



NXP mainstream hybrid (DVB / PAL) LCD TV system solution TV522/32

4th-generation platform for low-risk LCD TV development

Supporting DVB and PAL/SECAM reception, the 4th-generation TV522/32 is a complete, easy-to-use reference design for mainstream hybrid LCD TV in the European market. It lets you offer enhanced features at a lower system cost. And like its predecessors, it reduces development times and costs, while allowing sufficient flexibility for you to differentiate your products in the marketplace.

Key benefits

- ▶ Ready-to-manufacture, hardware and software reference design reduces cost, risk and time-to-market
 - Mature 4th-generation solution
- ▶ Best-in-class price / performance ratio
- ▶ Part of a proven, global portfolio covering DVB, PAL, SECAM, ATSC and NTSC standards
 - Pin and software compatible with our integrated DTV system solution TV520/32
 - Common software and tooling further reduces development costs
- ▶ Scalable for high-end picture quality

Key features

- ▶ Based on highly integrated home entertainment engine PNX8541
- ▶ State-of-the-art front end optimized for regional requirements
 - DVB channel decoder TDA10048 incorporating 'PulseKiller' algorithm for impulsive noise reduction

- ▶ 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 for enhanced sharpness
 - MPEG artifact reduction
 - 3 or 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)
- ▶ Software runs under Linux OS
- ▶ Bit-mapped OSD

The roll-out of digital broadcast services across Europe continues to accelerate. Most countries have concrete plans to switch off PAL/SECAM analog transmissions – and some have already implemented them. In this landscape, our mainstream hybrid (DVB / PAL) LCD TV system solution TV522/32 offers the ideal solution to get ahead of the competition.

A cost-effective solution for mid-range sets, the TV522/32 offers the perfect platform for a wide-range of applications. It can be easily scaled for smaller-screen sizes or combined with one of our companion chips to create premium products that deliver the most exciting viewing experience.

This latest reference design is based on the highly integrated PNX8541 system-on-chip, which builds on the proven functionality and maturity of our previous generation solutions. The design also includes our proven tuner / channel decoder front-end including the TDA10048 channel decoder for highly reliable, interference-free DVB reception.

Available as a complete, ready-to-manufacture reference design, the TV522/32 reduces the time, cost and risk of developing a new product. Yet it retains the flexibility to differentiate your products and support your brand values with outstanding picture and sound quality.

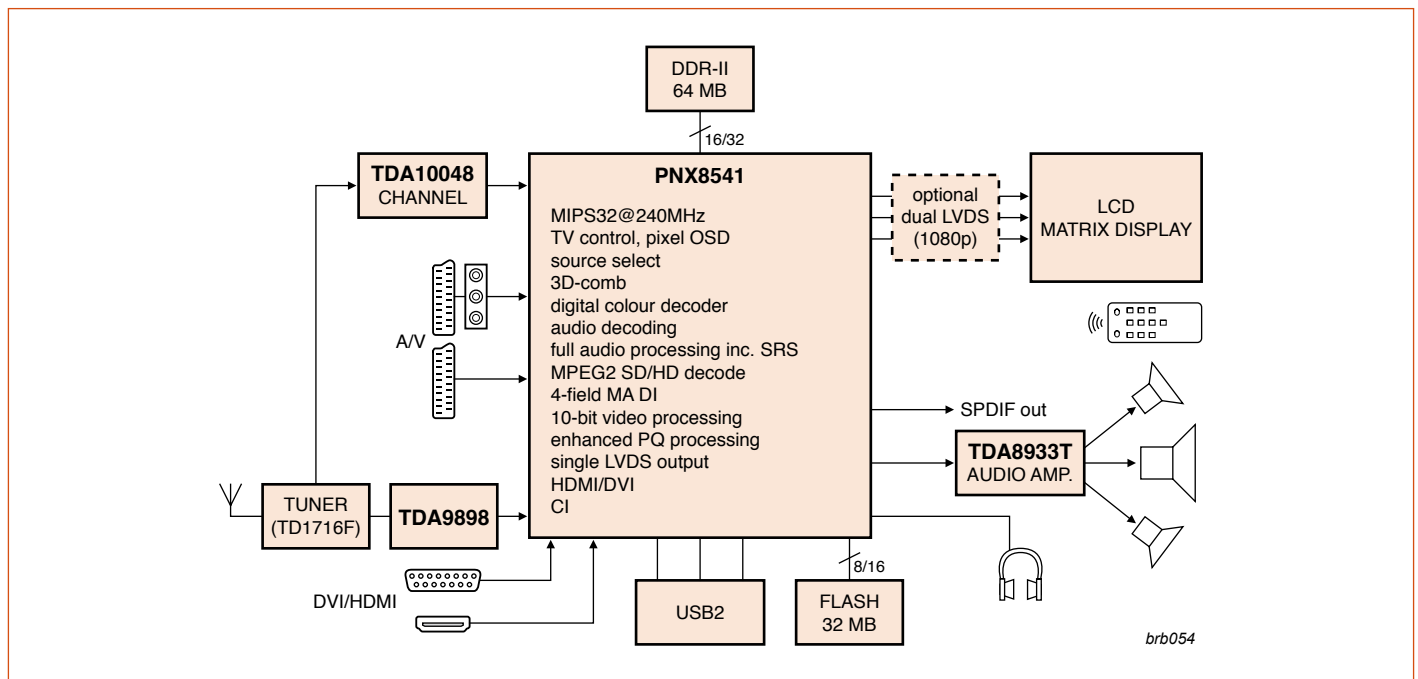
High-quality viewing experience

The TV522/32 builds on our rich IP portfolio to deliver an outstanding viewing experience. It includes extensive picture improvement functionality such as 2D / 3D comb filtering, next-generation edge-dependent de-interlacing (EDDI+), 3- or 4-field motion adaptive de-interlacing (MADI) and sharpness enhancements. Combined with 10-bit video processing, these features provide optimal image quality at the right price. In addition, an integrated HDMI receiver offers a solution for digital interfacing and content protection.

To match the great picture quality, the TV522/32 also delivers fantastic sound performance. It features 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

All our LCD TV reference designs are offered with a system design-in toolkit (SDT) to help you get to market fast. It contains everything you need to support you in differentiating your product and customizing connector configurations, user-interface look and feel, different LCD panels and other components. Moreover, you can use the same TV520 family development tools (e.g. software debugger) – further reducing development costs.



Block diagram

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