



NXP set-top box system solution STB215

Quality, security, simplicity

As set-top box makers face more pressure to integrate security into the box, NXP eases the implementation of conditional access systems. Our set-top box system solution STB215 incorporates leading security measures, helping you compete effectively in the cable STB market.

Key benefits

- ▶ Reference boards for Europe and Asia
- ▶ Competitive solution with low BOM
- ▶ Enhanced security
- ▶ Short lead time after customization
- ▶ Consistency across all solutions from zapper to PVR by using same IC family and software (see STB220 system solution)

Key features

- ▶ State-of-the-art Nexperia Home Entertainment Engine PNx8329, MPEG2 source decoder, certified by Nagravision according to Nocs specification.
- ▶ Highly integrated front-end TDA8271A and TDA10023 (cable) ICs
- ▶ API software allowing fast integration of Nagravision libraries
- ▶ Compliance with Irdeto, Conax and Viaccess
- ▶ Optional USB2.0 and HDMI (with upscaling) connections

With a focus on security, the STB215 gives you a quick and simple route to delivering digital cable set-top boxes for mid-level markets. With reference designs available for both Europe and Asia, and a great combination of image quality and enhanced security features, the STB215 also minimizes your time-to-market and lowers development, manufacturing and logistics costs. The system can be easily adapted for satellite and terrestrial reception, simply by using one of our other fully integrated front-end solutions.

The STB215 provides a comprehensive package that include key ICs, reference design and board, software (drivers and adaptation layer), and a CD-ROM with full documentation. Based on the ECOS operating system, the software development environment offers a set of debug tools (EJTAG).

Nexperia Home Entertainment Engine PNX8329

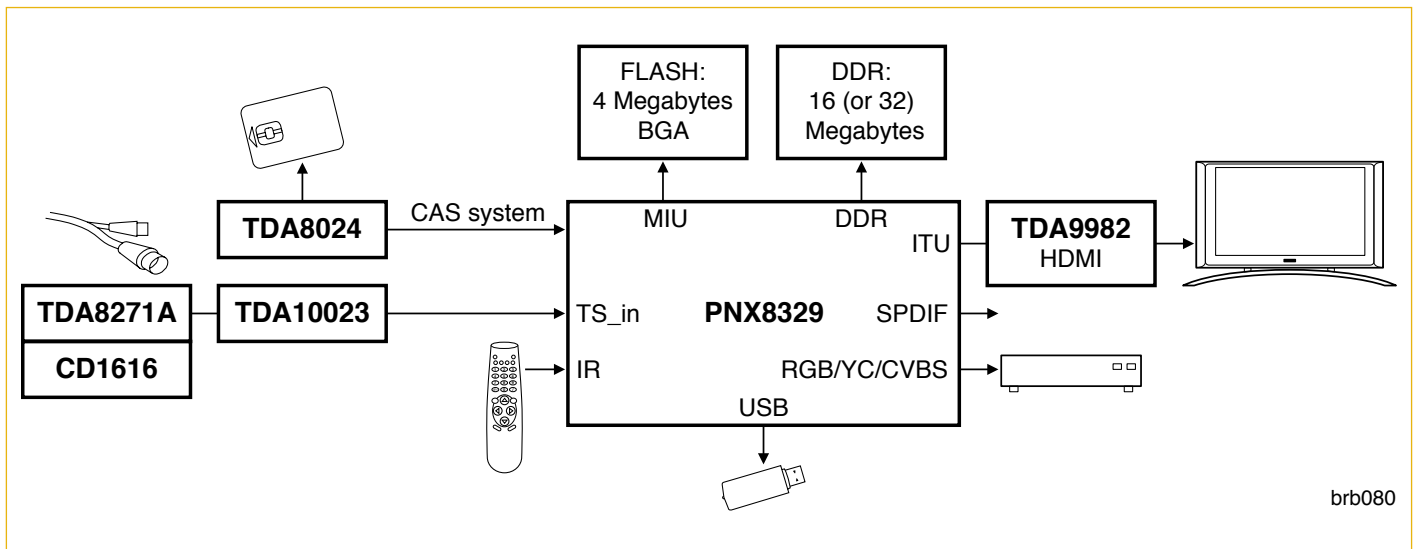
At the heart of the solution lies our advanced and highly integrated Nexperia Home Entertainment Engine (HEE) PNX8329. It features a powerful 240 MHz MIPS RISC CPU and has extensive built in functionality, including several memory and connectivity interfaces.

The PNX8329 also incorporates a single multistandard video decoder which can decode MPEG1 and MPEG2 streams in addition to JPEG pictures including rotation and scaling. The decoder quality is further enhanced by blocking and dynamic sharpness algorithms.

The chip's advanced middleware support includes MHEG and OpenTV.

Key features

- ▶ Secured key handling and JTAG port
- ▶ Support for boot authentication
- ▶ Optional Macrovision copy protection
- ▶ Support for up to two smart card (ISO 7816-3) interfaces
- ▶ Two independent video displays (TV and VCR)
- ▶ Audio-MPEG1 layer I and II, LPCM up to 96 KHz, MP3, Dolby digital 51C-3 down-mixed to prologic or stereo.
- ▶ Low power mode
- ▶ BGA package



System level block diagram