

## OMNITUNE™ TUA 9001

RF Silicon Tuner for for DVB-H/T and CMMB  
(Direct Conversion Receiver)



OMNITUNE™ TUA 9001 is a highly integrated CMOS Direct Conversion Receiver (DCR), supports DVB-H/T and CMMB for mobile and portable multimedia solutions. OMNITUNE™ TUA 9001 covers VHF, UHF as well as L-bands for Europe and US frequency ranges. It can be operated with either a single or dual supply with a power consumption as low as 18mW at 10% duty cycle operation in DVB-H mode and 190mW in DVB-T mode.

With its 50Ohm RF inputs and external LNA support, the device is suited for applications that require a single VHF/UHF antenna input and excellent sensitivity.

OMNITUNE™ TUA 9001 supports a wide range of crystal and external reference frequencies. It features an integrated wide-band RF AGC, a programmable channel filter, as well as a fully integrated VCO and PLL loop filter.

### Applications

- Mobile devices such as mobile phones, PDA, game stations and personal media players
- Portable applications such as laptops, USB sticks, PC cards and automotive infotainment
- TV receivers with DVB-H/T and CMMB functionality (portable and handheld)

### Features

- Direct Conversion Receiver
- Supports MBRAI Class b2 and c
- 0.13um RF CMOS
- Quad band support : 170 MHz-240MHz VHF, 470MHz-890MHz UHF, 1.45GHz-1.49GHz L-Band and 1.672GHz L-Band)
- Integrated wide-band RF AGC

*Note: The OMNITUNE trade mark is owned by Infineon Technologies AG.*

- Single supply or dual supply voltage for lowest power consumption
- Less than 18mW (10% D/C)
- Less than 190mW in DVB-T mode
- Low power modes and power scalability
- Fractional-N synthesizer with fully integrated VCO and loop filter
- External reference frequency input available
- Supports crystal and reference frequencies from 16 to 38.4MHz
- Fast on/off cycling: From idle to receive in <1ms
- Integrated, programmable 7th order Chebyshev channel filter for 5, 6, 7 and 8MHz channel bandwidth
- Fully differential analog I/Q interface
- Support single antenna input for VHF and UHF Band

### Benefits

- Optimized low power solution
- Minimum PCB area and component count
- No SAW filter required
- Supports time slicing
- External LNA supported, e. g. BFR 380, for optimum performance please contact Infineon

### Product Available in

- PG-WFSGA-65 (5x5x0.8mm)

[www.infineon.com/tuner](http://www.infineon.com/tuner)

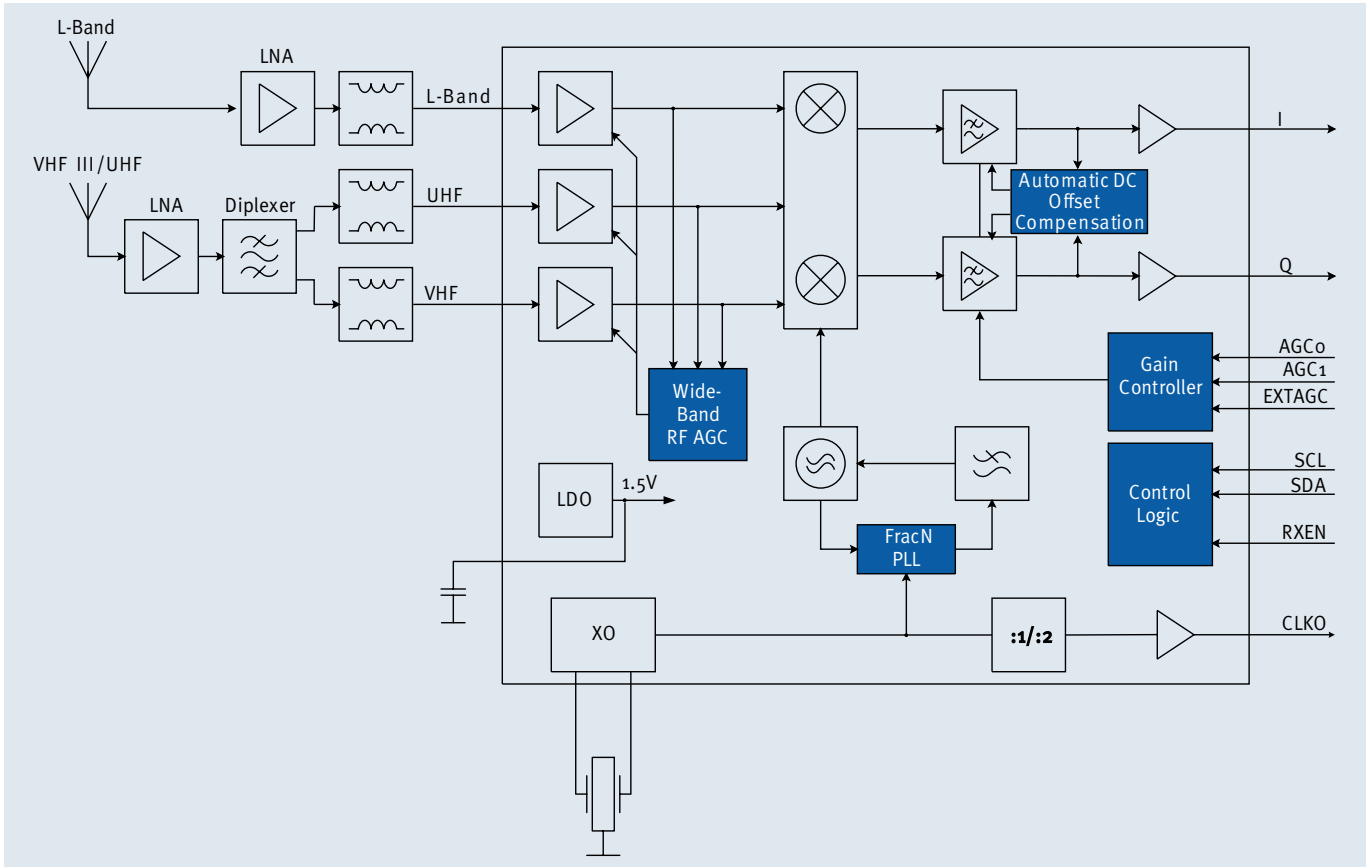
## Communication Solutions



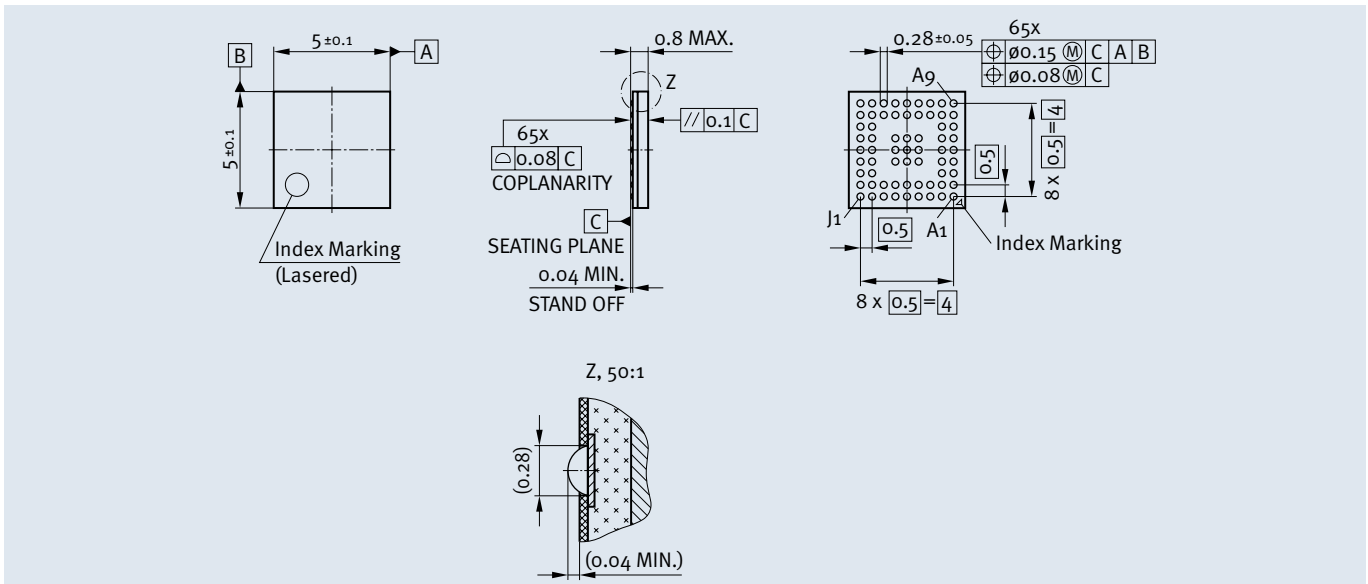
Never stop thinking

# Product Brief

## Block Diagram



## Package Diagram (WFSGA-65)



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