



NXP TV520/32 and TV507 system solutions: a single platform for digital and analog LCD TV with best in class HD picture quality

Addressing the changing European TV landscape, faster than ever

Completely pin and software compatible, our integrated digital TV system solution TV520/32 and analog TV system solution TV507 offer a single platform for serving all European LCD TV markets. These complete reference designs reduce your development times and costs, while allowing sufficient flexibility for you to differentiate your products in the marketplace and provide a sensory HD picture quality experience.

Key benefits

- ▶ Common platform for integrated digital and analog-only solutions
- ▶ Best-in-class price/picture performance
- ▶ Ready-to-manufacture reference designs for cost-effective, low-risk product development and shortest time to market
- ▶ Part of a proven portfolio covering full range of global solutions including DVB, ATSC, PAL, NTSC and SECAM standards
- ▶ Scalability for high-end picture quality
- ▶ Commonality of software and tooling further reduces development costs

Digital broadcasts are becoming increasingly common and many countries are already making plans to switch off analog transmissions. However in Europe, different countries have very different timescales for making that transition, and some national markets may remain analog-only for many years after the early adopters have switched to digital.

Our mainstream LCD TV system solutions TV520/32 (hybrid reception) and TV507 (analog reception) offer you an easy way to meet the demands of all these markets. Forming a common platform for hybrid and analog-only sets, they are fully pin and software compatible.

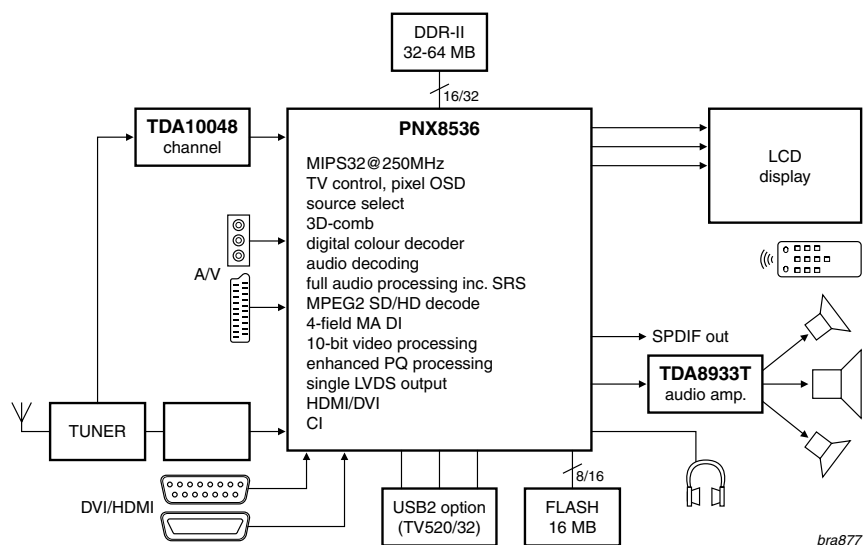
The solutions are available as complete, ready-to-manufacture reference designs to reduce the time, money and risk you need to invest when developing a new product. Yet they retain the flexibility to differentiate your products and support your brand values in order to deliver a sensory experience to your customers. Based on tried-and-tested technology, they deliver outstanding picture and sound quality and offer the scalability to enable you to move towards higher-end sets.

NXP mainstream hybrid (DVB/PAL) LCD TV system solution TV520/32

Supporting DVB and PAL reception, the TV520/32 is a complete, easy-to-use reference design for mainstream hybrid LCD TV in the European market. It's based on the highly integrated PNX8536 system-on-chip, which incorporates much of the functionality of our successful TV810 system solution into one IC. The TV520/32 system solution also features our new DVB channel decoder TDA10048, an IC that extends our reputation for highly reliable, interference-free DVB reception.

Key features

- ▶ Complete hardware and software reference design for shortest time-to-market
- ▶ Based on highly integrated PNX8536 system-on-chip
- ▶ State-of-the-art silicon front end optimized for regional requirements
 - DVB channel decoder TDA10048 incorporating 'PulseKiller' algorithm for impulsive noise reduction
 - Prepared for the option of a silicon tuner TDA18271
- ▶ DVB and PAL reception
- ▶ 10-bit video processing
- ▶ 16 different picture improvement functions including
 - Next-generation edge dependent de-interlacing (EDDI+)
 - 3D comb filter with auto-adaptive 2D/3D switching
 - Temporal noise reduction on SD content for enhanced sharpness
 - MPEG artifact reduction
 - 4-field motion adaptive de-interlacing (MADI) enhanced with edge dependent processing
- ▶ Automatic Picture Control
- ▶ Integrated HDMI receiver, source selection and A/D conversion
- ▶ LVDS output for direct panel connection, supporting HD resolutions on WXGA displays (1366 x 768)
- ▶ RGB output for use with external dual LVDS transmitter driving full HD panels (1920x1080p)
- ▶ Includes proven middleware and application software delivering
 - Optimal user experience for both digital and analog channels
 - Common GUI and optimized picture settings for both digital and analog sources
- ▶ Software runs under Linux OS
- ▶ Bit-mapped OSD

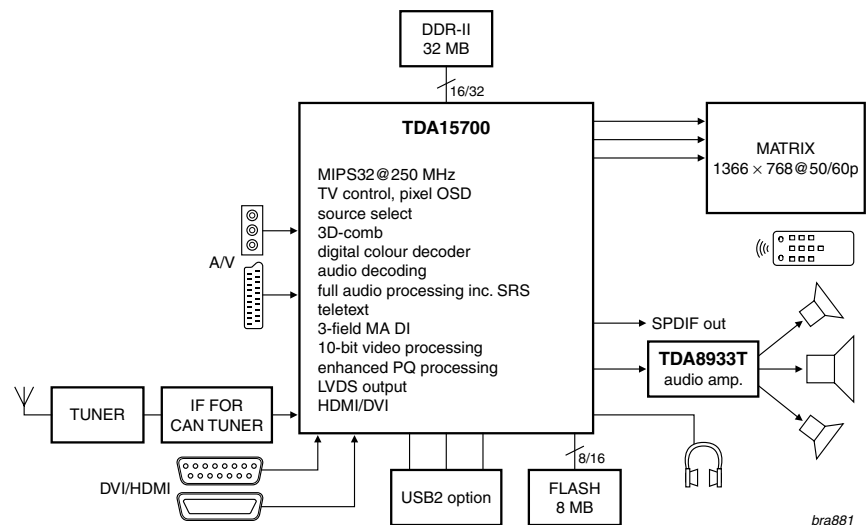


NXP complete analog LCD TV reference design kit TV507

A ready-to manufacture system solution, the TV507 is based on our feature-rich LCD One Chip III TDA15700. This single-chip solution for analog LCD TV incorporates technology derived from our Nexperia-based TV520 series of TV solutions. Together with teletext, closed captioning, sound processing and scaling, it also delivers 3-field motion adaptive de-interlacing (MADI), integrated HDMI and an array of picture improvement features.

Key features

- ▶ Complete hardware and software reference design for shortest time-to-market
- ▶ Based on highly integrated LCD One Chip III (LOCIII) TDA15700
- ▶ Prepared for the option of a silicon tuner TDA18271
- ▶ PAL, NTSC and SECAM color decoding
- ▶ 10-bit video processing
- ▶ Numerous picture improvement functions including
 - Next-generation edge dependent de-interlacing (EDDI+)
 - 2D and 3D comb filtering
 - 3-field motion adaptive de-interlacing (MADI)
 - Active color management
- ▶ Panorama scaling and letter box insertion
- ▶ Integrated HDMI receiver, source selection and A/D conversion
- ▶ LVDS output for direct panel connection, supporting HD resolutions on WXGA displays (1366 x 768)



- ▶ Includes proven middleware and application software delivering optimal user experience
- ▶ Software runs under Linux OS
- ▶ Bit-mapped OSD
- ▶ Flexible multipage Teletext solution (up to 4000 pages)

High-quality viewing experience that addresses your senses

Building on our rich IP portfolio, both the TV520/32 and TV507 deliver an outstanding vibrant viewing experience. They incorporate a wealth of picture improvement features including 2D/3D comb filtering, next-generation edge-dependent de-interlacing (EDDI+), 3- or 4-field motion adaptive de-interlacing (MADI) and sharpness enhancements. These combine with 10-bit video processing to provide optimal image quality at the right price. In addition, an integrated HDMI receiver ensures a cost-effective path to high-end digital interfacing.

Perfectly complementing the great image quality, the solutions also deliver excellent sound performance. They feature advanced audio processing to get the most out of flat speakers, and a range of third-party options including Virtual Dolby, SRS TruSurround XT, Dolby Pro Logic II, BBE and many more.

System design-in tool kit for fast excellence

To help you achieve the fastest time-to-market, we offer our LCD TV reference designs in combination with a system design-in toolkit (SDT). The SDT includes everything you need to support you in the product differentiation process and customization of items such as connector configurations, user-interface look and feel, different LCD panels and front-end components. To further reduce development costs, the reference designs and SDT enable you to use the same development tools such as software debugger for both hybrid and analog-only designs.

MPEG-2 disclaimer

Use of this product in any manner that complies with the MPEG-2 Standard is expressly prohibited without a license under applicable patents in the MPEG-2 patent portfolio, which license is available from MPEG LA, L.L.C., 250 Steele Street, Suite 300, Denver, Colorado 80206.

www.nxp.com



NXP Semiconductors is in the process of being established as a separate legal entity in various countries worldwide. This process will be finalized in the course of 2006.

© 2006 Koninklijke Philips Electronics N.V.

All rights reserved. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice. No liability will be accepted by the publisher for any consequence of its use. Publication thereof does not convey nor imply any license under patent- or other industrial or intellectual property rights.

Date of release: September 2006
Document order number: 9397 750 15628
Printed in the Netherlands