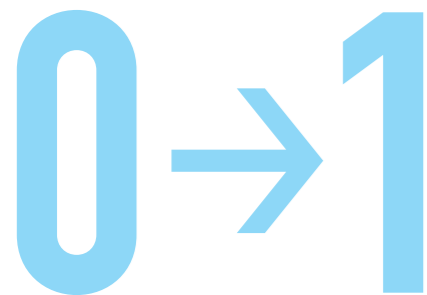


# Product Development Capability for Creating Value

Developing products with new value helps to create new cultural trends. Casio's product development involves creating something from nothing—going from “0” to “1”.



## The Unique “Beautility” of Creating Something from Nothing

Casio's product development process emphasizes innovative planning. The only way to create new value that customers have never imagined is to think outside the box. The EXILIM EX-TR100, for example, features a bold design that completely transforms the conventional digital camera. With a rotating LCD and frame configuration, the EX-TR100 offers a totally new way to use a digital camera, maximizing the enjoyment of easy photo taking. This product design is distinctively “Casio,” integrating beautiful design and highly utilitarian function.



\* Screen displaying HDR-ART effect

## Design Creates New Uses

The EX-TR100 enables photography from angles that used to be impossible, based on various camera positioning possibilities such as hand held, self standing, and hanging on a wall. The standing position also makes it easy to capture movies. Of course, Casio's cutting-edge imaging engine ensures great picture quality.

Held like a camcorder

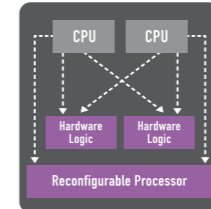
Standing on its own

Hanging on a wall



### 01 Digital technologies

The EXILIM Engine HS for digital cameras instantly performs complicated image processing via its reconfigurable processor, which enables operations to be resourced flexibly to the optimum hardware circuits, along with a multi-CPU design that performs decentralized processing at high speeds. This results in beautiful images with reduced noise, based on the automatic detection of photographic conditions such as backlighting or a night scene.



### 02 Energy saving

Casio has developed the industry's first all-band CMOS receiver LSI, which integrates the analog circuit that receives radio waves with the digital circuit that processes data. The LSI can be used for radio-controlled watches, enabling them to maintain operational stability with an ultra-low power level that is 1/1,000<sup>th</sup> of that required by ordinary communication devices such as cellular phones. The technology has already been applied in Casio watches featuring Multiband 6 technology that can receive radio signals worldwide.



## CASIO CORE-TECHNOLOGY

### The Five Core Technologies: Constantly Advancing

To develop products based on totally original ideas, Casio continually works to create advancements in five core technology areas.

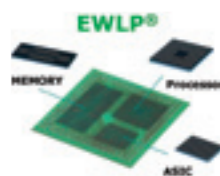
### 03 Durability

The glass face, buttons, and back case of every G-Shock watch are all designed not to make direct contact with the ground if dropped. Further, the heart of the watch is protected from shocks by a design that keeps the internal module suspended in a hollow structure. Important parts inside the module are also protected by buffer materials.



### 04 Compact size

WLP<sup>1</sup> is a high performance, compact, highly reliable, low-cost, material-conserving semiconductor packaging technology. Applications of it are rapidly expanding, particularly for smartphones. Casio has also developed a high-density packaging technology, EWLP<sup>2</sup> in which the WLP itself is embedded in the motherboard.



\* 1.WLP: Wafer level package, an LSI package that enables rerouting of copper traces, formation of electrode terminals, and encapsulation of chips in epoxy resin, all on an intact wafer.  
\* 2.EWLP: Embedded wafer level package.

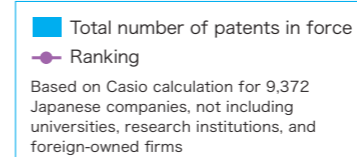
### 05 Ease of use

Casio's high-end calculator models have a special feature that ensures reliable key punching. The surfaces of the keys for 1 through 9 are concave, while the keys at the bottom such as “zero” have a gentle convex shape, making it easier to move the fingers across the keypad.

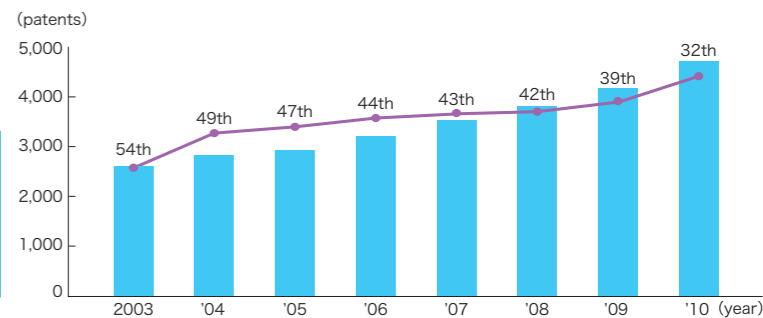


## Steady Acquisition of Intellectual Property

In order to strengthen its intellectual property, Casio puts great effort into patent applications and rights acquisition. The number of maintained patents in Japan has been rapidly expanding in recent years (excluding patents that expire at the end of each year).



Number of maintained patents in Japan and ranking (not including patents that expired at the end of each year)



### Taking on the Challenge of Next-Generation Technology

The new G-SHOCK equipped with Bluetooth Low Energy, a short-range wireless communication technology, is redefining what the wristwatch can do. By linking this G-SHOCK to a smartphone via Bluetooth, for example, the wearer can use the watch to operate his or her phone, and view the

### G-SHOCK Watch with Bluetooth LowEnergy Interfaces with Smartphones

subject lines of any emails received. In the future, the watch will also be able to link up with health devices, game machines, PCs and other everyday devices, thereby turning the wristwatch into a multi-function information device. This will greatly expand the convenience of watches.