

Description

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

Applications

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

IC Information

- Package: LFBGA 176-pin; 12x12 mm
- 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
- I²C 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

