

PRODUCT SUMMARY

SKY74210 Helios™ WEDGE Transceiver With Support For Multiband EDGE and HSPA Mobile Handset Applications

Applications

- Quad-band EGPRS handsets and modules
- WCDMA handsets and modules
- HSPA handsets and modules

Features

- Single-chip, multi-band WEDGE transceiver
- Compliant with v3.08 of the DigRF 3G standard
- Eight-band WCDMA functionality (bands I to VI and VIII to IX)
- Quad-band EGPRS functionality
- HSDPA category 1 to 12 capable; HSUPA category 1 to 6 capable
- EGPRS class 10 to 12 and class 30 to 39 capable
- Low external component count
- Integrated diversity receiver
- Compressed mode operation
- Shared direct conversion/very low IF receive path for EGPRS/WCDMA without the need for interstage receive SAW filters
- Shared direct conversion transmit path for EGPRS/WCDMA without the need for interstage transmit SAW filters
- $\Sigma\Delta$ ADCs for digitization of baseband receive signals
- DACs for conversion of the modulator output
- Programmable receive filter coefficients
- 0.13 μm RF CMOS technology
- LGA (92-pin, 7 x 7 mm) Pb-free (MSL3, 260 °C per JEDEC J-STD-020) package

NEW

Skyworks offers lead (Pb)-free RoHS (Restriction of Hazardous Substances) compliant packaging.



Description

The SKY74210 Helios™ WEDGE transceiver is a compact, multimode device that supports multiband EDGE and High-Speed Packet Access (HSPA) mobile handset applications. Designed with high programmability, the device can be configured to perform optimally in various modes while sharing the same circuitry.

The SKY74210 eliminates the requirement for interstage receive and transmit Surface Acoustic Wave (SAW) filters by using Skyworks innovative direct conversion/very low Intermediate Frequency (IF) receive architecture and direct conversion transmit architecture. A set of six-wire, high-speed serial ports provide the baseband interface (DigRF v3.08 3G compliant).

The direct conversion/very low IF receive architecture eliminates the need for IF processing and costly SAW filters. Skyworks innovative circuit design makes it possible to eliminate the interstage filter, commonly required in WCDMA mode to reduce the transmit signal. This approach effectively allows the receive chain to be shared by both EGPRS and WCDMA modes. A second on-chip receive path is provided to enable diversity operation, which allows High-Speed Downlink Packet Access (HSDPA), category 10, data communication.

The direct conversion transmit architecture also allows EGPRS and WCDMA modes to share the same path. The needed noise floor is accomplished without using interstage transmit SAW filters in either mode. Drivers are provided to allow the use of separate EDGE and WCDMA PAs for optimized efficiency.

The SKY74210 is intended to be combined with selected components from the Intera™ family of Front-End Modules (FEMs). The resulting subsystem forms a complete radio solution that saves significant space, cost, and design cycle time while providing improved performance.

The SKY74210 is fabricated using 0.13 μm RF CMOS technology and is available in a compact, 7 x 7 mm Land Grid Array (LGA) package. A functional block diagram of the SKY74210 Helios WEDGE transceiver is shown in Figure 1.

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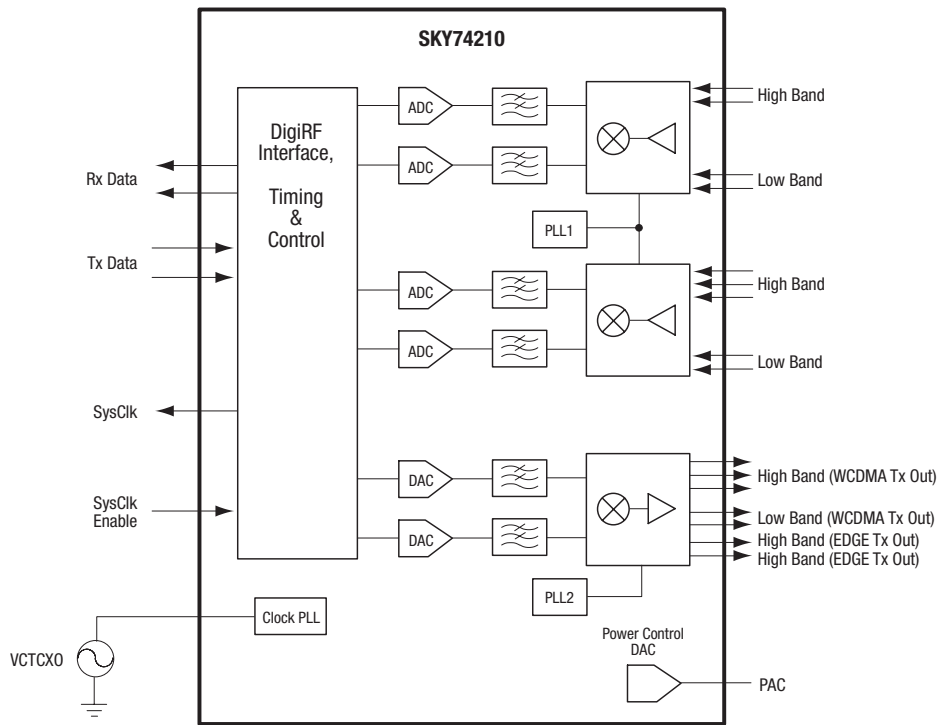


Figure 1. SKY74210 WEDGE Transceiver Functional Block Diagram

Ordering Information

Model Name	Manufacturing Part Number	Product Revision
SKY74210 Helios WEDGE Transceiver	SKY74210-xx (Pb-free package)	

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