GET ON THE GRID

Simplify RF, Microwave, and Millimeter Wave Component Evaluation and Signal Chain Design

SEE HOW ADI AND X-MICROWAVE ARE SIMPLIFYING THE SIGNAL CHAIN.

analog.com/XMW
Simplifying RF Component Evaluation and Signal Chain Design

Changing Design Environment

- Aerospace and defense, 5G, VSAT, industrial, and automotive sensor applications are driving huge market growth for RF applications
- In this highly competitive environment, time to market and lower cost of development are more critical than ever
- Companies can no longer spend months developing their RF designs
- They need a faster way to test, evaluate, and build their signal chains

The New Solution: Drop-In Flexibility

- Analog Devices, in collaboration with X-Microwave, is simplifying the way RF designers evaluate components and build their signal chains
- X-MWblocks® provide ADI's RF, microwave, and millimeter wave parts with all necessary application circuitry on standardized drop-in modules
- Using these blocks, designers can easily assemble and modify to optimize RF signal chains
- No soldering of components or connection of multiple evaluation boards required
- Supporting software and programming tools further simplify the design process
Complete Ecosystem of RF and Microwave Components on X-MWblocks

Drop-in modular design blocks allow designers to easily build and quickly modify RF signal chains, and the deep design and simulation software further simplifies each stage of design.

ADI and X-Microwave together are revolutionizing the way RF components are evaluated and signal chains are designed.
The Industry’s Broadest Portfolio Is Now Supported on X-Microwave Design Blocks

Wide Range of Part Options for Complete Signal Chain Design

- **Drop-in X-MWblocks**
  - Built-In Bias/Control Circuit with RF Connectors

- **Packaged and Die Parts**
  - 250+ ADI Parts, Including Die

- **Up to 60 GHz**
  - ADI’s Industry-Leading Wideband Parts

Complete Suite of Software Tools to Help with Signal Chain

- **ADIsimRF and ADIsimPLL**
- **X-MWsimulator™**

- **X-Microwave controller**
  - For VCO, PLL, DSA, switches, and more
From Concept to Complete Signal Chain Prototype:

Fast and Cost Effective

Signal Chain Concept
- Complete X-band radar signal chain using Analog Devices parts
- Includes RF front end and internal and external LO sources
- TDD and FDD modes

Mechanical Block Layout
- Using X-Microwave layout tool

Mechanical Application Layout
- Using X-Microwave layout tool

Full Prototype Build
- Complete working X-band radar prototype built using Analog Devices parts on X-MWblocks
ADI on X-MWblocks

X-Microwave’s complete modular ecosystem for RF and microwave components is called the X-MWsystem.

X-MWblocks™ are the drop-in and drop-on components at the heart of the X-Microwave innovative modular building block system. X-MWblocks are easy to test, integrate, align, and configure to 60 GHz. From prototype to final production hardware, no messy sweat soldering or silver epoxy processes are required. X-MWblocks are highly characterized and include X-parameter and S-parameter models. Optimize your design topology using our online X-MWsimulator and build your product with confidence. X-MWprotostations™ are prototype stations for testing individual X-MWblock components or to quickly cascade, align, and test multiple X-MWblocks to create an integrated microwave assembly. Prototype stations include:

- Prototype plates
- High performance RF probes
- Modular wall and lid pieces to build arbitrary housings
- High performance test cables (adapt from 1.85 mm to 2.92 mm)

X-cessories are all of the accessories used to build, test, and optimize X-MWsystems on the prototype station or in housings. Purchase X-MWblocks and all of the X-cessories you need to build a prototype or production integrated microwave assembly with functionality to 50 GHz.

X-Microwave is pleased to offer a broad selection of Analog Devices RF parts on its format. Over 250 parts from dc to 100 GHz are supported, including both packaged and die parts and drop-in or connectorized parts.

Watch the video and learn more at analog.com/XMW

Newest ADI X-MWblocks

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<th>Category</th>
<th>X-MW PN</th>
<th>ADI MFG PN</th>
<th>Format</th>
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<tr>
<td>Amplifier</td>
<td>XM-A2A3-0404D</td>
<td>HMC441LC3B</td>
<td>0404</td>
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<tr>
<td>Bias controller</td>
<td>XM-A738-0804D</td>
<td>HMC880LP4E</td>
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<td>Comparator</td>
<td>XM-A44H-0809D</td>
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<td>Modulator</td>
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<td>Switch</td>
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<td>0409</td>
</tr>
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Check out more X-MWblocks at analog.com/XMWblocks

Figure 1. ADI parts available as individual or combined X-MWblocks.