# **HISTORY HIGHLIGHTS**

Since its founding in 1910, Hitachi has acted from our Corporate Credo of "contributing to society through the development of superior, original technology and products."

In the intervening years, the world and society have changed greatly, but we have never lost the Hitachi Founding Spirit of "Harmony," "Sincerity" and "Pioneering spirit."

• Founded by Namihei Odaira as an electrical repair shop Succeeded in manufacturing three 5-HP (3.6775-kW) electric motors as the company's first products • Completed a 5-kVA transformer for Hitachi Kozan 1915 • Completed 10,000-HP (7,355-kW) water turbine 1924 • Completed the first large-scale DC electric locomotive to be manufactured in Japan 1931 • Completed 10,000-A hydraulic electrolytic cell 1932 • Completed Hitachi's first electric refrigerator 1943 • Completed 85,000-kW Francis water turbine and 70,000-kVA alternating current generator • Completed 21,000-kW two-stage pump-turbine 1952 1954 • Completed the first large-scale cold strip mill to be produced in Japan 1955 • Completed 100,000-kW Francis water turbine and 93,000-kVA alternating current generator 1958 • Electron microscope awarded the grand prix at the World Exposition in Brussels 1959 • Completed electronic computers based on transistors • Hitachi America, Ltd. established 1961 • Completed experimental nuclear reactor



- Completed the first cars for the Shinkansen (bullet train)
  - Manufactured monorail running between Haneda Airport and Hamamatsu-cho, Tokyo
- 1968 • Developed hybrid LSI
  - Developed 300-m/min elevators for high-rise
- 1969 • Completed on-line banking system • Developed and mass-produced all-transistor color televisions
- 1970 • Developed computer-aided traffic control system for the

Shinkansen (bullet train)



- 1973 • Developed new-type image pickup tube
- 1974 • Commercial operation began at Japan's first 460,000-kW nuclear power station
  - Released the first series of general-purpose large-scale computers



- 1974
- 1975 • Developed Hitachi High Crown Control Mill
- 1978 • Completed world's first field emission electron microscope with record-high resolution
  - Experimental color camera with solid-state miniature image device developed
- 1982 • Hitachi Europe Ltd. established
  - Succeeded in world's first micro-level observation of magnetic field by the use of electron beam holography
  - Listed on New York Stock Exchange
  - Started mass production of 256-kbit DRAMs

1984

### 1985

- Completed the "JT-60" large-scale Tokamak device for break-even plasma experiments
- Established the Hitachi Foundation to promote cultural, educational and scientific exchanges between Japan and the U.S.

#### 1988

• Hitachi Asia Pte. Ltd. established

### 1989

- Developed world's fastest superconductive computer
- Developed superconductive MR imaging equipment
- Established two R&D centers in the U.S. and two laboratories in Europe

### 1990

 Released very large-scale computer with the world's fastest processing speed at that time

### 1991

- Developed inverter-controlled electric locomotive with the world's largest control capacity
- Developed highly sensitive image pickup tubes



### 1993

- Developed Shinkansen (bullet train) with new maximum service speed of 270 km/h
- Developed capillary array DNA sequencer

### 1994

- Hitachi (China), Ltd. established
- Developed the original 32-bit RISC processor SuperH family

### 1995

- Developed Super TFT LCD module featuring ultra-wide viewing angles
- Developed 10-Gbit/s fiberoptic transmission equipment



1995

### 1998

- Developed 320-Gbit/s optical data transmission system
- Developed the experimental 128-Mbit single-electron memory



1998

### 1999

- Established dependable autonomous hard real-time management technology
- 2000
- Developed 52.5-Gbit/in<sup>2</sup> perpendicular magnetic recording method

### 2001

- Developed Notary and Certificate Authority systems for e-government
- Developed mobile web-gateway system
- Developed application processor for mobile phones

#### 2002

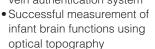
- Developed world's first silent water-cooling notebook PC
- Developed world's smallest0.3-mm square contactless IC chip
- Developed compact DNA analysis system genetic for SNP typing



2002

### 2003

 Developed and commercialized compact, highly accurate, high-speed finger vein authentication system





2003

• Dr. Hideaki Koizumi, a Hitachi Fellow, presented a lecture at the 400th Anniversary of the Foundation of the Pontifical Academy of Sciences, Vatican City

#### 2004

- Developed world's smallest sensor-net terminal with a battery life of over one year
- Developed high-temperature lead-free solder paste

## 2005

- Explosives Trace Detection System received U.S. TSA certification
- Exhibited two-wheel mobile robot "EMIEW" capable of direct dialogue at the 2005 World Exposition Aichi, Japan
- Established Hitachi (China)
  Research & Development
  Corporation



2005

#### 2006

- Confirmation of electro-luminescence phenomena on injection of electrical current in ultra-thin silicon film
- Basic experiment on the application of Optical Topography as a brain-machine interface
- Mass production of 2.5-inch HDD using perpendicular magnetic recording technology

#### 2007

- Prototype of world's smallest noncontact RFID powder IC chip (dimensions 0.05 mm × 0.05 mm)
- Prototype of the 2-Mbit non-volatile SPRAM chip using magnetization reversal by spin injection
- Developed EMIEW 2, a small and lightweight interactive robot

### 2008

- Developed lithium-ion battery system technology for use in high-speed diesel hybrid trains
- Developed technology for small but highly efficient electric motors that do not use rare metals