

DATA SHEET

| | |
|------------------|----------------------------------|
| Part No. | MN673744 MN673744HL |
| Package Code No. | MLGA239-C-1111 LQFP208-P-2828 |

SEMICONDUCTOR COMPANY
MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.

MN673744, MN673744HL

Video Digital Conversion LSI

■ Overview

Analog video signals, such as NTSC and PAL analog video signals, are input into the MN673744, MN673744HL and converted into Rec.656 output signals that meet international standards of digital video signals.

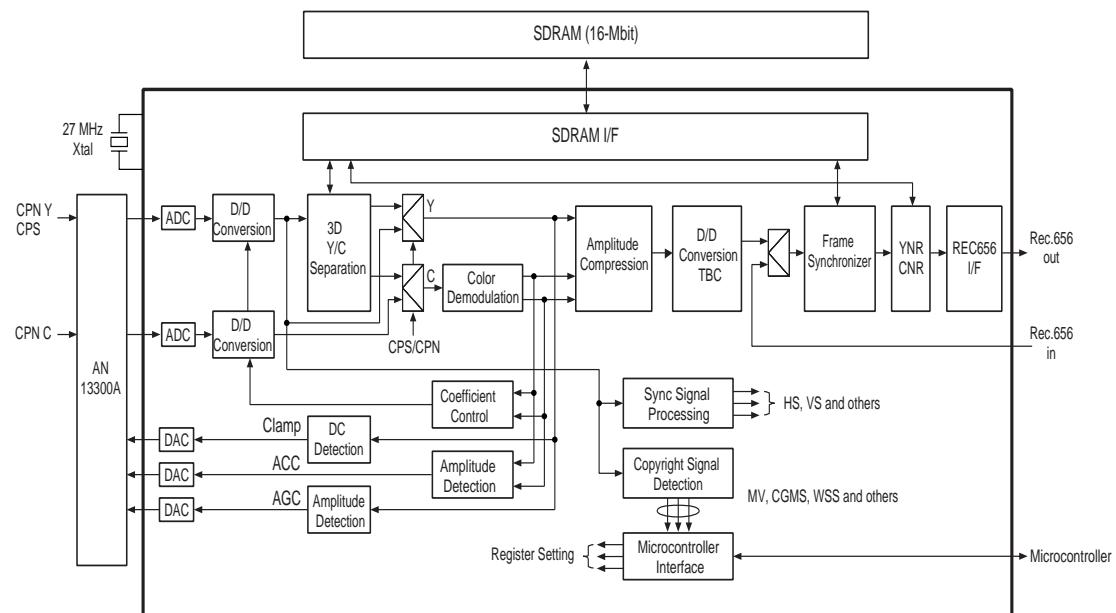
■ Feature

- Improved processing precision of both 2D and 3D Y/C separation : 9 bits
- A single clock fixed at 27 MHz is used from the A/D conversion to Rec.656 output stages.
- A time base corrector (TBC) with a function of velocity error correction is provided to ensure the correct time axis on the whole screen.
- A frame synchronizer is provided to convert all input signals into standard signals perfectly.
- It requires a single SDRAM (capacity: 16-Mbit; clock frequency: 108 MHz) externally.

■ Applications

- Disc recorders with hard discs or DVDs employed, screen displays such as TV and PDP units, and PCs with AV functions.

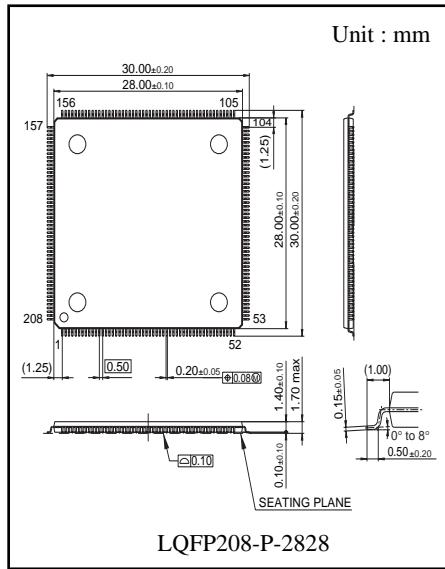
■ Block Diagram



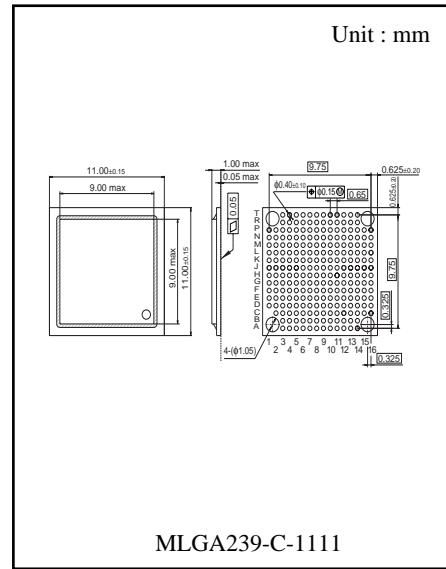
■ Specifications

| | |
|--------------------------|---|
| Function | Movement adaptive 3D Y/C separation, 3D noise reduction processing, TBC processing, and frame synchronizer processing |
| Analog input | Composite signal and Y and C signals input (2 lines) |
| Digital I/O | ITU-R and BT.656 (1 line each) |
| Operating supply voltage | 3.3 V \pm 0.3 V (I/O, analog block) 1.8 V \pm 0.15 V (Internal digital block) |
| Power consumption | 0.55 W max. |
| Package | 208-pin LQFP with \square 28 mm (MN673744HL) 239-pin C-CSP with \square 11mm (MN673744) |

■ Package



MN673744HL



MN673744

■ Support Tools

- Evaluation board
- Register control program
- Specifications and Product Standards

Request for your special attention and precautions in using the technical information and semiconductors described in this material

(1) An export permit needs to be obtained from the competent authorities of the Japanese Government if any of the products or technical information described in this material and controlled under the "Foreign Exchange and Foreign Trade Law" is to be exported or taken out of Japan.

(2) The technical information described in this material is limited to showing representative characteristics and applied circuits examples of the products. It neither warrants non-infringement of intellectual property right or any other rights owned by our company or a third party, nor grants any license.

(3) We are not liable for the infringement of rights owned by a third party arising out of the use of the technical information as described in this material.

(4) The products described in this material are intended to be used for standard applications or general electronic equipment (such as office equipment, communications equipment, measuring instruments and household appliances).

Consult our sales staff in advance for information on the following applications:

- Special applications (such as for airplanes, aerospace, automobiles, traffic control equipment, combustion equipment, life support systems and safety devices) in which exceptional quality and reliability are required, or if the failure or malfunction of the products may directly jeopardize life or harm the human body.
- Any applications other than the standard applications intended.

(5) The products and product specifications described in this material are subject to change without notice for modification and/or improvement. At the final stage of your design, purchasing, or use of the products, therefore, ask for the most up-to-date Product Standards in advance to make sure that the latest specifications satisfy your requirements.

(6) When designing your equipment, comply with the guaranteed values, in particular those of maximum rating, the range of operating power supply voltage, and heat radiation characteristics. Otherwise, we will not be liable for any defect which may arise later in your equipment.

Even when the products are used within the guaranteed values, take into the consideration of incidence of break down and failure mode, possible to occur to semiconductor products. Measures on the systems such as redundant design, arresting the spread of fire or preventing glitch are recommended in order to prevent physical injury, fire, social damages, for example, by using the products.

(7) When using products for which damp-proof packing is required, observe the conditions (including shelf life and amount of time let standing of unsealed items) agreed upon when specification sheets are individually exchanged.

(8) This material may be not reprinted or reproduced whether wholly or partially, without the prior written permission of Matsushita Electric Industrial Co., Ltd.