

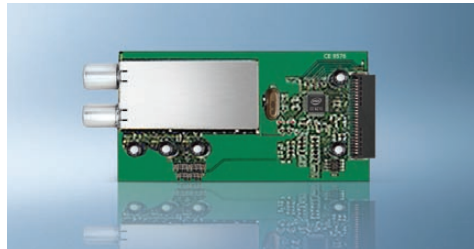
## Product Brief

**Intel® CE 9576**  
**DVB-C Front-End Solution**  
 Demodulators and Tuners

### Applications

- DVB-C Set top boxes
- DVB-C integrated digital TVs
- PC DVB-C receiver cards

# Single Channel DVB-C Digital Cable Front-end Solution with LG\* Tuner



### Product Overview

The Intel® CE 9576 reference design is a complete DVB-C digital cable front-end receiver built around the Intel® CE 6210 high-performance single channel QAM demodulator and LG\* TDCC-G031 digital cable tuner. Digital cable signals are received and down-converted by the LG tuner to a conventional high intermediate frequency (IF) and fed to the Intel CE 6210 QAM demodulator for channel coding to transport-stream output.

The Intel CE 9576 reference design specifically addresses the challenges of DVB-C cable networks, offering high performance, power and size in applications including personal video recorders (PVR), set top boxes, portable integrated digital TVs (iDTVs) and PC-TV modules and cards.

### Reference Design Kits

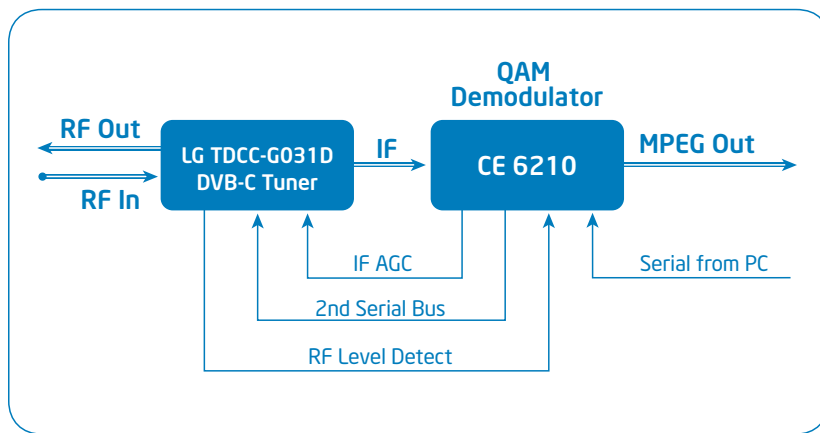
Supplied as a tested and validated application board, the reference design provides a reliable, fast time-to-market DVB-C digital front-end solution. This highly-integrated front-end reference design kit enables you to quickly and cost-effectively evaluate and implement the DVB-C standard in your product designs. Software is supported directly by Intel and the design includes comprehensive documentation and test results.

### Intel® CE 9576 DVB-C TV Receiver Board Performance Summary

Parameter	Value (typ)	Units
RF frequency range	110 to 858	MHz
RF signal range	37 to 105 (64QAM) 43 to 105 (256QAM)	dBuV
N±1 adjacent channel protection - PAL	27.5 (64QAM) 21.0 (256QAM)	dB
N±1 adjacent channel protection - DVB-C	24.5 (64QAM) 21.3 (256QAM)	dB
Carrier to noise	23.8 (64QAM) 30.3 (256QAM)	dB
Power consumption	1.3 (operational) 1.0 (standby)	W

Note: 64QAM and 256QAM at symbol rate 6.875MS/s

### Block Diagram



This compact, low-power DVB-C front-end solution provides NorDig Unified signal-handling performance. The reference design kit uses a single +5 volt supply, since all other power rails are generated onboard. The solution is optimized for real in-field cable network environmental conditions.

### Product Features

- DVB-C EN300 429 compliant
- Tested to NorDig Unified and PRC performance
- Low power consumption < 1.3 W (CE 6210 - 300mW) at 6.9MBaud
- On-chip state-machine control enabling automatic lost-signal reacquisition
- Conventional-IF and low-IF inputs supported
- Single IF bandwidth for all symbol rates
- Parallel and serial MPEG TS outputs
- External 4 or 27 MHz clock or single low-cost 10 MHz crystal

- Low driver software overhead due to on-chip state-machine control
  - Power down mode under software control
  - Channel bit error rates, and uncorrected block count
  - RF level, BER and C/No signal indicators
- Support for Intel CE 6210 software development
- Support material available:
  - Schematics and layout diagrams
  - Intel CE 6210 QAM demodulator data sheet and design manual
  - Hardware user manuals
  - Full software package
  - Performance test results

### Customer Support

Contact your current sales representative for availability and customer support details. For more information, visit the Intel Consumer Electronics home page at: [www.intel.com/go/consumerelectronics](http://www.intel.com/go/consumerelectronics)

For more information on LG TDCC-G031 tuners please contact [sales@lgit.kr](mailto:sales@lgit.kr).

For more information, visit the Intel Consumer Electronics home page at: [www.intel.com/go/consumerelectronics](http://www.intel.com/go/consumerelectronics)

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