

Product Features

- Single-chip frequency up/down-conversion
- 24 to 30 GHz multi-band RF operation (3GPP n257, n258, n261)
- Wideband IF range
- Fully integrated sideband and image rejection
- Active Tx/Rx conversion gain
- Tx/Rx half duplex operation
- On-chip x4 LO frequency multiplier
- High Rx linearity
- Single 1.8V supply operation



New Updates

- Flat wideband IF and RF response
- Industry leading spectral purity
- Autonomous temperature telemetry and rejection
- Power detectors, all ports
- New FC-CSP package for simple thermal management and planar antenna layout

Related Parts

- See [AWMF-0221](#) Dual Pol Quad 4x2 Beamformer IC for n257, n258, n261 bands

Description

The AWMF-0210 is a highly integrated silicon frequency-conversion IC intended for 5G phased array applications. When used together with Anokiwave's beamformer IC products, this device enables low-cost, high-performance, and feature-rich 5G phased array systems.

The half-duplex IC integrates Tx single-sideband up-conversion and Rx image-reject down-conversion functionality with programmable high side or low side LO. An on-chip frequency multiplier simplifies board-level integration with external PLLs.

The IF up/down converter ICs are fully compatible with the respective Anokiwave Beamformer ICs, sharing common mechanical and electrical interfaces, and designed for cascade integration from IF to antenna and back.

If you need further information about the AWMF-0210, please contact us at beamforming-sales@qorvo.com.



Anokiwave, Inc.
5355 Mira Sorrento Pl
San Diego, CA 92121

Document: AWMF-0210-DSB
Rev. 5

www.anokiwave.com
1-858-792-9910
innovation@anokiwave.com

AWMF-0210 Developer Kit

The developer kits (AWMF-0210-DK, AWMF-0210-DL) include all hardware and software required to interface to the AWMF-0210. The kits enable full evaluation and RF testing of the converter IC with user-friendly interfaces, including off chip baluns to present a single ended IF input and output. The test board has been carefully designed to demonstrate the performance of the device and to provide the necessary port to port isolation. Calibration data is included to enable the removal of test board line losses. The SPI control is supported through a high-speed cable, interposer board, and USB interface module. Driver software and GUI are supplied to provide control from a PC. DC power is supplied to the test board through a separate cable assembly also included in the kit. A full set of measured data is included to provide reference performance for each Developer Kit. Evaluation of the AWMF-0210 with the Developer Kits will significantly shorten the time to become familiar with the operation and performance of the product, thereby reducing system development time and cost.

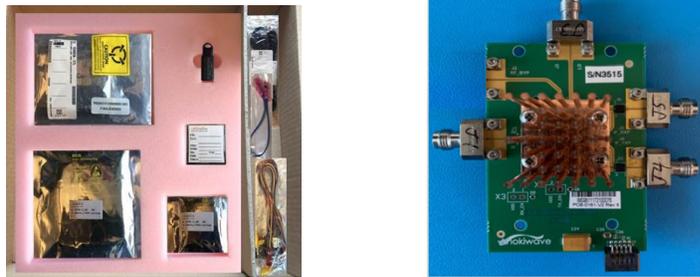


Figure 1: AWMF-0210 DK Contents and Evaluation Board

Developer Kit Contents

- 1 x Test board with 4 x RF connectors, 1 x DC connector, and 1 x SPI connector
- 1 x DC power cable assembly
- 1 x high speed SPI cable assembly
- 1 x SPI interposer board
- 1 x USB-SPI interface module
- SPI driver software
- Control software with User Guide, full test results, and board calibration
- 1 x Software Installation and Control Software User's Guide
- 10 extra ICs (AWMF-0210-DK only)
- Gerber files, PCB layout support, and Anokiwave design assistance (AWMF-0210-DK only)

Ordering Guide

Model	Package	MSL Rating	Package Description	Package Option	Package Marking
AWMF-0210	FCCSP	3	FC-CSP		AWMF-0210 ZZZZZZZ YYWWGHIJ KLMNOP_X
AWMF-0210-DK			Developer's Kit for evaluation (includes 10 extra ICs + support)		
AWMF-0210-DL			Developer's Kit Lite (without additional ICs or support)		