

## PRODUCT SUMMARY

# SKY66431-11: 5G Massive IoT System-in-Package

## Applications

- Personal/pet tracking
- eBike tracking
- Industrial asset tracking
- Smart metering
- Wearable medical devices
- Security/alarm systems
- Fleet management
- Industrial monitoring devices
- Low-power IoT devices

## Features

- Most compact LTE modem and RF front-end in a single package:
  - Integrated baseband, transceiver, RF front end, RAM memory, crystals and power management
  - 8.8 x 11.3 x 1.585 (max.) mm BGA package, 0.5 and 1 mm pitch
  - Device weight: TBD
- Compliant to 3GPP Rel-14, upgradable to 3GPP Rel-15 & 16
- Optimized for half-duplex operation (HD-FDD) for LTE-M/NB-IoT
- Pre-certified with major MNOs, FCC, ISED/IC, RED, UKCA, ACMA, and GCF/PTCRB
- Global frequency band support:
  - Low-band: B5, B8, B12, B13, B14, B17, B18, B19, B20, B26, B28, B85
  - Mid-band: B1, B2, B3, B4, B25, B66
- Best-in-class deep sleep power consumption of 1 uA
- Positioning over LTE (PoLTE), a low-power, cloud-based solution for indoor/outdoor positioning
- Embedded Low-power GNSS solution eliminating need for an external GNSS chipset for intermittent tracking
- Extremely low leakage internal PMU that enables operability for 20 years

- Throughput:
  - LTE-M (1.4 MHz bandwidth) up to 300 kbps DL, 1.1 Mbps UL
  - NB-IoT (200 kHz bandwidth):
    - NB2: 120.7 kbps DL, 160 kbps UL
- Powerful fully integrated application MCU based on Andes D15 Core
- Single 2.8 V to 5.5 V supply operation
- Operating temperature range: -40 °C to +85 °C
- Skyworks conformal shielding, silver (Ag) free
- Halogen free, GaAs free
- REACH lead (Pb)-free and RoHS-compliant
- MSL3 @ 260 °C per JEDEC J-STD-020

## Description

The SKY66431-11 is a multi-band multi-chip System-in-Package (SiP) supporting 5G Massive IoT (LTE-M/NB-IoT) platforms. The SiP integrates the entire RF front end, transceiver, power management, memory, crystals and baseband modem for an LTE multi-band radio operating in the 698 MHz to 2200 MHz frequency range. NOR flash, and a few passives external to the package complete the SiP implementation.



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.

*This SiP includes the Sequans Monarch 2 SQN3430 chipset*



For additional information on hardware setup and programming support visit:  
<https://cloud.sequans.com>

## Ordering Information

Part Number	Product Description	Evaluation Board Part Number
SKY66431-11	5G Massive IoT System-in-Package	SKY66431-11EK1

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