



# NXT6000

## Single-Chip DVB-T Receiver

### FEATURES

- Full DVB-T and NorDig Compliant
- Superior dynamic multipath and Doppler performance
- Programmable adjacent channel and adaptive co-channel interference cancellation
- Integrated 10 Bit A/D converter supporting both low IF and direct 36 MHz IF sampling
- Automatic transmission mode detection including number of carriers and guard interval (hence minimum software intervention)
- Automatic digital carrier recovery over a wide range of offsets (hence no AFC required)
- Automatic digital timing recovery (hence no VCXO required)
- Channel correction using advanced adaptive time and frequency filtering
- Signal quality indication to assist optimal antenna adjustment
- IF and RF AGC using PDM outputs for the tuner
- Includes Viterbi and Reed Solomon Forward Error Correction
- Outputs an MPEG-2 Transport stream in parallel or serial format
- I<sup>2</sup>C interface to allow configuration by an external processor
- Lock flags are provided to show device status
- 64-pin LQFP package offering a very compact solution
- 0.25-micron process with 2.5 Volt core and 3.3 Volt I/O
- Suitable for use in integrated digital terrestrial televisions and set-top boxes

The NxtWave NXT6000 OFDM Demodulator and FEC IC is a highly integrated solution for digital terrestrial receiver applications. This single-chip receiver includes an OFDM Demodulator together with Viterbi and Reed Solomon Forward Error Correction and an integrated 10 Bit A/D converter. The NXT6000 not only supports all modes of the DVB-T standards as defined by ETS 300 744, but also meets the mandatory requirements of the NorDig Receiver Specification that defines a set of requirements for high-performance terrestrial receiver solutions.

Both high and low IF tuner architectures are supported in the NXT6000 using either 36 MHz or 4.57 MHz IF. The IC also provides both IF AGC and RF AGC outputs which can be used to control the gain in the tuner.

The NXT6000 is packaged in a 64-pin LQFP and hence offers an extremely compact solution for integrated digital televisions and set-top boxes. A 2.5 Volt core 0.25-micron process is used which together, with state-of-the-art demodulator design, enables a high-performance solution to be realized with a modest power consumption.

