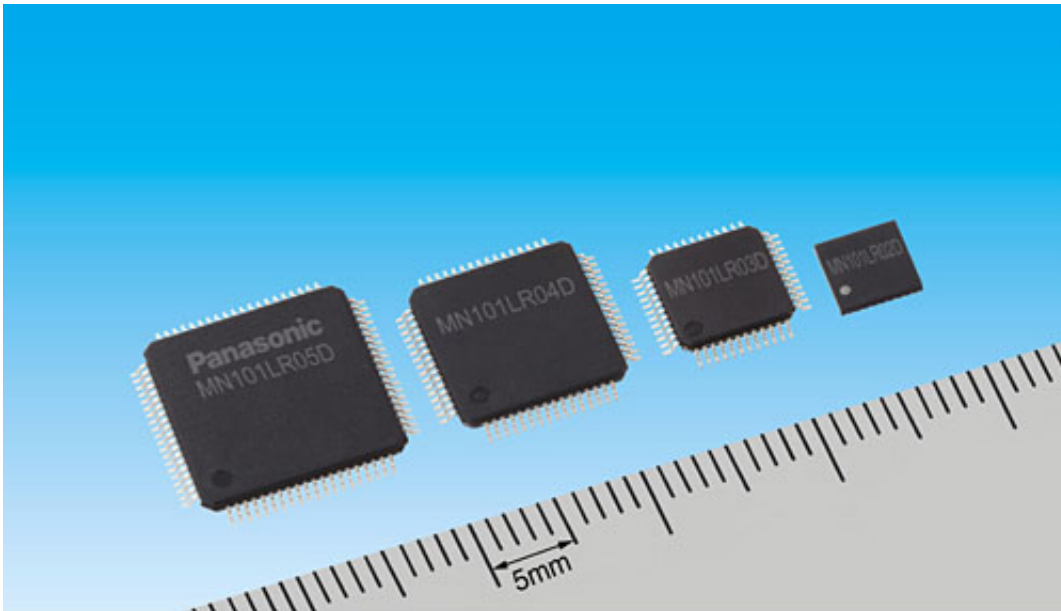


Panasonic starts first mass production of ReRAM mounted microcomputers

July 30 2013



ReRAM Mounted Low Power Consumption Microcomputer, MN101LR Series

Panasonic Corporation today announced that it will start the world's first mass-production of microcomputers with mounted ReRAM, a type of non-volatile memory, in August 2013. Through utilizing microcomputers with mounted ReRAM, it will be possible to achieve high-speed rewriting and longer operational times in battery-powered equipment,

such as portable devices and security devices etc., reducing the amount of maintenance required. The first of these mass-produced products is the low power consumption 8-bit microcomputer, MN101LR series.

In recent years, battery-driven equipment, such as portable healthcare products and security equipment for disaster and crime prevention, is becoming more common. There is a growing requirement to decrease the maintenance time for such equipment by reducing the frequency of battery replacements through extending the battery operation time. In addition, due to the high performance of the equipment, there is a need to read and write information in memory at high speed. In order to respond to such requirements, the company has introduced a microcomputer series with mounted ReRAM, featuring low power consumption and high-speed rewriting. The first part of the series comes in 16 models which feature a wide variety of peripheral functions, such as built-in LCD display control, high precision 12-bit AD converter, clock function, etc. Panasonic plans to expand the field of applications of ReRAM microcomputers to other applications, including non-contact IC cards such as electronic passports, wearable equipment connected to the cloud, and energy harvesting related products.

This development has the following features:

- The use of the newly developed 0.18 μm ReRAM in microcomputers and low power-consumption processes contributes to longer operational times for customers' products.
- The high-speed, low [power-consumption](#) by byte rewriting can easily reduce the amount of EEPROM [3] previously required as part of an external attachment, thereby reducing the system cost.
- The ReRAM to be produced this time around is based on the rewriting principle of a redox reaction of a metal oxide, in which high-speed rewriting and high reliability can be achieved, making it ideal for industrial applications.

The product will be suitable for applications in portable healthcare products, such as blood-pressure meters and physical activity meters, security equipment, such as fire alarms, eco-management sensing [equipment](#), and non-contact IC cards, such as electronic passports, etc.

Provided by Panasonic Corporation

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