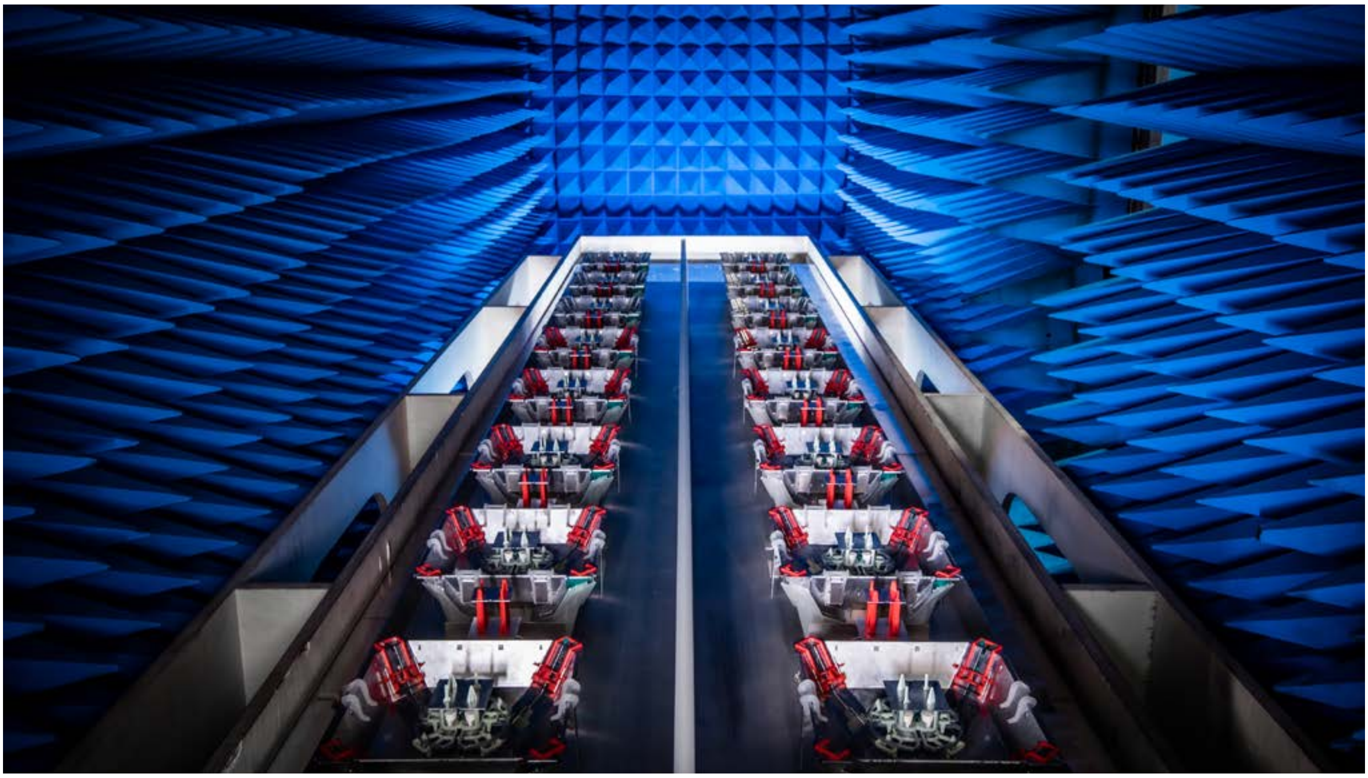
The test setup complies with the test methods suggested by proposal paper IEC 62037-1.

Benefits

- Reduced test time and connection cycles
- Improved testing efficiency
- Optimized utilization of test equipment (totex)
- Reduced complexity of test setup
- Minimal cabling required
- Easily expandable
- Capex and opex savings

Features

- Modular design
- Multiple base units and filters
- Combiner unit
- Direct connection to DUT via PIM test cable and quick-lock adaptor
- Fast and efficient PIM testing



Antenna in the test lab

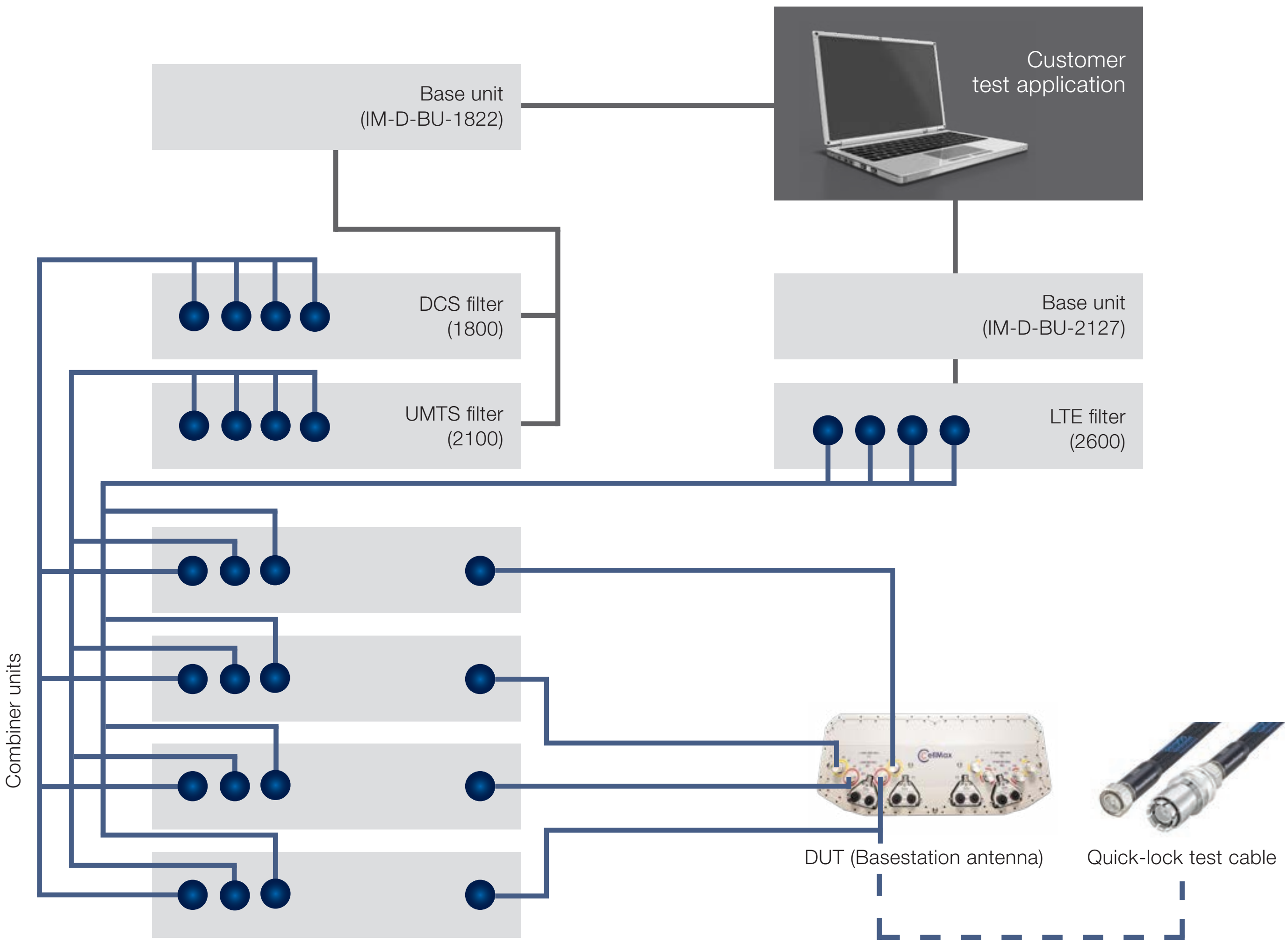
Specifications

Power at test port (at filter unit)	2× up to min. +36 – 46 dBm
Output power accuracy	±0.5 dB
IM-level (2×43 dBm, S/N = 10 dB)	≤ –168 dBc @ 2×43 dBm (–171 dBm typical)
Frequency band of 4-port filter units	600, 700, 800, 850, 900, 1800, 1900, 2100, 2600, 3500 MHz Other frequency bands and additional ports on request

For detailed specifications see datasheet: www.rosenberger.com/pia

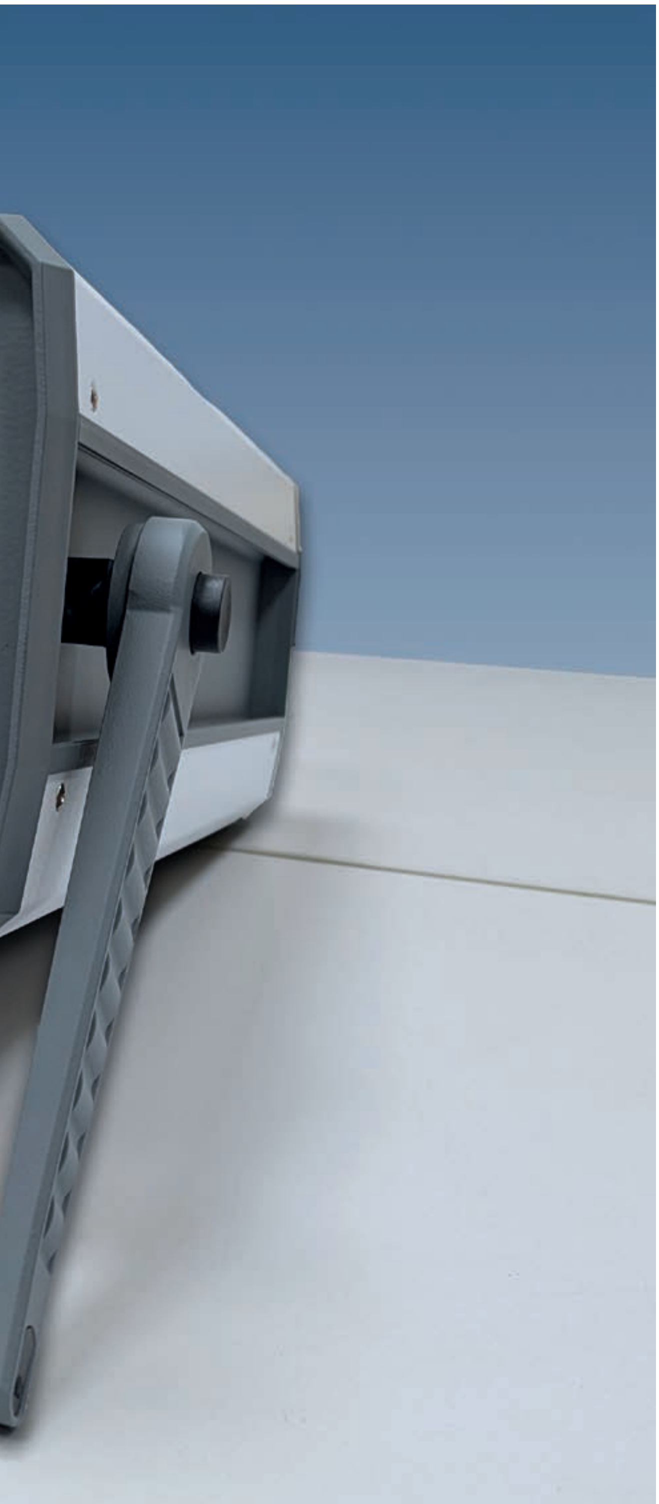
Example of a high-band test configuration

- One connection towards DUT on 4 high-band ports
- PIM test with 4 high-band ports, 3 different bands simultaneously in one connection
- Overall test time is significantly shorter in sweep mode (PIM test including cable connection)



Testing in Lab and Product Design Environment

Portable. Flexible. Budget friendly.



Rosenberger desktop analyzers are portable and flexible for R&D and test labs.

Test Lab and Product Design Analyzer

The budget-friendly PIM analyzer concept offers a single-band unit packed with powerful features. The optional DTF measurement enables faster fault-finding by accurately determining the source of PIM.

This analyzer can also be used in production environments. Thanks to intuitive software operation and easily replaceable air filters, downtime caused by measurement time as well as maintenance and service work can be significantly reduced.

Benefits

- Supports all bands from 300 – 6000 MHz
- Outstanding up/down sweep time
- Software defined receiver with very high performance
- High flexibility and portability in test environment

Features

- Distance to PIM source integrated with high resolution (software option)
- Outstandig dynamic residual IM Level < –174 dBc (2×43 dBm typical)
- Field exchangeable test ports
- Remote control via LAN

Rosenberger Desktop Analyzer

Model	**Basic Line, High Power**
Application range	Portability and flexibility in production line, R&D and test labs Multifunction desktop PIM analyzer supports various types of measurements in production environment, R&D and test labs
Frequency range	300–6000 MHz
DTF	Integrated in base unit (no separate module needed, software option)
Features	2-tone, sweep Spectrum analyzer, LAN for remote control, 7" touchscreen, intuitive software operation, exchangeable test port adaptors (7-16 and 4.3-10) Optional: DTF, distance to PIM source Optional: VNA on the PIM testport Optional: High power 2×49 dBm

Specifications

IM order	2^{nd}, 3^{rd}, 5^{th}, 7^{th}
Output power at test port	23–46 dBm, high power option 49 dBm
Residual PIM	< –128 dBm (< –171 dBc @ 2×43 dBm) < –131 dBm (< –174 dBc @ 2×43 dBm) typical
PIM vs. distance accuracy resolution	< 0.3 m, all bands Depends on number of PIM sources
Range	Down to –140 dBm PIM, 0–700 m

For detailed specifications see datasheet: www.rosenberger.com/pia

Accessories

Filter Units for Special Applications of PIM Analyzer α

Rosenberger No.	Description	Product
IM-B-FI-xxxx/Bxx**	Filter unit All commercial mobile bands	
IM-B-FI-800/B20+B20*	Filter unit With eyelet for fall protection With RX input (QMA) to find external PIM sources LTE 800 MHz (Band 20)	
IM-B-FI-700LU-P2*	2-port filter unit To measure on two different antennas With RX input (QMA) to find external PIM sources LTE 700 MHz (Band 12/13/14/17)	
IM-B-FI-600/B71+B2*	Filter unit With RX input (QMA) to find external PIM sources PCS 1900 MHz (Band 2)	
IM-B-FI-1900AWS-P2*	2-port filter unit To measure on two different antennas With RX input (QMA) to find external PIM sources PCS 1900 MHz (Band 2)	
IM-B-FI-1821/B1+3*	Crossband Filter Unit	

* All other bands – Combinations on request
** xxxx: Please fill in the requested frequency 600–2600 MHz – Bxx: please fill in the requested band no.

Available Frequencies

7-16 Connector	Frequency Range	
	Tx [MHz]	Rx [MHz]
IM-B-FI-600/B71	617–652	663–698
IM-B-FI-700/12+17	728–764	698–716
IM-B-FI-700/13+14	728–764	776–798
IM-B-FI-700/B28	758–803	703–748
IM-B-FI-800/B20	790–821	832–862
IM-B-FI-850/B5	869–894	824–851
IM-B-FI-900/B8	925–960	880–915
IM-B-FI-900+/B8	921–960	876–915
IM-B-FI-1400/B11+21	1475.9–1510.9	1427.9–1462.9
IM-B-FI-1800/B3	1805–1880	1710–1785
IM-B-FI-1900/B2+4	1930–2155	1710–1910
IM-B-FI-2100/B1	2110–2170	1920–2060
IM-B-FI-2350/B30+40	2345–2360	2305–2335
IM-B-FI-2600/B38	2600–2620	2570–2590
IM-B-FI-2600/B7	2620–2695	2445–2590

Power Accessories for PIM Analyzer α

Rosenberger No.	Description	Product
IM-A-BU-BAT	Spare Battery For base unit	
IM-A-BAT-CH-Lite	Battery charger To charge spare battery IM-A-BU-BAT	
IM-A-ACSRY-CHGR-BU	Power unit To charge the batteries in the base unit while no measurement is running	
IM-B-BU-PU	Power Unit To operate the base unit and charge the batteries at the same time (during measurement as well)	

Transport Accessories for PIM Analyzer α

Rosenberger No.	Description	Product
IM-B-ACSRY-Bag-BU	Carrying bag For base unit	
IM-A-ACSRY-Backpack	Carrying bag For accessories, e.g. load, filter, torque wrench etc.	
IM-B-ACSRY-Case-BU	Transport case For base unit Ruggedized Waterproof	

Accessories

Test Accessories & Tools

Rosenberger No.	Description	Product
IM-A-ACSRY-Tablet	Android tablet To remote control the base unit	
IM-Cable 716m-716m-3000 IM-Cable 716m-716m-4000 IM-Cable 4310m-4310m-3000	High-performance PIM test cable Ruggedized Torsion-proof Other configurations or lengths on request	
IM-Load-Site-4.3-10 IM-Load-Site-7-16	Low PIM termination Port Saver m/f	
  60W000-002 64W022-001 53W008-000 53W009-000 99W057-001	Torque wrenches and pliers To loosen or tighten screw connections Wrench size SW 32 – 7-16 – Torque 25 Nm Wrench size SW 22 – 4.3-10 – Torque 5 Nm Wrench size SW 18 – N – Torque 1.1 Nm Wrench size SW 20 – N – Torque 1.1 Nm Wrench size adjustable 0–35 mm	
SLTK003-002	Accessory kit including different torque wrenches, adaptors (4.3-10 – 7-16), IM-cable and a low PIM load	
IM-Ext. PIM Hunting Probe	Hunting probe To search for external interference factors on PIM-critical parts	
IM-Cable-RX-15m	Cable 50 Ω To connect the PIM hunting probe to the filter unit	
EIM-ACSRY-Leasheye	Leasheye For fall protection Retrofitable	

Adaptors

Rosenberger No.	Description	Product
60S164-K00N1	Adaptor 7-16 male – 4.3-10 female	
60K164-K00N1	Adaptor 7-16 female – 4.3-10 female	
60K101-KIMN1	Adaptor 7-16 female – 7-16 female	
60K164-S00N1	Adaptor 7-16 female – 4.3-10 male	
64K101-K00B1	Adaptor 4.3-10 female – 4.3-10 female	
60K408-800N1	Flange adaptor Exchangeable 7-16 female (filter unit)	
64K401-800B1	Flange adaptor Exchangeable 4.3-10 female (filter unit)	
60S110-KxxN1*	PIM standard adaptor –110 dBm 7-16 male – 7-16 female	
64S110-KxxN1*	PIM standard adaptor –110 dBm 4.3-10 male – 4.3-10 female	
60S080-KALN1	Zeroing adaptor 7-16 male – 7-16 female	

* xx: Please fill in the requested frequency, 06–26 (e.g. 06 = 600 MHz, 26 = 2600 MHz)

Frequency Bands

Band	Band No.	Tx [MHz][1], DL	Rx [MHz], UL
Tetra 390[2]		390–400	380–385
Tetra 392[2]		392–400	380–388
Tetra 422[2]		422–430	410–418
Tetra 462[2]		462–470	450–458
LTE 600	B71	617–652	663–698
LTE 700LU	B12, B13, B14 and B17	728–764	698–716/776–798
APT700	B28	758–803	703–748
Dig.Div	B20	791–821	832–862
AMPS	B5	869–894	824–849
EGSM/EGSM-R	B8	921–960	880–915
LTE 1400	B11 and B21	1475.9–1510.9	1427.9–1462.9
DCS	B3	1805–1880	1710–1785
PCS	B2	1930–1990	1850–1910
PCS and AWS	B2 and B4	1930–2155	1710–1910
UMTS	B1	2110–2170	1920–2060
WCS	B30	2345–2360	2305–2315
LTE 2600/IMTE	B7	2620–2690	2500–2570
LTE 3500[2]	B42	3510–3594	3410–3484
LTE 3800[2]	B43	3700–3740	3600–3800
3700 MHz[2]	N77	3660–3700	3500–3600 3850–3980
4800 MHz[2]	N79	4800–4840	4700–4750 4950–5000

1) Frequency range can differ between models – for details see specific datasheet
2) Not available for PIM Analyzer α
Other frequencies on request

Services

Factory Calibration & Repair

To ensure highest precision of measurements, we recommend a factory calibration interval of 12 months. In-house calibration and repair service is optionally available. If you wish to send back a unit for factory calibration or repair, for smooth transaction please contact us prior to shipment.

FAQs

- Setting and calibration of the unit to the values based on factory-provided, initial calibration.
  Check for latest Firmware update.
- To ensure highest precision of measurements we recommend a calibration interval of 12 months.
- Standard cycle time is 10 working days after receipt of unit.
- Service options such as on-site calibration service or a service contract are also available.

Download Software & Tools

For downloads
refer to the website:

www.rosenberger.com/pia

Service Contact

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E-Mail pia_service@rosenberger.com

Quality & Environment

The quality of Rosenberger products, solutions and services is an essential part of our corporate strategy.

Ensuring the optimum quality of products and services and taking responsibility for our environment are fundamental elements of Rosenberger's corporate philosophy. Our quality philosophy does not only cover the optimization of parts and products, but also the continuous improvement of all company processes: from product development, planning, procurement, production, sales, logistics right through to environmental policy. To summarize, we want to offer maximum benefits for our customers all over the world.

We aim to act in an environmentally conscious manner, use materials economically, protect natural resources, recycle, and ensure energy efficiency.

In recognition of continuously improving processes and applying quality management systems, Rosenberger has won a number of prestigious quality and environmental excellence awards.

Complete Control with Innovative Technology

Industrial image processing guarantees fully automatic machine inspection. A combination of hardware and software ensures error-free execution of complex production. Digital sensors inside industrial cameras with special optics for image acquisition analyze and monitor all process steps. If products are in need of adjustment they are immediately scanned prior to checking for errors against the respective design data.

Certificates

- IATF 16949
- DIN EN 9100
- ISO 9001
- ISO 14001
- ISO 45001
- ISO 50001
- DaKKs accreditation according to DIN EN ISO 17025

Learn more about Rosenberger certifications:

www.rosenberger.com/company/certifications/

Rosenberger Global Network

The global network of Rosenberger comprises research, development, production, and assembly facilities at numerous international locations. From Europe to Asia and North and South America, we ensure close integration of our expertise and resources. This worldwide structure enables us to implement innovations more quickly, optimize cost structures, and provide our customers in all key markets with direct access to products and services.

Supported by strong partners, Rosenberger is present in the most important industrial nations – offering competent consultation, short delivery times, and smooth processes.

This international network forms the foundation for sustainable success, excellent customer service, and the continuous advancement of our technologies.

Contacts

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