

Hitachi Releases Industry's Smallest 128-Mbit and 256-Mbit CSP Version Flash Memories

— For embedding in products such as third-generation mobile phones, achieving a mounting area less than half that of Hitachi TSOP packages, and offering a time-saving development environment —

Tokyo, July 9, 2001— Hitachi, Ltd. (TSE: 6501) today announced two AND-type flash memories employing a small CSP package, the 128-Mbit HN29W12811BP-60 and 256-Mbit HN29V25611ABP-50, for embedding in portable products such as third-generation(3G) mobile phones, PDAs, and digital cameras. Sample shipments will begin in July 2001 for the 128-Mbit model and in August 2001 for the 256-Mbit model in Japan.

These two new products feature a mounting area approximately 43% that of Hitachi TSOP products, and are provided with a development reference kit to simplify embedded system design. These features will make it possible to reduce the size of systems incorporating large-capacity flash memory, and also achieve shorter development times.

[Background]

With the increasing functionality of mobile phones and the growing volumes of information they are required to handle, including e-mail and WWW contents, the capacity of their built-in memory also continues to expand. 3G mobile phones using W-CDMA, cdma2000, or a similar system, in particular, can be expected to require at least 128-Mbit flash memory capacity for data storage.

Following on from Hitachi's currently available 128-Mbit and 256-Mbit AND-type flash memories in TSOP packages, the company has now developed the industry's smallest 128-Mbit and 256-Mbit flash memories employing a CSP package for embedded systems such as mobile phones, PDAs, and digital cameras that require a compact, lightweight design.

[About these Products]

The 256-Mbit HN29V25611ABP-50 AND-type flash memory achieves a small chip size through the use of a 0.18 μm process, and is housed in an 11.26 mm \times 9.22 mm, 72-pin CSP that requires only approximately 43% of the mounting area of Hitachi's flash memory TSOP packages. In addition, the power supply voltage of 2.7 V to 3.6 V offers low system power consumption.

The 128-Mbit HN29W12811BP-60 AND-type flash memory employs a 0.25 μm process, operates on a power supply voltage of 3.0 V to 3.6 V, and uses the same 72-pin CSP package as the 256-Mbit product.

[About the Development Environment]

“An AND flash memory development reference kit” is available to simplify the development of systems incorporating these two flash memories. Since simulation can be carried out on a PC, the system performance can be evaluated during the design stage.

In addition, functions such as AND-type flash memory operation management, previously performed by hardware by connecting a dedicated controller, are now managed by software for purposes of embedding in a small end-product. The software is provided as C-language source code with a wide range of microcomputers.

< Typical Applications >

- W-CDMA, cdma2000, and similar third-generation mobile phones
- Handheld PCs, palm-size PCs, PDAs, personal organizers, and similar portable information devices
- Smart phones, pagers, and similar portable communication devices
- Solid-state recording/playback devices such as MP3 players and IC recorders
- Digital video cameras and digital still cameras

< Prices in Japan > (For Reference)

Product Code	Capacity	Sample Unit Price (Yen)
HN29W12811BP-60	128-Mbits	1,800
HN29V25611ABP-50	256-Mbits	3,600

< Specifications >

Item		128-Mbit HN29W12811BP-60	256-Mbit HN29V25611ABP-50
Memory configuration		16 Mwords × 8 bits	32 Mwords × 8 bits
Power supply voltage		3.0 V to 3.6 V	2.7 V to 3.6 V
Reading	First access	50μs	
	Serial access	60ns	50ns
Writing	Unit	2,048 bytes	
	Time	2.5ms	1ms
Erasing	Unit	2,048 bytes	
	Time	1ms (typ.)	
Package		72-pin CSP	
Package dimensions		11.26 mm(typ.) × 9.22 mm(typ.) × 1.2 mm(max.)	