

## PRODUCT SUMMARY

# SKY58258-21 Sky5®: Front-End Module for LTE and NR

## Applications

- Multi-band 4G/5G handsets
  - Band B42, B43, B48, n48, n77, n78 and C-band

## Features

- Full Baseband-Agnostic Design
- Full Power APT support without DPD
- UHB S-PAD covering B42, B43, B48, n48, n77, n78 and C-band
- MIPI® v2.1 compliant 52 MHz RFFE bus
- High Performance ET/APT PA core
- High performance LNA cores
- Support Fast SRS Hopping timing requirements
- 50 ohm input / output impedance with internal DC-blocking
- Continuous bias control via RFFE interface
- Low Supply voltage
- Low leakage current in power-down mode
- Integrated TX-RX switch
- Integrated LNA with MIPI® control features
  - up to six gain modes
  - independent gain and bias control
- Integrated wide bandwidth filters
- Small, low profile package
  - 5.0 mm x 3.0 mm x 0.7 mm (Max)
  - 30-pad configuration (includes 16-pad ground array)

## Description

The SKY58258-21 Front-End Module (FEM) for LTE and NR is a recent addition to the Skyworks Sky5® portfolio of 5G Technology products. Packaged in a single 5.0 mm x 3.0 mm x 0.7 mm (Max) form factor, this versatile and fully matched FEM supports ultra-high band 4G/5G and LTE/NR applications.

The 30-pad surface mount (SMT) module consists of PA blocks, input and output ports matched to 50 ohms, a MIPI standard digital control block, single-ended filter, antenna and Tx-Rx switches and low noise amplifier (LNA).

Utilizing an enhanced architecture, the SKY58258-21 covers multiple bands and meets the spectral linearity requirements of CP-OFDM and DFTS-OFDM modulations with up to 100 MHz bandwidth and up to 273 resource block allocations. Output power is controlled by varying input power and adjusting VCC maximizes efficiency. Extremely low leakage current maximizes handset stand-by time.

A functional block diagram is shown in Figure 1.



Skyworks Green™ products are compliant with all applicable legislation and are halogen-free. For additional information, refer to *Skyworks Definition of Green™*, document number SQ04-0074.

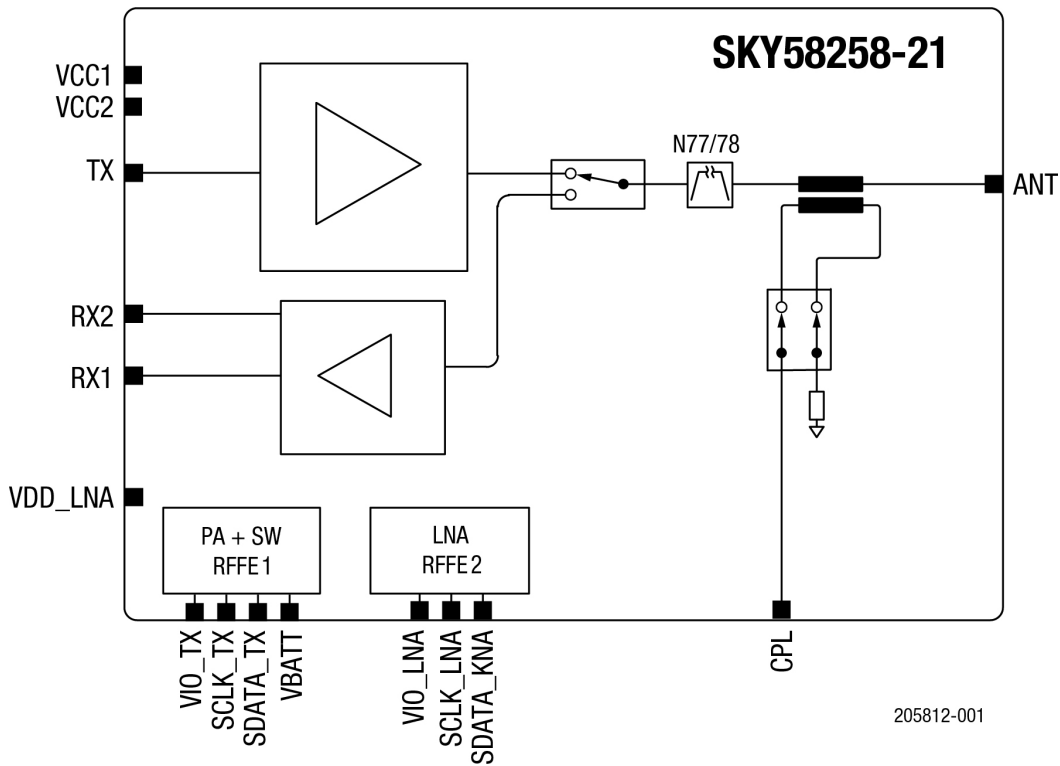


Figure 1. SKY53730-11 Functional Block Diagram

## Ordering Information

Part Number	Product Description	Evaluation Board Part Number
SKY58258-21	Front-End Module	SKY58258-21-11EK1

Copyright © 2020 Skyworks Solutions, Inc. All Rights Reserved.

Information in this document is provided in connection with Skyworks Solutions, Inc. (“Skyworks”) products or services. These materials, including the information contained herein, are provided by Skyworks as a service to its customers and may be used for informational purposes only by the customer. Skyworks assumes no responsibility for errors or omissions in these materials or the information contained herein. Skyworks may change its documentation, products, services, specifications or product descriptions at any time, without notice. Skyworks makes no commitment to update the materials or information and shall have no responsibility whatsoever for conflicts, incompatibilities, or other difficulties arising from any future changes.

No license, whether express, implied, by estoppel or otherwise, is granted to any intellectual property rights by this document. Skyworks assumes no liability for any materials, products or information provided hereunder, including the sale, distribution, reproduction or use of Skyworks products, information or materials, except as may be provided in Skyworks Terms and Conditions of Sale.

THE MATERIALS, PRODUCTS AND INFORMATION ARE PROVIDED “AS IS” WITHOUT WARRANTY OF ANY KIND, WHETHER EXPRESS, IMPLIED, STATUTORY, OR OTHERWISE, INCLUDING FITNESS FOR A PARTICULAR PURPOSE OR USE, MERCHANTABILITY, PERFORMANCE, QUALITY OR NON-INFRINGEMENT OF ANY INTELLECTUAL PROPERTY RIGHT; ALL SUCH WARRANTIES ARE HEREBY EXPRESSLY DISCLAIMED. SKYWORKS DOES NOT WARRANT THE ACCURACY OR COMPLETENESS OF THE INFORMATION, TEXT, GRAPHICS OR OTHER ITEMS CONTAINED WITHIN THESE MATERIALS. SKYWORKS SHALL NOT BE LIABLE FOR ANY DAMAGES, INCLUDING BUT NOT LIMITED TO ANY SPECIAL, INDIRECT, INCIDENTAL, STATUTORY, OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, LOST REVENUES OR LOST PROFITS THAT MAY RESULT FROM THE USE OF THE MATERIALS OR INFORMATION, WHETHER OR NOT THE RECIPIENT OF MATERIALS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Skyworks products are not intended for use in medical, lifesaving or life-sustaining applications, or other equipment in which the failure of the Skyworks products could lead to personal injury, death, physical or environmental damage. Skyworks customers using or selling Skyworks products for use in such applications do so at their own risk and agree to fully indemnify Skyworks for any damages resulting from such improper use or sale.

Customers are responsible for their products and applications using Skyworks products, which may deviate from published specifications as a result of design defects, errors, or operation of products outside of published parameters or design specifications. Customers should include design and operating safeguards to minimize these and other risks. Skyworks assumes no liability for applications assistance, customer product design, or damage to any equipment resulting from the use of Skyworks products outside of stated published specifications or parameters.

Skyworks, Skyworks Green™, Sky5® and the Skyworks symbol are trademarks or registered trademarks of Skyworks Solutions, Inc. or its subsidiaries in the United States and other countries. Third-party brands and names are for identification purposes only, and are the property of their respective owners. Additional information, including relevant terms and conditions, posted at [www.skyworksinc.com](http://www.skyworksinc.com), are incorporated by reference.