Casio's Research and Development Policy

Under a corporate creed of "Creativity and Contribution," Casio is committed to research and development, aiming to contribute to society by developing original products.

Our R&D structure consists of two systems: basic research and elemental technology development, which focuses on new businesses and incorporates a medium-to-long-term perspective, and development aimed at product commercialization, which relates directly to existing businesses.

Through alliances with research institutes affiliated with central and prefectural governments and industry-government-academic bodies such as universities, we are actively pursuing collaborative projects in fields where medium-to-long term growth is anticipated, as well as in areas that are likely to produce innovations in critical technologies that can be translated into our core technologies.

Prioritized Technological Fields

- LSI technology
- High-density mounting technology
- Electronic component technology
- Telecommunications and digital broadcasting technology
- Information network/system technology
- Software and IP (algorithm) technology
- Environmental technology

W-CSP — semiconductor packages best suited for high-frequency wireless connection

"Radio" functions including wireless LAN and Bluetooth® are increasingly becoming standard features of such common electronic equipment as PCs, cell phones and portable game consoles. The semiconductors that enable these wireless connections need to become ever smaller and more functional. Given this trend, W-CSP (Wafer-Level Chip Size Package), an original semiconductor packaging technology developed by our subsidiary Casio Micronics Co., Ltd., is earning a growing reputation in the market.

W-CSP is a technology for processing LSIs in the state of wafers and completing them as packages. Previously, wires were used for external LSI connections. In W-CSP, posts for rewiring are formed on LSIs for connecting ball-shaped electrodes. W-CSP offers excellent reception as it uses no wire that is subject to strong noise influence. High-function LSIs, including those using 300-millimeter wafers, have recently become more widespread. However, they are vulnerable to physical impact because of the special materials they use. Our W-CSP offers a high level of impact-resistance thanks to a solid structure that absorbs impacts with posts and an encapsulated resin layer.

We are determined to refine this W-CSP technology and encourage its use as a global standard for next-generation semiconductor packages.

Structure of W-CSP