

## DVB-C Demodulator Available For Immediate Implementation From Global IP Core

**August 7, 2023 - Global IP Core Sales** - The demodulator is designed to be used together with a cable



tuner and an analog to digital converter (ADC). The system has an internal state machine to control the operation, which can be externally configured via the SPI interface. This DVB-C QAM demodulator is supplied as a portable and synthesizable Verilog-2001 IP. The system is designed to be used in conjunction with a standard cable tuner. The QAM signal is acquired blindly, and QAM signal constellations from QAM 16 through QAM 256 are supported. The equalizer in the chip can be configured as fractional or symbol spaced. It acquires the QAM signal without a training sequence, in blind mode, and then tracks the signal in the decision-feedback mode. Signal degradation due to impulse noise in cable systems is overcome using a combination of convolutional interleaving and Reed-Solomon error correction.

### Additional features include:

- DVB-C EN 300 429 & ITU-T J.83 Annex A & Annex C compliant QAM demodulator
- Supports IF input
- QAM constellations 16, 32, 64, 128 and 256
- Blind acquisition of QAM constellation sizes
- Parallel and Serial MPEG outputs
- 3 external clocks, or 2 external, 1 internally generated
- SPI port (Slave) to external processor

### Applications:

- Set-top boxes
- Cable receivers
- Digital Cable ready TV sets

### IP Deliverables:

- Synthesizable Verilog
- System Model (Matlab) and documentation
- Verilog Testbenches
- Documentation
- FPGA testing environment

*The DVB-C demodulator is coded in Verilog-2001. No third-party Intellectual properties are contained in this product. Performance evaluation was completed using an XtremeDSP Spartan-3A DSP development board on a Xilinx Spartan-3A DSP 3400 device.*

Please contact us for a Product Brief (PB) at [info@global-ipc.com](mailto:info@global-ipc.com) or check out our product portfolio at [www.global-ipc.com](http://www.global-ipc.com)

### About Global IP Core Sales

Global IP Core Sales® was founded in 2021 and provides state-of-the-art IP Cores for the Semiconductor market. The majority of our products are silicon proven and can be seamlessly implemented into FPGA and ASIC technologies. Global IP Core Sales® will assist you with your IP Core and integration needs. Our mission is to grow your bottom line.