



## ConnecTV™ Plug and Play DTV Receiver

### FEATURES

- **Integrated VSB/QAM QAMLink® receiver**
  - 12-bit A/D converter with internal AGC amplifier
  - Full equalizer architecture spans up to -35 to 49  $\mu$ s delays
  - Direct IF sampled architecture reduces system cost
  - Single IF signal path for QAM/VSB/NTSC to reduce system costs
  - ITU-T J.83 Annex A/B/C FEC modes
  - MPEG-2 transport output (serial/parallel)
  - All-digital clock and carrier recovery
  - Integrated PLLs to minimize external components
  - All acquisition times typically less than 50 ms
- **QPSK out-of-band receiver**
  - 100-200 MHz receiver LO with input AGC and 6-bit A/D
  - Variable symbol rate QPSK receiver
  - Digital demodulator, Nyquist filters, tracking loops, and four-tap adaptive equalizer
  - DVS-167 (Davic™)/DVS-178 (DigiCipherII™) FEC decoder
- **NTSC/PAL IF Demodulator**
  - Adjacent channel rejection filters
  - Programmable digital audio trap filter
  - Programmable group delay compensation filter
  - Analog Composite Video Baseband Signal (CVBS) output
  - FM demod output supports internal BTSC stereo decoder, external BTSC stereo decoder (baseband or IF input), or external Zweiton M decoder
- **Integrated acquisition controller**
- **EIA/CEA-909 antenna interface**
- **144-pin LQFP package**

### SUMMARY OF BENEFITS

- Complete DTV single chip receiver solution
- FCC VSB and Plug and Play functionality
- Superior performance under both static and dynamic multi-path channel conditions
- Integrated NTSC demodulator
- BTSC decoder on chip
- Direct interface to CMOS and discrete DTV tuners
- Reduces system costs through direct IF sampling
- Single IF path for QAM/VSB/NTSC simplifies board design
- Smart antenna support
- Automatic NTSC co-channel interference and RFI rejection filters
- Integrated de-interleaver RAM for VSB FEC, and QAM for modes up to J=4 reduces system costs
- Analog stereo, mono, or SAP outputs
- I2S or baseband multiplexed audio output
- On-chip stereo audio DACs
- BSC master to control peripherals

### Plug and Play DTV System Solution

