NXT2005

DTV Cable Transceiver and Terrestrial Receiver

FEATURES

- OpenCable™, SCTE DVS-031, ITU-J.83B, and DOCSIS™ compliant 64/256 QAM demodulation and FEC
- ATSC compliant VSB demodulation and FEC
- FDC demodulator and RDC modulator comply with SCTE DVS-178 and DVS-167 specifications
- Cable functions are compliant with Digital Cable Ready 1, 2, and 3 labeling
- Exceptional dynamic and static multipath performance
- High phase noise tolerance
- Fast acquisition <50 msec
- Integrated 32KB deinterleaver RAM for VSB, 64 QAM, and all OpenCable compliant 256 QAM modes
- FAT channel supports direct sampling at low IF or high IF
- Internal PLL for continuous FAT channel parallel/serial MPEG data output
- All digital baud and carrier recovery and generation, no external VCO or VCXO required
- Advanced signal level, signal quality indicators, and statistical reporting
- On-chip agile frequency synthesizer provides LO for FDC down-conversion
- Universal RDC gain control interface
- Integrated FAT and FDC BERT
- High performance internal ADCs and DAC with internal references
- 16 general purpose I/O pins
- On-chip microcontroller
- Flexible tuner control
- NTSC detection capability
- Direct POD interface
- Integrated I²C compatible slave
- Easy migration from NXT2002
- Dynamic low power modes
- 1 watt typical power consumption
- 144 pin LQFP

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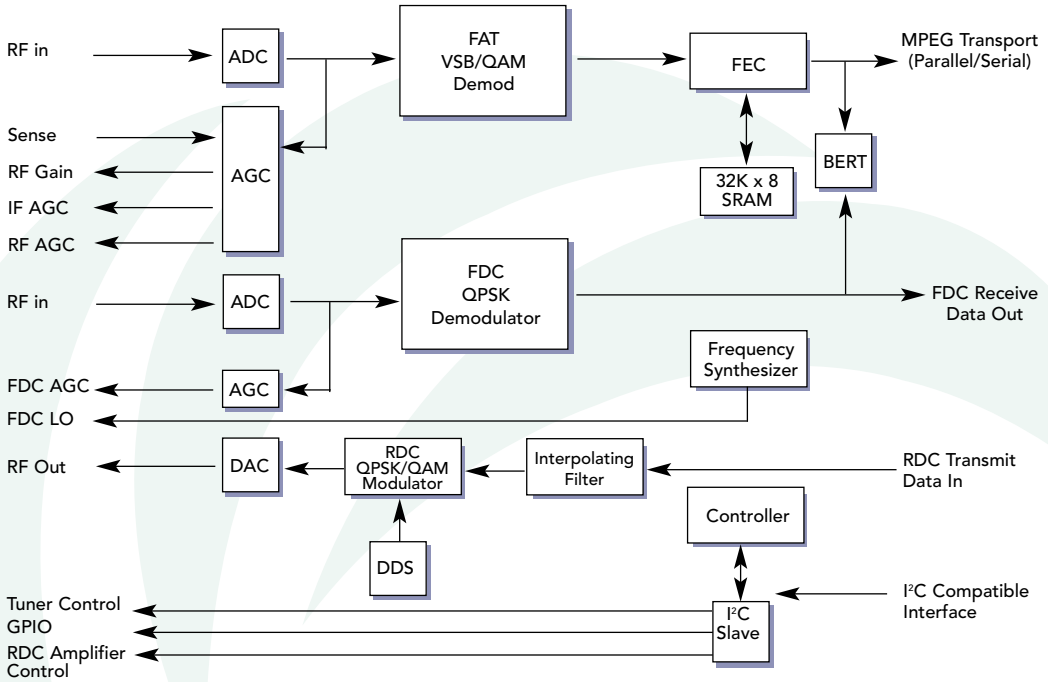
The NXT2005 DTV Cable Transceiver and Terrestrial Receiver is configurable to work in either the ATSC compliant 8 VSB reception mode for terrestrial broadcasting or in the OpenCable™/ ITU-J.83B/SCTE DVS-031/ DOCSIS™ compliant 64 QAM or 256 QAM and QPSK modes for Digital Cable Ready 1, 2, and 3 downstream reception and return path transmission. **The NXT2005 is designed for a variety of applications including off-air and cable digital television receivers, set-top boxes, PCTV and datacast appliances where cost and industry leading performance are a must.**

The NXT2005 is based on the same VSB and QAM demodulator technology available in the NXT2002. In addition, it incorporates the QPSK forward data channel receiver and the QPSK/QAM reverse data channel modulator all in one highly integrated solution. The FDC receiver and RDC transmitter provide a direct digital interface to OpenCable compliant Point of Deployment (POD) modules.

For 8 VSB and QAM, the sparsed equalizer provides better AWGN performance, exceptional dynamic multipath tracking, and less stochastic jitter than conventional equalizers. Advanced integrated adaptive control provides fast reliable acquisition and re-acquisition. These advancements in equalizer technology improve the overall demodulator performance resulting in reliable operation in environments where competing solutions may not acquire or maintain signal lock.

The NXT2005 is capable of reporting detailed statistical and signal quality information to the host processor. The RF Sense input, together with the signal quality information, enhance the end user's ease of operation. **The high level of on-chip integration further reduces the number and cost of external components.**



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