

## Description

SL100x is a fully **Software defined Universal Baseband Demodulator IC** specializes in supporting worldwide terrestrial, cable, radio and TV broadcasting standards. The IC is also well suited for custom waveform demodulation.

## Applications

- ▶ HDTV, STB, TV Tuner module
- ▶ Internal and external A/V receiver modules for Tablets
- ▶ Tactical radio communication systems; Satellite receivers
- ▶ Secure and Proprietary baseband waveform demodulation
- ▶ Surveillance, remote monitoring & emergency warning systems

## IC Information

- ▶ Package: LFBGA 176-pin; 12x12 mm ; 0.80mm ball pitch
- ▶ Power supply: 3.3V, 2.5V and 1.2V

## Interfaces

- ▶ INPUT: Flexible interface to IF/LIF tuners
- ▶ OUTPUT: Parallel Digital Transport Stream output interface
- ▶ AGC outputs for RF and IF stages
- ▶ CVBS and SIF analog outputs for analog A/V decoder
- ▶ I<sup>2</sup>C interface for programming and code download
- ▶ JTAG & UART for diagnostics and debug

## Standards

Single Carrier	QPSK, 16/32/64/128/256 QAM
Multi Carrier(OFDM)	QPSK, 16/32/64/128/256 QAM
TV / Cable / Radio Standards	ATSC, DVB-T, ISDB-T, DTMB Clear QAM, DVB-C, ISDB-C NTSC, PAL, SECAM, FM, DRM, DAB

## Features

- ▶ Indigenous “Software Defined Radio” (SDR) architecture
- ▶ Supports selection of standards through Software configuration
- ▶ Meets Tier 1 OEM performance requirements
- ▶ Flexible tuner support – interfaces to LIF (silicon) and IF MOPLL tuners
- ▶ Integrated ADCs, PLL’s and DAC’s
- ▶ Separate RF and IF AGC outputs with adaptive tuner-gain and loop-delay parameters
- ▶ Fast channel re-lock through restoration of channel parameters
- ▶ Forward Error Correction (FEC) support for all standards: Viterbi, Reed-Solomon, LDPC, Trellis and Turbo decoder
- ▶ Integrated de-interleaving support for better Doppler
- ▶ Excellent multi-path performance with adjustable tap
- ▶ Capable of handling large carrier offsets
- ▶ Fast channel acquisition and recovery algorithms with blind, decision-directed and trained algorithm
- ▶ Dynamically programmable matched filters to compensate for carrier frequency offsets
- ▶ Co-channel rejection filters
- ▶ Digital adjacent channel rejection filters
- ▶ FEC statistics measurements and signal meters
- ▶ Control processor to reduce host software burden
- ▶ Field proven, low footprint and low power device

