

Single chip configuration integrating 3D Y/C separator, TBC and frame synchronizer.

Digital Conversion LSI MN673747(HL)

■ Overview

MN673747(HL) digital conversion LSI converts analog video signal inputs of NTSC/PAL (Y/C, composite video), SECAM (composite video) and Y/Cb/Cr (component) signals into ITU-R BT.656 format signals (international standard for digital video signal transfer) before output.

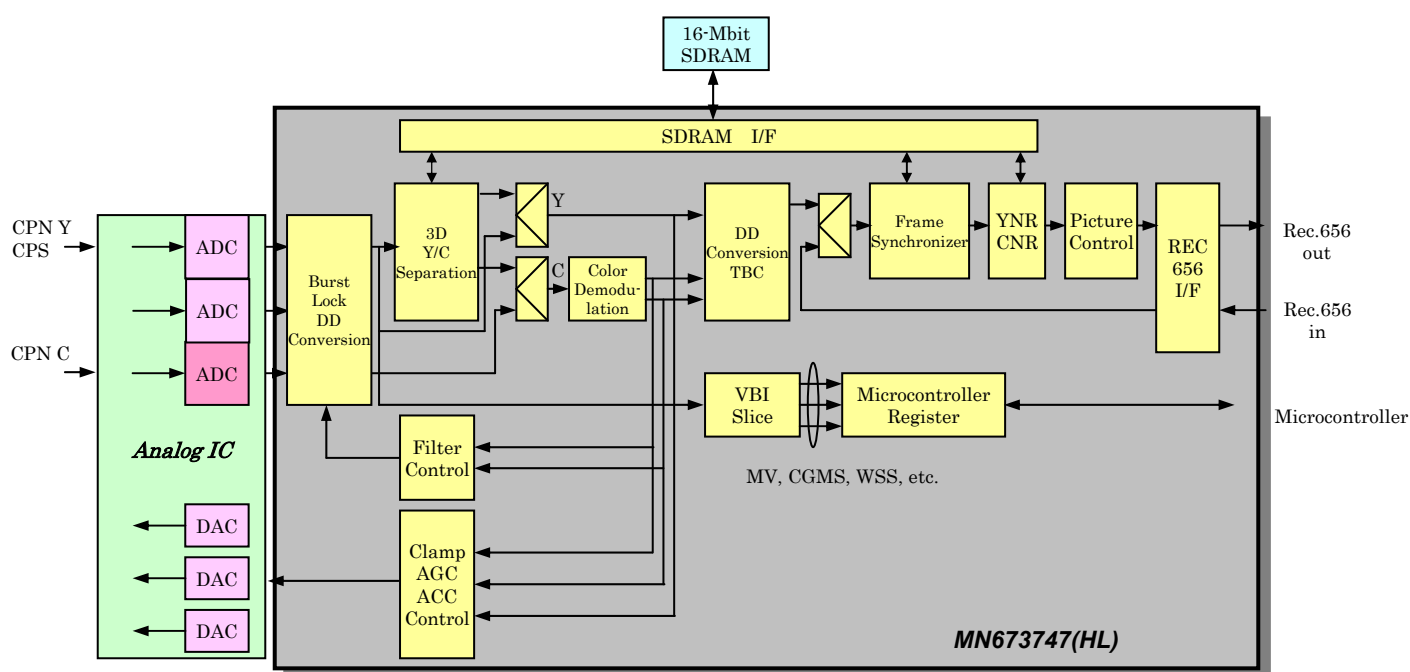
■ Feature

- Increased Y/C separation (2D and 3D) accuracy of 9 bits.
- All processes from A/D conversion to Rec. 656 output handled at single fixed clock frequency of 27MHz.
- Velocity error/jitter correction used for TBC (Time Base Corrector) ensures accurate time axis correction for the full screen.
- Frame synchronizer standardizes input signals.
- All functions achievable using a single external SDRAM (16-Mbit, 108MHz clock frequency).
- Microcontroller buss and I²C buss for control buss interface (common usage).

■ Applications

DVD recorders, multimedia PCs, HDD-equipped products and TV/PDP display units

■ Block Diagram



AN13310

■ Specifications

Functions	Motion-adaptive 3D Y/C separation, TBC,
	3D noise reduction, DD conversion,
	frame synchronization
Analog Input	Composite signals and Y/C, Y/Cb/Cr signals
Digital Input/Output	ITU-R BT.656 × 1
Process	0.15μm 4-layer AL
Operating Frequency	108.0MHz max. (27MHz system clock)
Power Supply Voltage	3.3V ± 0.3V (analog block)
	3.3V ± 0.3V (digital input/output block)
	1.8V ± 0.15V (internal digital block)
Package	239-pin, 0.65mm-pitch 11mm × 11mm C-CSP 176-pin, 0.5mm-pitch 24mm × 24mm LQFP

■ Package

