STi5100

Low-cost interactive set-top box decoder

DATA BRIEF

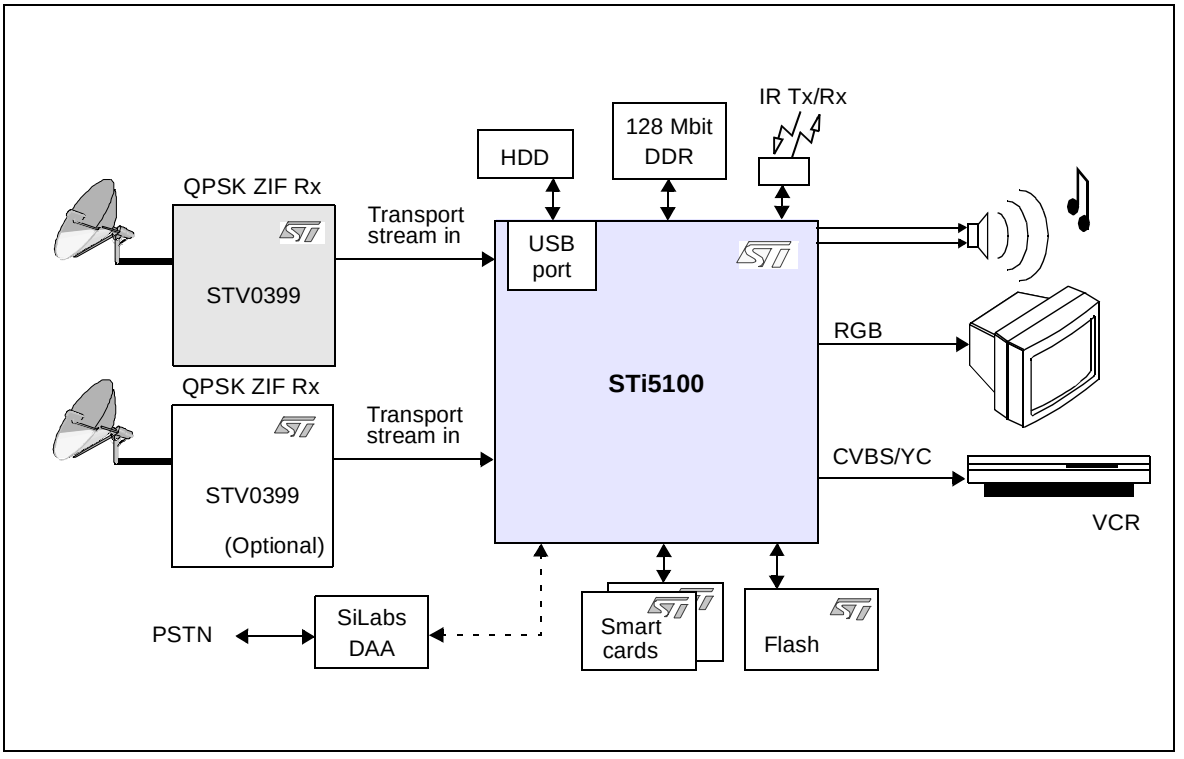
Description

The **STi5100** provides the power and features required to meet the specifications of the most demanding broadcasters and can be used in satellite, terrestrial, cable or IP set-top boxes. The STi5100 also provides a USB2.0 host interface which allows consumers to connect a wide range of peripherals to their STB such as digital cameras, memory sticks, printers and hard disk drives for DVR applications

The STi5100 features the ST20 CPU that is standard across the OMEGA range but boosts the clock speed to 243MHz which, when combined with the DDR memory interface, gives the new device exceptional levels of performance. The new chip also includes a unified DDR memory interface and a modem interface compatible with Silicon Laboratories' silicon DAA.



Application: Cost effective set-top box with optional hard disk



Features

- **Enhanced ST20 32-bit VL-RISC CPU**
  - 243 MHz, 8Kbyte ICache, 8Kbyte DCache, 4 Kbyte SRAM
- **Unified Memory Interface**
- **Dual Transport Stream Merger**
  - Supports DVB and DIRECTV®
  - Integrated DES-ECB, DVB and ICAM descramblers
  - NDS RASP compliant
  - Low cost DVB-CI and Cable Card support
- **MPEG-2 MP@ML Video Decoder**
  - Trick modes including smooth fast forward and rewind
- **Audio**
  - MPEG-1 layers I/II, MP3
  - Dolby® Digital decoding
  - Dolby Pro Logic® compatible output
  - PCM input, mixing and sample rate conversion
  - SRS/TruSurrondXT® virtual surround sound
  - Simultaneous MPEG audio decode and output of Dolby streams
- **Graphics/Display**
  - 4 display planes
  - 2, 4 and 8 bpp CLUT graphics, 256 x 30 bits (AYCBCr) CLUT entries
  - 16 bpp true color graphics
  - Alpha blending, antialiasing, antiflutter, antiflicker filters
- **PAL/NTSC/SECAM encoder**
  - RGB, CVBS, Y/C and YUV outputs with 10-bit DACs
  - CGMS, Teletext, WSS, VPS and close caption
- **On-Chip Peripherals**
  - 4 ASCs (UARTS)
  - 4 parallel 8-bit I/O banks
  - 2 smartcard interfaces and clock generators
  - 3 SSCs for I²C/SPI master/slave interfaces
  - Silicon Labs line side (DAA) interface
  - High-speed USB OHCI/EHCI compliant host interface
  - DiSEqC interface
- **Enhanced Security**

Ordering information

Device number	Description
STi5100ZUA	Basic STi5100
STi5100-Mboard	Development platform
STi5100-Ref	Example STB design
STi5100-STDVB	STAPI drivers for DVB

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