



Discover the Experience

# Scalable Tool for Air Interface Emulation EB Prosim FE



EB Prosim FE

## Single-Box Solution for Easy Test Setup

Transceiver performance verification systems typically consist of numerous test equipment and accessories. EB Prosim FE air interface emulator is a test solution including the latest radio channel emulation capabilities and required test system accessories, with advanced test setup configurability in a single box.

EB Prosim FE is a scalable tool for testing all major wireless technologies. It is designed specifically for the testing of terminal devices.



### KEY INFORMATION

▶ Technology independent radio channel emulator

▶ File-based real-time emulation

▶ Frequency area 35-2655 MHz

▶ 2x2 MIMO channel emulation

▶ Cellular standards: GSM/GPRS/EDGE, PCS, WCDMA, CDMA/CDMA2000, LTE, TETRA

▶ Broadcasting standards: DVB-T/H, DMB-T/S and ISDB-T

▶ FDD and TDD systems

▶ Bandwidth 30 MHz

▶ Analog baseband and RF interfaces

▶ Up to 4 physical channels

▶ Up to 20 fading paths per channel

▶ Propagation delay up to 13 ms

▶ Interfering signal types AWGN, CW, GMSK, WCDMA DL, 8-PSK and OCNS

▶ Automatic routing unit

▶ Automatic input level setting

▶ Input and output power measurement

▶ Channel sequence simulation

▶ Real-time adjustable emulation parameters

▶ Complex correlation

▶ Pre-stored standard channel models

▶ User defined channel models

▶ Pre-stored standard test cases

▶ ATE control through GPIB and Ethernet

More detailed information available in EB Prosim FE datasheet.

# Scalable Solution for Performance Testing

## Air interface emulator

The most challenging part of implementing any wireless system is to understand the characteristics of the radio channel, which defines the performance of wireless communication systems. EB PropSim FE brings the radio channel environment with different propagation phenomena to your laboratory.

EB PropSim FE is built on EB's solid radio channel know-how. It supports numerous radio channel environments with extensive built-in radio channel modelling tools. With this test solution, developers of terminals and network infrastructure equipment as well as operators can verify the functionality of their designs and systems against real-world radio channel conditions conveniently in repeatable and controllable laboratory conditions.

Testing and verifying the performance of the design with a realistic air interface throughout the product development process provides major opportunities for savings, both in terms of time and money. EB PropSim FE is a future-proof and versatile

testing tool that can be utilized in multiple R&D phases and projects within one organisation. EB proactively develops the EB PropSim radio channel emulator product family to meet the demanding testing requirements of future wireless standards.

## Scalable solution for your testing needs

EB PropSim FE is designed to be a scalable and modular test solution. Therefore it can be easily tailored to meet your testing needs with the correct set of functionalities. EB PropSim FE can be equipped with up to four physical fading channels enabling 2x2 MIMO testing, or upgraded later to this full configuration based on your testing requirements. Other available features include RF local oscillators and an integrated interference generator with different interference sources. Depending on the complexity of the air interface environment, the EB PropSim FE can also be configured with the right amount of fading paths for each fading channel.

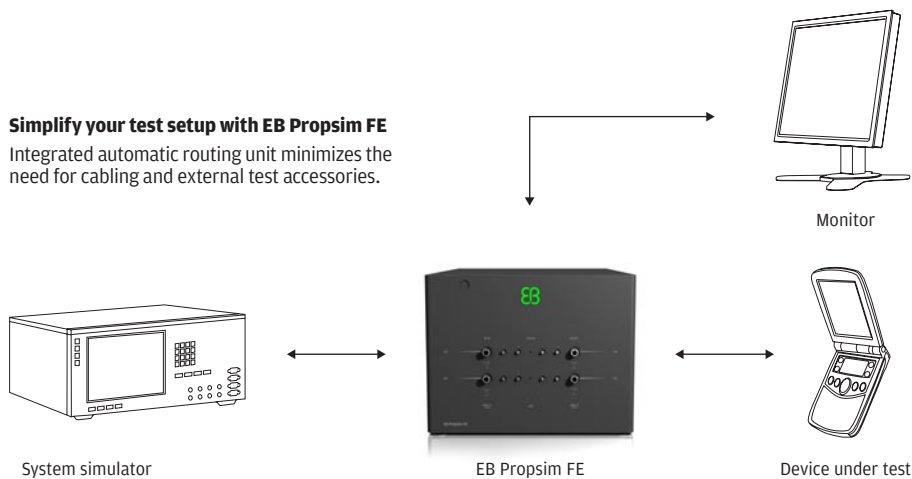
## Simplify your test setup

Test system components and accessories such as interference and AWGN generators, switching boxes, circulators/duplexers and attenuators are conventionally used to build complex test setups. EB PropSim FE integrates these in a single-box with internal automatic routing unit. Consequently EB PropSim FE provides a single point to control and monitor the test setup and test case parameters. The integration of various test accessories inside the EB PropSim FE improves test system accuracy and reduces the time required for test setup verification.

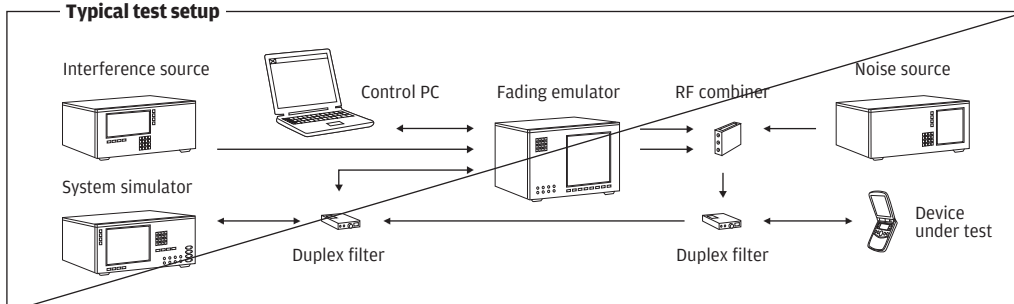
The included pre-defined test case templates allow fast and easy creation of new standards based test setups and test cases. A versatile user interface enables easy creation and modification of channel models and test case parameters while performing the tests. These parameters include e.g. mobile speed, signal-to-noise ratio and carrier-to-interference ratio.

### Simplify your test setup with EB PropSim FE

Integrated automatic routing unit minimizes the need for cabling and external test accessories.



### Typical test setup





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