



Features

Common features

- Compatible with low to high IF tuners
- Flexible clock management uses external reference from 4 to 30 MHz
- ADC for RF signal strength indicator

DVB-T demodulation

- General features:
 - Wide-range carrier tracking loop for large offsets recovery
 - Dual ADC for IQ baseband interface
 - Dual $\Sigma\Delta$ digital split AGC for RF and IF/BB gain control
- Channel impairments management:
 - Nordig Unified (v2.0) compliant
 - DTG 5.0 and Digtienne compliant
 - Built-in channel reception quality indicators
 - Out-of-guard interval echoes compatible
 - Impulsive noise rejection capable
 - Outstanding adjacent and co-channel rejection capability with integrated and flexible digital channel filtering
 - High-performance digital carrier, timing and symbol recovery loops
- Decoding capabilities:
 - ETSI EN-300744 v1.5.1 compatible
 - 2-K and 8-K FFT
 - 6, 7 and 8 MHz channel bandwidths
 - 1/4, 1/8, 1/16, 1/32 guard-interval length
 - QPSK - 16QAM - 64QAM modulations
 - Hierarchical modulation capability
 - TPS decoding
 - Puncture rates are 1/2, 2/3, 3/4, 5/6, 7/8
 - Outer Reed-Solomon decoder as per DVB-T standard
 - Energy dispersal descrambler

DVB-C demodulation

- Decodes ITU-T J.83-Annexes A/C and DVB-C bit streams
- High-performance integrated ADC for direct IF architecture in all QAM modes
- Supports 16, 32, 64, 128 and 256 point constellations
- Variable symbol rates
- Front derotator for better low symbol rate performance and relaxed tuner constraints
- Integrated matched filtering
- Robust integrated adaptive pre- and post- high multi-tap equalizer
- On-chip FEC A/C with ability to bypass individual blocks
- Fast signal acquisition

Interfaces

- I²C serial bus interface:
 - Fast, up to 400 kHz slave interface
 - Four possible slave addresses
- Flexible and DVB-CI compliant TS output

Technology

- Advanced low-power CMOS process (65 nm)
- Multi supply: 1.2 V core, 2.5 V analog, 3.3 V digital interfaces
- On-chip 1.2 V regulator
- Ultra-compact TQFP64 package
7 × 7 × 1.0 mm³ with exposed pad
- Power consumption: < 450 mW (typ),
standby < 80 mW (typ)

