

VCT 49xyl, VCT 48xyl

May/2004



VCT 49xyl, VCT 48xyl Video-Controller-Text-IF-Audio IC Family

The VCT 49xyl, VCT 48xyl is an IC family of high-quality single-chip TV processors. Modular design and deep-submicron technology allow the economic integration of features in all classes of single-scan CRT TV sets and FPD TV sets.

Each member of the family contains the entire IF, audio, video, display, and deflection processing for 4:3 and 16:9 50/60-Hz mono and stereo TV sets. The integrated microcontroller is supported by a powerful OSD generator with integrated Teletext and Closed-Caption acquisition.

The VCT 49xyl, VCT 48xyl family offers a rich feature set, covering the whole range of state-of-the-art 50/60 Hz CRT and FPD TV applications.

Control and Data Processing

- ◆ 8-bit 8051 instruction set compatible CPU
- ◆ Up to 512 kB on-chip program ROM
- ◆ WST, PDC, VPS, and WSS acquisition
- ◆ Closed-Caption and V-chip acquisition
- ◆ Up to 10 pages on-chip teletext; Up to 1000 pages with external SRAM
- ◆ Powerful OSD generation

IF Processing

- ◆ Alignment-free multi-standard QSS IF processing with a single SAW
- ◆ Programmable group delay equalization

Audio Processing

- ◆ FM radio and RDS/RBDS with standard TV tuner @ "zero cost"
- ◆ TV-sound demodulation:
 - All A2 Standards
 - All NICAM standards
 - BTSC/SAP with DBX
 - EIA-J
- ◆ Baseband sound processing for loud-speaker channel:
 - Bass/treble or equalizer
 - Loudness and spatial effect (e.g. pseudo stereo)
 - Micronas BASS
 - Subwoofer output
 - Micronas AROUND virtual
- ◆ Optional sound features:
 - Virtual Dolby Surround
 - BBE, SRS WOW, SRS TruBASS
 - Micronas VOICE

Video Processing

- ◆ ITU 656, CVBS, S-VHS, Y_cC_b and RGB inputs
- ◆ 8/10-bit ITU 656 output
- ◆ 4H adaptive comb filter (PAL/NTSC)
- ◆ Multi-standard color decoder (PAL/NTSC/SECAM)
- ◆ Non-linear horizontal scaling "Panoramavision"
- ◆ Luma and chroma transient improvement (LTI, CTI)
- ◆ Histogram calculation
- ◆ Non-linear color space enhancement
- ◆ Dynamic black level expander (BLE)
- ◆ Scan velocity modulation output
- ◆ Soft start/stop of H-drive
- ◆ Vertical angle and bow correction
- ◆ Nonlinear / dynamic EHT compensation

Miscellaneous

- ◆ Single 20.25-MHz reference crystal
- ◆ Low-power standby mode
- ◆ Cost-efficient PSSDIP88-1/-2 package
- ◆ PMQFP144-2 package

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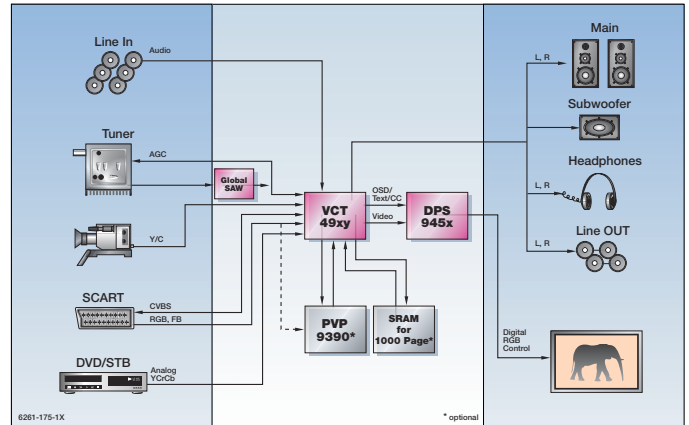
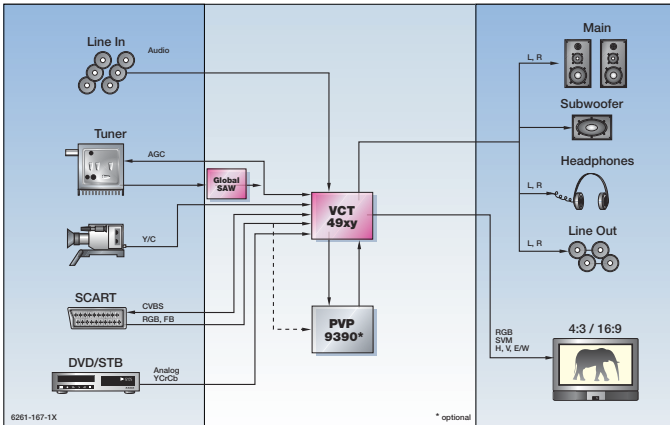


Fig. 1: Single-scan CRT TV application example

Fig. 2: LCD TV application example

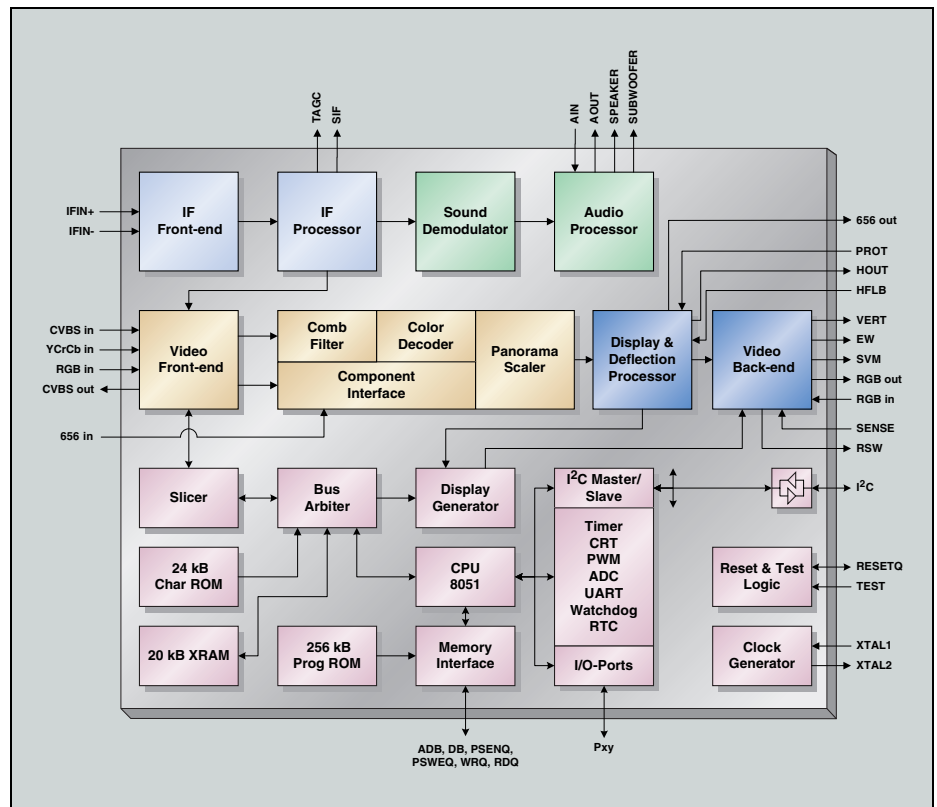


Fig. 3: Block diagram of the VCT 49xyl

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