Rapid and Efficient Manufacturing

Casio always keeps pace with the latest manufacturing technology, and has synchronized its entire supply chain for efficient operation.

Synchronizing all processes from upstream to downstream

Casio produces over 100 million product units per year, including peripheral devices. In order to quickly and efficiently deliver a large number of products such as several thousand types of watches, all the processes from design and procurement to manufacturing and logistics must be performed in a synchronized fashion. By ascertaining the latest market demand data, forecasting future changes, and conveying the necessary information to each process simultaneously, Casio prepares production plans that adapt to continually changing demand.

Desian

Sharing design data and using it for each process

Design affects all subsequent processes in ways that determine the amounts of materials used, the labor required in manufacturing, and the energy required for transportation. Accordingly, excess needs to be removed, the number of parts minimized, and inefficiency thoroughly eliminated in the design process. Design at Casio is all carried out using 3D computer-aided design, and the design data is shared internally over the company intranet. The data is then used in all sorts of downstream processes. For example, it is used to check the necessary components for manufacturing, to create manufacturing molds, and to prepare diagrams for user manuals.

Procure ment

Adjusting procurement quantities in accordance with market fluctuations

Production plans change on a daily basis in accordance with fluctuations in market demand. In order to avoid inventory shortages or surpluses, it is necessary to have detailed control, even of parts procurement. Casio is continually adjusting its procurement quantities based on the latest production plans through an online network connecting the headquarters and plants. In order to work together with suppliers on social and environmental issues. Casio has established its Procurement Policies, and promotes CSR activities throughout its supply chain with efforts such as supplier briefings and questionnaire surveys.

Produc tion

Global system of production in optimal locations

Casio carries out production in optimal locations through international specialization. Production is assigned to principal plants in Japan, China, and Thailand, as well as other locations, based on the site characteristics in each country, including technical capability, distance to markets, ease of materials procurement, and labor costs. In order to ensure stable provision of products, Casio ensures that two sites can produce any given product. In order to increase the competitiveness of Casio products and businesses, the company maintains its own production technology, and works to produce parts within the Casio Group.

Continually evolving production technology

Tough Movement : A gem of high-precision assembly

The OCEANUS line of solar-powered radio-controlled watches with full metal cases features Casio's Tough Movement technology. The movement itself is shock resistant, and the watch automatically resets even very slight variances to the correct time using standard time signals.



The movement is manufactured by Yamagata Casio Co., Ltd., which has the Casio Group's most advanced manufacturing technology. The manufacturing line is located in a special clean room that is protected by double entrances. Tiny gears as small as 2.2 millimeters in diameter produced by Casio are assembled into modules with an accuracy of one hundredth of a millimeter using an assembly device that has an image recognition



Logistics

Focusing on efficiency while reducing costs and CO₂ emissions

Casio has worked hard to find ways to deliver products as efficiently and quickly as possible. The company looks for optimal transport methods requiring the least cost and time, in response to sales plans and freight circumstances. Examples include the consolidation of logistics facilities and their relocation to ensure the shortest routes. The optimal box size is calculated based on the size of the shipping container. By packing boxes without wasting container space, Casio is working to reduce CO2 emissions along with logistics costs.

> processing function. The program that controls the manufacturing equipment brings together the technical capability of Casio Computer Co., Ltd. and the manufacturing expertise developed by Yamagata Casio. The accumulation of technologies for highprecision assembly is what makes the production of the Tough Movement possible.