



STV0362

Low-power and ultra compact DVB-T single chip receiver DVB-H broadcast compliant

Data Brief

Feature summary

- NorDig Unified specification (v1.0.2) capable
- Channel reception quality indicator
- Out-of-guard interval echoes superior performances
- Impulsive noise rejection capable
- Outstanding adjacent and co-channel rejection capability with integrated on-chip digital channel filters
- Digital carrier, timing and symbol recovery loops
- 2 K, 4 K, 8 K FFT length
- 6, 7 and 8 MHz channels bandwidth
- 1/4, 1/8, 1/16, 1/32 guard interval length
- QPSK - 16 QAM - 64 QAM modulations
- Hierarchical capability
- TPS decoding
- Viterbi soft decoder rate 1/2
- Puncture rates are 1/2, 2/3, 3/4, 5/6, 7/8
- Low power advanced CMOS process (90 nm)
- Power consumption: <250 mW (typ) in operation
- Multi-supply: 1.0 V core, 2.5 V analog, 3.3 V digital
- TQFP64 7 x 7 x 1.0 mm.

Order codes

Part number	Package
STV0362	TQFP64 (7 x 7 x 1 mm)

Description

The STV0362 inherits the functionality of the STV0361 device and embeds new functionalities required by the DVB-H standard at the physical layer side. The STV0362 features the full DVB-T and DVB-H standards framing structure, channel coding and modulation. The symbol, timing and carrier recovery loops are fully digital and sized in order to match the state-of-the-art RF down-converter devices.

The STV0362 is compatible with direct conversion silicon tuners and is featuring two high-performance differential 12-bit ADC for I and Q channels. The tuner baseband power is controlled by a classic AGC loop, and the RF level is monitored by a dedicated single-ended 8-bit ADC.

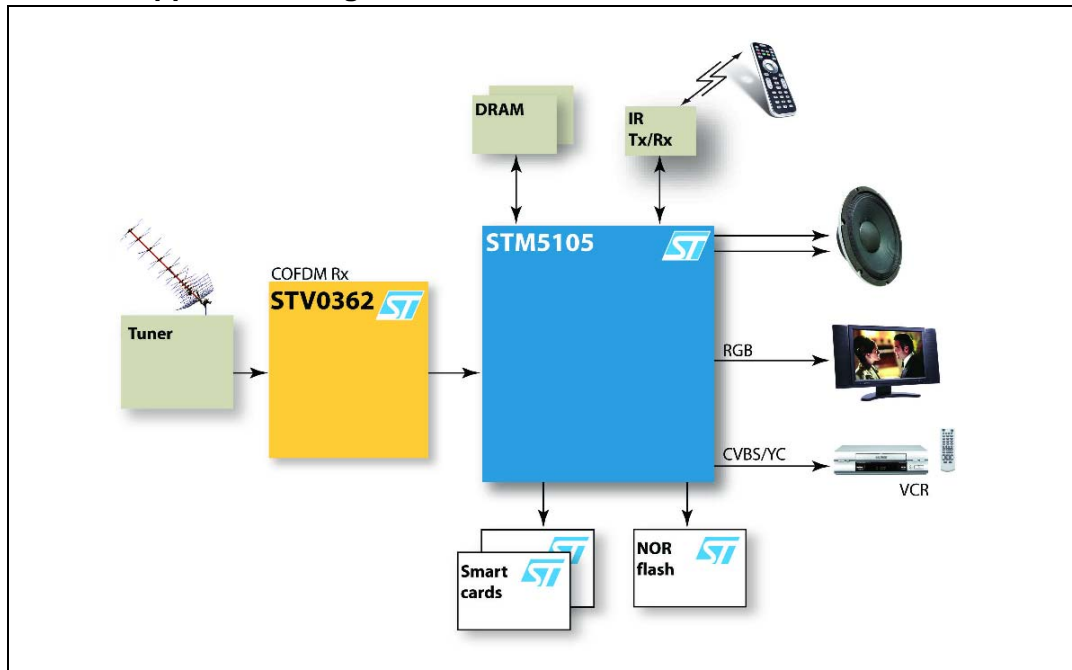
The terrestrial DVB-T network can be subject to several interference sources which are the neighboring digital and analog channels, as well as the in-band analog channels. The STV0362 cancels these interference sources and removes the effects of impulse noise. The channel equalization is capable of static and dynamic echo canceling even in severe urban environments.

The embedded high-performance algorithms are enhanced to cope with out-of-guard interval echoes; specific channel quality monitoring is available for acquisition and survey.

The specific power handling constraints are primarily addressed by both technology and clock rate management. The efficiency of channel acquisition and re-acquisition also minimizes power consumption.

The STV0362 relies on the decoder multimedia processor to manage the MPE-FEC and to control time slicing while operating in DVB-H mode.

STV0362 application diagram



Revision history

Table 1. Document revision history

Date	Revision	Description of changes
10-March-2006	1	First release

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