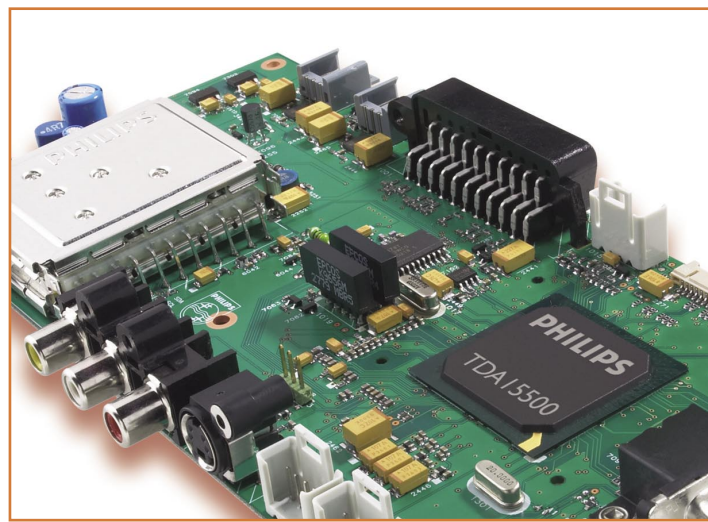


# TDA15500

## Single chip solution for mainstream LCD TV sets

Designed to deliver high picture quality in mainstream LCD-TV systems, Philips LCD One Chip (LOC) includes the Intermediate Frequency (IF) stage, video decoder, picture improvement features, de-interlacer, micro-controller with tele-text, closed captioning, sound entertainment, scaling and LVDS output.



### Application

- Mainstream LCD-TV systems

### Features

- Video: color decoding for PAL, NTSC, SECAM; 2D comb filtering, active color management and panorama scaling
- Audio: 24bit DSP, fully featured Digital Stereo and A/V stereo, surround sound and Dolby Prologic™
- Connectivity: analogue input, triple ADC, 8-bit resolution, 165 MHz, standard and mid level clamping and automatic gain control; maximum supported input resolution 1600x1200 (UXGA); in-circuit emulation support and direct high speed access to on chip modules
- Scaling and color management: picture cropping, fully programmable color matrices supporting color space conversion and panel RGB compensation, programmable vertical and horizontal polyphase filter supporting scaling with variable characteristics from smoothing to sharpening
- On-screen display: character-based OSD with dynamic re-definable character sets and transparent/translucent overlay
- Output: display modes up to SXGA @ 85Hz and WXGA @ 85Hz supported; single or dual pixel LVDS interface supporting 6 or 8 bits per color; programmable LVDS output timing including synchronization and validation signals

Semiconductors

The TDA15500 is a low cost, single chip solution for LCD TV implemented in an easy to use reference design that enables rapid development of LCD TVs in today's highly competitive marketplace. It also provides manufacturers with the flexibility to differentiate themselves from other market players. The technology used in the TDA15500 LCD One Chip has been derived from Philips' market leading Ultimate One Chip family, guaranteeing worldwide decoding performance and high picture quality, supported by our robust and field-proven GTV software stack.

### Quality video and on-screen display

Building on the extensive functionality of the UOCIII family, the LCD One Chip offers features such as 2D Comb-filtering, dynamic skin tone control, blue stretch, peak-white limiter, and soft clipper for optimal dynamic picture behavior, to create a perfect picture for mainstream LCD TVs.

### Dynamic digital sound

A good picture deserves good sound, so the LCD One Chip offers unique sound processing in the digital domain. It supports patented Philips algorithms as well as 3<sup>rd</sup> party, logo-enabling technologies like Virtual Dolby®, SRS 3D, SRS TrueSurround®, I²S for a subwoofer or full DPL, BBE® sound process. It also offers the latest enhancement technology for improving clarity and speech intelligibility and supports Philips patented Dynamic Ultra Bass (DUB-II), Dynamic Bass Enhancement (DBE) and level dependent bass to bring top class audio into mainstream LCD TV chassis.

### Versatile scaling and connectivity

Hardware and software scaler blocks, proven in the LCD monitor market, like LVDS output, are integrated into the TDA15500. Combining our strengths from the LCD monitor and TV market, this makes the TDA15500 the perfect solution for mainstream systems at an affordable price. Four tap filters offer state of the art horizontal and vertical scaling to ensure a natural picture on any LCD screen. In addition, advanced processing algorithms can identify PC or HD signals, ensuring easy connection to external sources.

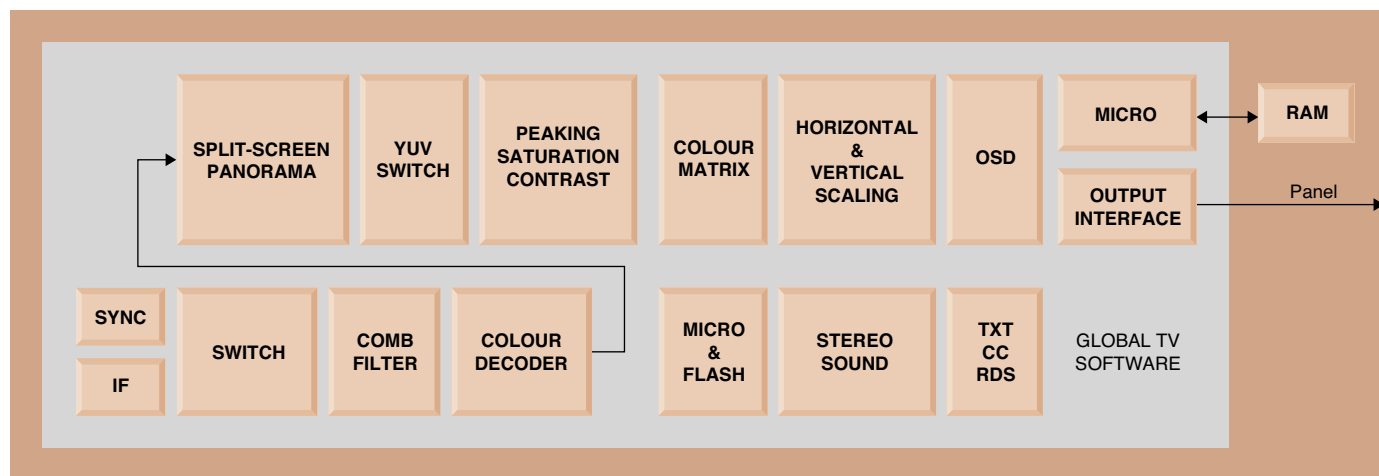
# PHILIPS

# TDA15500

## Single chip solution for mainstream LCD TV sets



### LCD One Chip TDA15500



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### GTV Software Development Kit (SDK)

To facilitate chassis development, our Global TV (GTV) software includes everything you need to customize your chassis designs with dedicated features and styles for different regional markets. On top of Teletext, Closed Captioning and VChip support, we offer a vast range of proven device driver libraries and ready-to-run demonstration applications in a

convenient package. These include features like FM radio, RDS, and easy control of video, sound, scaling and connectivity functions including tuning and power management, all backed up with comprehensive technical support, training, tools and documentation.

### Philips Semiconductors

Philips Semiconductors is a worldwide company with over 100 sales offices in more than 50 countries. For a complete up-to-date list of our sales offices please e-mail [sales.addresses@www.semiconductors.philips.com](mailto:sales.addresses@www.semiconductors.philips.com). A complete list will be sent to you automatically. You can also visit our website <http://www.semiconductors.philips.com/sales>.

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