

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

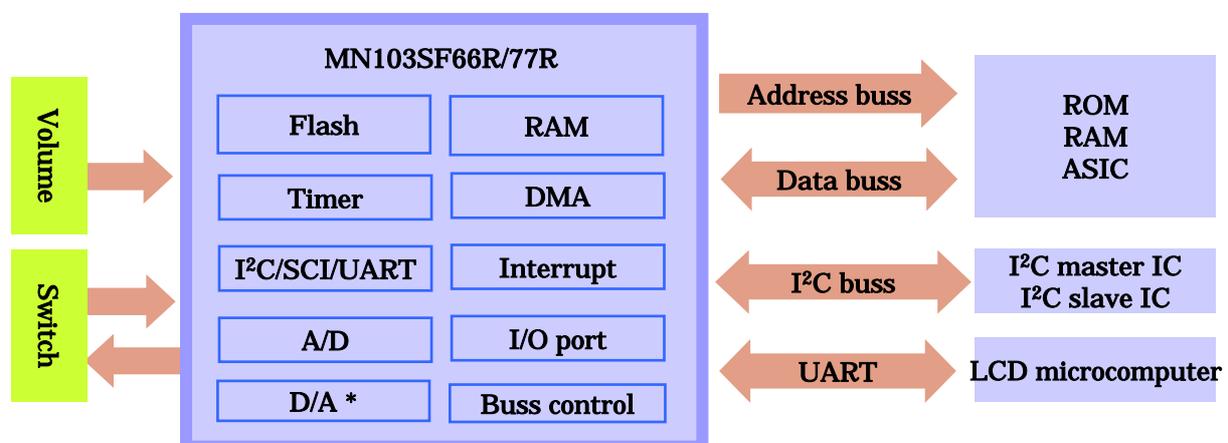
- Incorporates Matsushita proprietary AN32 32-bit CPU for high-speed processing at 60MHz internal frequency with 15MHz oscillation.
- Built-in 1MB flash memory is one of the largest available in its class.
- Minimal power consumption(2mW/MHz).
- Built-in multi-function timer, serial interface, and A/D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