What is RFmx?

RFmx is a set of interoperable software applications that optimize NI RF instrumentation for general-purpose, cellular, connectivity, and aerospace/defense test applications. RFmx simplifies your signal generation and measurement experience.

Why RFmx?

RFmx streamlines test system development by accelerating setup, measurement, and performance. Soft front panels provide an intuitive interface for connecting to hardware, enabling users to efficiently perform measurements and debug automated tests. Composite measurement functionality and parallelized execution ensure maximum instrument utilization for test time reduction. And with dedicated personalities for conventional spectrum analysis, modulated signals, and standard defined signals (5G New Radio, Wi-Fi, Bluetooth), RFmx is tailored to your application. From design to manufacturing test, RFmx helps you achieve your goals faster.

Key Benefits

Comprehensive System : Ensure accurate benchtop results for general purpose and standard defined RF measurements. With RFmx and PXI instrumentation, software and hardware connect for seamless signal generation and analysis.

General-Purpose : Gain insight into a wide range of general-purpose signals quickly and easily. Use the SpecAn and Demod personalities for performing conventional spectrum analysis and interacting with a variety of modulated signals.

Standard Compliant : Test multiple wireless standards for cellular, connectivity, and IoT signals. Select the personality of RFmx for your specific application and testing needs.

Quick Start : Begin taking measurements out of the box with interactive soft front panels, and generate and modify unlocked waveforms using waveform creation software. Intuitive and easy to use, RFmx streamlines validating test performance and debugging test scenarios.

Accelerated Development : Start automation with programming examples for every measurement in LabVIEW and text-based languages. RFmx demystifies complex RF theory with extensive help documentation and a programming reference guide.

Faster Execution : Complete testing quicker with innate high-speed measurement algorithms and composite measurement functionality. RFmx enables test plan optimization for instrument utilization with native, multi-threaded parallel measurement execution.

Featured Content

Quickly Create and Generate Standard Compliant Waveforms

RFmx Waveform Creator centralizes signal generation for interactive waveform configuration, visualization, and playback.

Interactively Analyze Signals, Monitor Test Results, and Debug Measurements

RFmx Soft Front Panel simplifies instrument interaction with a unified user interface similar to traditional box instrumentation.

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Featured RFmx Products

RFmx NR

RFmx NR provides signal generation and analysis for 5G New Radio (NR) cellular test applications.

RFmx WLAN

RFmx WLAN provides signal generation and analysis for WLAN 802.11a/b/g/j/p/n/ac/ax test applications.

RFmx Bluetooth

RFmx Bluetooth provides signal generation and analysis for Bluetooth basic rate (BR), enhanced data rate (EDR), and low-energy (LE) test applications.

RFMX NB-IOT/EMTC

RFmx NB-IoT/eMTC provides signal generation and analysis for NB-IoT and eMTC cellular test applications.

RFmx NB-IoT/eMTC is a license for the RFmx LTE/LTE-Advanced measurement personality that extends the capability of NI RF instrumentation for NB-IoT and eMTC cellular signal generation and analysis. This software enables you to analyze LTE Cat-NB1/NB2 and LTE Cat-M1/M2 uplink signals with standard-compliant, physical layer measurements such as error vector magnitude (EVM), adjacent channel leakage ratio (ACLR), spectrum emission mask (SEM), and more. With RFmx, you can perform and debug measurements quickly and easily with interactive software front panels, create and playback open, un-locked waveforms with RFmx Waveform Creator, and speed up automated testing with the performance-optimized API. This software installs with RFmx LTE/LTE-Advanced.

RFmx NR

RFmx NR provides signal generation and analysis for 5G New Radio (NR) cellular test applications.

RFmx NR is a measurement personality that extends the capability of NI RF instrumentation for 5G New Radio (NR) cellular signal generation and analysis. This software enables you to analyze FR1 and FR2 (mmWave) 5G NR signals with stand-ard-compliant, physical layer measurements such as error vector magnitude (EVM), adjacent channel leakage ratio (ACLR), spectrum emission mask (SEM), and more. With RFmx, you can perform and debug measurements quickly and easily with interactive software front panels, create and playback open, unlocked waveforms with RFmx Waveform Creator, and speed up automated testing with the performance-optimized API.

RFmx Bluetooth

RFmx Bluetooth provides signal generation and analysis for Bluetooth Basic Rate (BR), Enhanced Data Rate (EDR), and Low Energy (LE) test applications.

RFmx Bluetooth is a measurement personality that extends the capability of NI RF instrumentation for Bluetooth Classic and Bluetooth Low Energy (LE) signal generation and analysis. This software enables you to analyze Basic Rate (BR), Enhanced Data Rate (EDR), and Low Energy (LE) signals up to Bluetooth 5.2 with standard-compliant, physical layer measurements such as modulation accuracy, carrier frequency drift, transmit power (TXP), and more. With RFmx, you can perform and debug measurements quickly and easily with interactive software front panels, create and playback open, unlocked waveforms with RFmx Waveform Creator, and speed up automated testing with the performance-optimized API. Additionally, RFmx Bluetooth helps you control your device under test with built-in Direct Test Mode (DTM) commands.

RFmx WLAN

RFmx WLAN provides signal generation and analysis for WLAN 802.11a/b/g/j/p/n/ac/ax test applications.

RFmx WLAN is a measurement personality that extends the capability of NI RF instrumentation for WLAN 802.11 signal generation and analysis. This software enables you to analyze 802.11a/b/g/j/p/n/ac/ax signals with standard-compliant, physical layer measurements such as error vector magnitude (EVM), spectrum emission mask (SEM), transmit power (TXP), and more. RFmx WLAN supports single-user and advanced multi-user signals with flexible configurations, impairments, and measurement results per user. With RFmx, you can perform and debug measurements quickly and easily with interactive software front panels, create and playback open, unlocked waveforms with RFmx Waveform Creator, and speed up automated testing with the performance-optimized API.

Part Number Table

Description	Part Number
RFmx NB-IOT/EMTC for Development, Download	786837-35
RFmx NR For Development, Download	786870-35
RFmx NR for Development, With Media	786870-35WM
RFmx NR For Deployment, Download	786871-35
RFmx Bluetooth for Development, Download	786945-35
RFmx Bluetooth for Development, with Media	786945-35WM
RFmx Bluetooth for Deployment, Download	786946-35
RFmx WLAN 802.11A/B/G/J/P/N FOR DEV	786949-35
RFmx WLAN 802.11a/b/g/j/p/n for Development, with Media	786949-35WM
RFmx WLAN 802.11A/B/G/J/P/N	786950-35
RFmx WLAN 802.11A/B/G/J/P/N/AC	786952-35
RFmx WLAN 802.11A/B/G/J/P/N/AC/AX	786953-35
RFmx WLAN 802.11a/b/g/j/p/n/ac/ax for Development, with Media	786953-35WM
RFmx WLAN 802.11A/B/G/J/P/N/AC/AX	786954-35
RFmx NR for Debug/Deploy, Download	787010-35
RFmx WLAN 802.11a/b/g/j/p/n/ac/ax for Debug/Deploy, with Media	787019-35WM
RFmx Bluetooth for Debug/Deploy Download	787022-35
RFmx Bluetooth for Debug/Deploy, with Media	787022-35WM