



High quality without high cost

Philips mainstream integrated LCD DTV system solution TV520/20



Supporting both ATSC and NTSC broadcast reception, the new TV520/20 solution brings the advantages of a fully integrated concept to the cost-sensitive mainstream LCD TV market. It's the first in a family of products based on a new highly integrated System-on-Silicon IC family (PNX853x). It offers an optimal viewing experience for the end-consumer at mainstream market price points.

Key features

- Complete hardware and software reference design for shortest time-to-market
 - Mature middleware and application software proven on the TV810
- State-of-the-art silicon front end optimized for regional requirements
 - Silicon tuner front-end option
 - TDA10060 VSB/QAM channel decoder
- Supports ATSC and NTSC broadcast reception
- Includes proven middleware and application software delivering
 - Optimum end-user experience for both digital and analog channels
 - Common GUI and optimized picture settings for both digital and analog sources

- 16 different picture improvement functions including
 - Next-generation Edge-Dependent De-Interlacing
 - 3D comb with auto-adaptive 2D/3D switching
 - Advanced noise reduction algorithms supporting sharpness enhancement
 - MPEG artifact reduction
 - 3-field motion adaptive de-interlacing enhanced with edge dependent processing
- Integrated HDMI receiver, source selection and A/D conversion
 - Supporting input resolutions up to 1080i
- LVDS output for direct panel connection, supporting HD resolutions on WXGA displays (1366 x 768)
- A single, small form factor, PCB

Key benefits

- Best price/picture performance in its class
- Reference design for rapid, cost-effective, lowest-risk product development
- A common (global) solution by changing just the front-end channel decoder for a DVB solution.

In the hyper-competitive TV markets, it's hard for LCD TV manufacturers to produce high-quality products that are still cost-competitive. Plus, with so many traditional players and new entrants, it takes product differentiation to support customers'

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brand values in order to stand out from the crowd – but development has to be rapid since massive price erosion means lifecycles are shorter than ever.

Enabling easy differentiation, the Nexperia TV reference design system solutions address all these issues. Philips Nexperia analog/digital TV system solutions are specifically designed to deliver high picture quality for mainstream LCD TV applications at a competitive price.

The TV520/20 reference design consists of all hardware and software required to build an analog/digital TV. It addresses the needs of the North American market in its rapid transition from analog to digital broadcast.

Next-generation solution for mainstream LCD DTV sets

Based on the new highly integrated System-on-Chip IC (PNX8535), the TV520/20 is a complete, easy-to-use reference design which delivers the flexibility manufacturers require to ensure differentiation.

By integrating much of the proven TV810 functionality into a single IC, Philips has achieved a significant reduction in IC chip count and PCB size to reach a much lower total system bill of materials. The hardware has been designed to work with a simplified platform software, while re-using the field-proven, higher-level software components from the TV810.

High-quality viewing experience

With the rapid growth of high-definition content, the quality of a TV's audio/video experience is more important than ever. The TV520/20 solution builds on Philips' rich portfolio of TV IP to bring many features normally associated with high-end TV products into the mainstream arena.

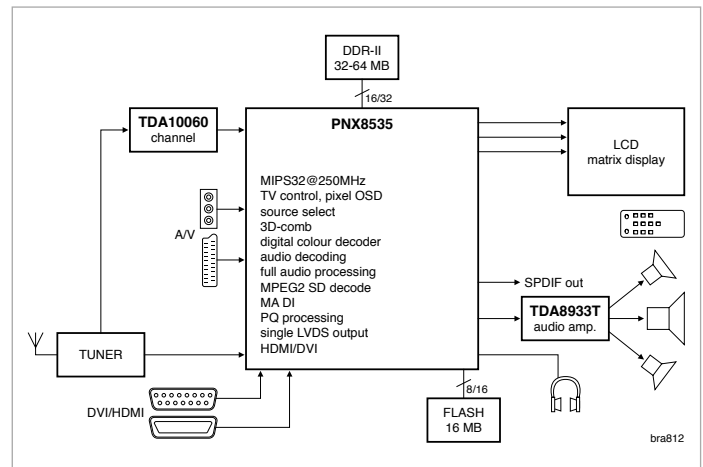
Features such as MPEG artifact reduction, 2D/3D comb filtering, next-generation edge dependent de-interlacing, peaking and sharpness enhancement features ensure optimal picture quality at the right price point.

Audio performance plays an increasingly important role in the context of the viewing experience. TV520/20 employs advanced digital sound processing algorithms to get the most out of flat speakers, together with a range of third-party options such as Virtual Dolby, SRS TruSurround XT, Dolby Pro Logic II, BBE and many more.

With great audio complementing excellent picture performance, the result is a high-quality overall experience.

System Design-in Toolkit

To support the need for ever-shorter chassis development cycles, the TV520/20 is offered in combination with a System Design-in Toolkit (SDT). The SDT package includes everything needed to support customers when adapting the reference design for product differentiation – connector configurations, UI look and feel, different LCD panels, front-end components, etc.



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