

## **BCM3520**





# 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 µs 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 multipath 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**



