



## FlexCop ASIC Software-programmable DVB Digital Receiver Controller

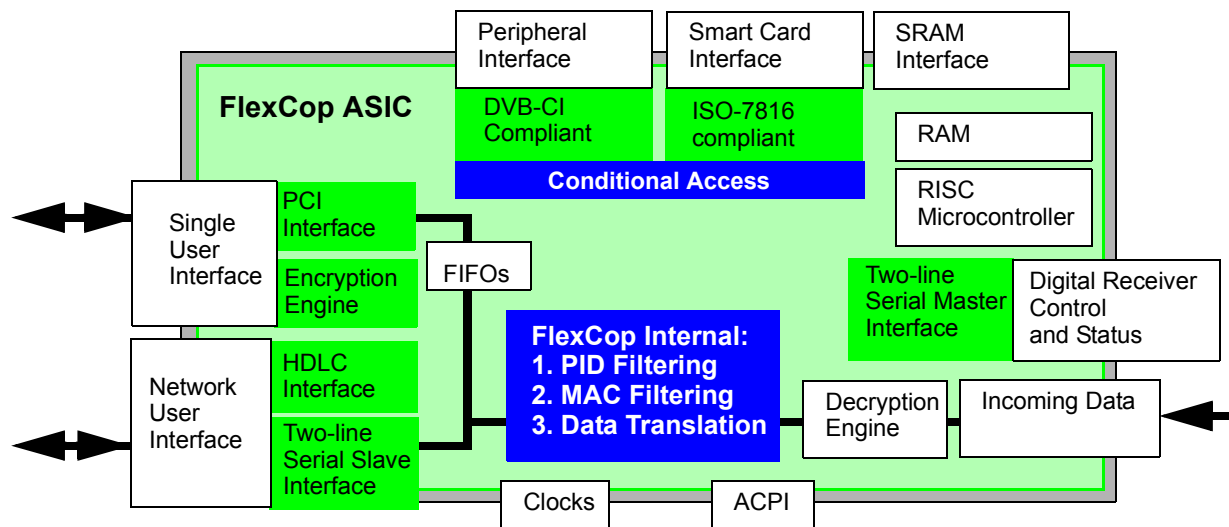
### Overview

FlexCop ASIC is a DVB digital receiver chip for any device that must access digital TV or IP information. The end-user device or on-screen presentation controls FlexCop through software, and FlexCop in turn controls the digital receiver. FlexCop is suitable for receiving Internet, multimedia broadcasts, digital television reception, or performing general MPEG transport stream demultiplexing. Compatible with DVB, MPEG-2, and NTSC networks it can be used as a network device or a single end-user device.

Digital receiver tasks are controlled by end-user software accessing library commands provided with FlexCop. In this way FlexCop can be customized to many different software applications and interfaces. Additionally, FlexCop performs PID filtering and translation on chip and oversees security and conditional access by directly controlling the smart card reader and descrambler. By completely managing the conditional access process FlexCop significantly unburdens the end-user's CPU and software.

### Features

- Handles DVB, MPEG-2 and NTSC streams
- PCI 2.1 interface
- HDLC interface for network operation
- Two-line serial master and slave interfaces
- Volatile and nonvolatile memory controllers
- ISO-7816 compliant Smart Card controller
- Supports DVB descrambling.
- Supports Japanese Multi-2 descrambling
- On-chip PID filtering, Smart Card ID filtering, and MAC destination address filtering. Handles up to 32 simultaneous PIDs.
- Programmable data rate clocks and tone frequency generators
- On-chip data translation for private network data, PSI tables, and conditional access tables
- Internal RISC microcontroller and RAM
- ACPI modes power supply control
- Comes with software command library



## Applications

- High speed (cable terrestrial) Internet access
- Receiving multimedia data broadcasts
- DBS program (cable terrestrial) reception
- Single PC or network operation

## User Interfaces

- Single User                    PCI version 2.1 compliant interface
- Network User                Two-line serial slave interface and HDLC interface
- Software Interface        C language FlexCop functions library provided with FlexCop

## Cable Terrestrial Receiver Front End Control

- Two-line serial master interface

## Memory Management

- Volatile                      SRAM controller
- Nonvolatile                EEPROM can be controlled by two-line serial master interface

## Conditional Access Management

- ISO-7816 compliant Smart Card interface
- DVB-CI compliant Peripheral and Descrambler interface
- On-chip Japanese multi-2 descrambling

## On-chip Filtering

- PID Filtering                Up to 32 simultaneous PIDs
- Private Network Filtering   Filters for private network PIDs
- Private Section Filtering   Smart Card ID filtering
- MAC Filtering                Destination MAC address filtering

## On-chip Translation

- Private network data translation (IP packets)
- PSI table translation
- Conditional access PSI (EMM and ECM) table translation

## On-chip Clock Generators

- Programmable data rate clocks and tone frequencies generated from incoming MCLK signal

## Cable Data Formats Handled

- Data types                    DVB, MPEG-2, NTSC
- Compliance                 ISO/IEC 13818-1  
                                      ISO/IEC 13818-6  
                                      EN 301 192