

32-bit microcomputers with onboard large-capacity flash memory ideal for digital AV systems.

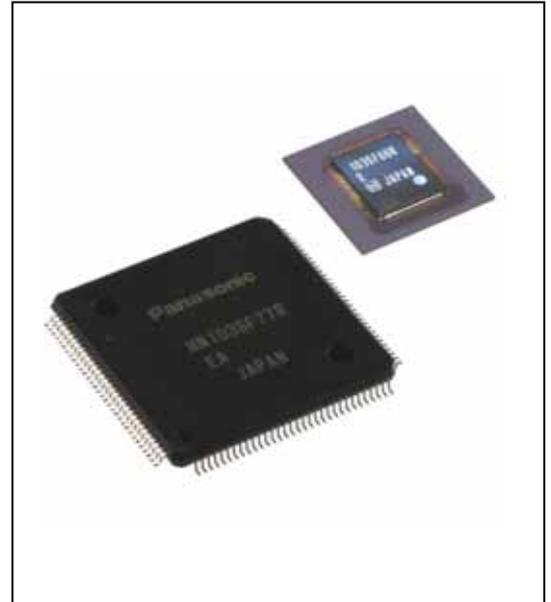
32-bit Microcomputers with Built-in Large-Capacity Flash memory MN103SF66R/77R

■ Overview

MN103SF66R/77R 32-bit microcomputers with a built-in AM32L 32-bit CPU feature small code size, low power consumption and high-speed operation. By incorporating and integrating various easy-to-use, intelligent peripheral functions such as a multi-function timer, serial interface and an A/D converter for digital AV system control, a single-chip control system becomes simple to configure. The built-in 1 MB flash memory enables a chip to be loaded with a significant amount of programs and data as well as allowing rewriting even after the chip has been installed equipment.

■ Feature

- Incorporates Matsushita proprietary AN32 32-bit CPU for high-speed processing at 60MHz internal frequency with 15MHz oscillation.
- Built-in 1MB flash memory is one of the largest available in its class.
- Minimal power consumption(2mW/MHz).
- Built-in multi-function timer, serial interface, and A/D converter enable single-chip control of digital A/V systems.

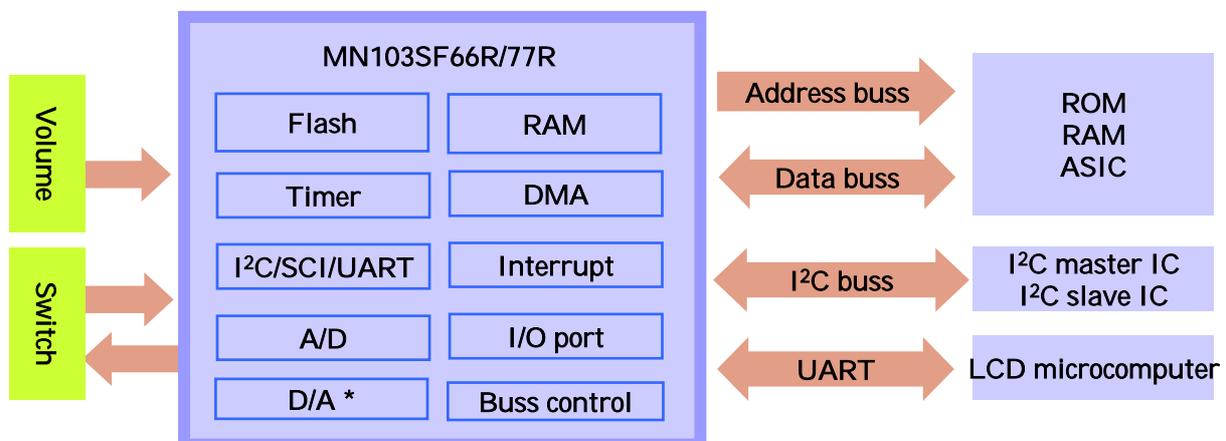


■ Applications

MN103SF66R: System controllers for DVC and other portable AV equipment

MN103SF77R: System controllers for audio and optical disc devices

■ Applied system image (an example of external memory extended system)



*D/A is only equipped with MN103SF77R.

■ Specification

| Parameter | MN103SF66R*1 | MN103SF77R*1 |
|---------------------------|---|---|
| Operating voltage | 2.7 V to 3.6 V | |
| Operating frequency | Internal 60 MHz (at external 15 MHz oscillation, with built-in multiplier circuitry) minimal instruction execution time:16.7 ns | |
| Built-in Flash/RAM | 1MB/40KB | 1MB*2/32KB |
| External Interrupts | 17 | 10 |
| DMA | 4-ch | 4-ch |
| Multi-function Timer | 8-bit timer : 20 16-bit timer : 12 WD timer : 1 | 8-bit timer : 10 16-bit timer : 6 WD timer : 1 |
| Analog Interface | A/D : 10-bit × 25-ch D/A : non | A/D : 10-bit × 12-ch D/A : 8-bit × 2-ch |
| Serial Interface | Sync. /UART selective : 10 16-byte FIFO built-in sync./UART selective : 1 Multi-master I ² C selective : 2 | Multi-master I ² C : 1, sync./UART selective : 3 Sync./UART/multi-master I ² C selective:2 |
| ROM collection | 12-ch | 8-ch |
| External Memory Expansion | 64MB space × 4 ,address/data separation/common use 8/16/32-bit data buss | 16MB space × 4 ,address/data separation/common use 8/16-bit data buss |
| I/O Port | In : 25,in/out selective :174 | In/out selective : 104 |
| Package | 251-pin C-CSP (11×11mm,0.65mm pitch) | 128-pin LQFP (18×18mm,0.5mm pitch) |

*1 : under development

*2 : Model with 512KB flash memory (MN103SF77N) is also planned.