



Fukuoka Kitakyushu Iizuka

To be a World-Class R&D Hub of Advanced System LSI

Cluster Vision

Based on market needs and potential in the region, the Fukuoka region (Fukuoka, Kitakyushu, Iizuka) actively promotes research and development of advanced system LSI in major strategic fields like fundamental technology for system LSI (embedded software, information communications), application technology (automobile, biotechnology, robot), and system packaging technology (packaging, design, advanced materials). To be a world-class cluster as well as to be an R & D hub of leading-edge system LSI, we have been provided training programs for embedded software engineers so that they can possess adaptable fighting potential.

Project Overview

(1) The goal of the Fukuoka cluster

We aim to become a world-class hub of advanced system LSI design and development to serve as the core of the Silicon Sea Belt region, which has grown to become the world's largest area for semiconductor manufacturing and consumption. We will further promote and accelerate "Silicon Sea Belt Fukuoka Project (SSB Project)" by making the best of potential resources such as intelligent resources of universities or semiconductor-related companies and automotive-related companies in the Fukuoka, Kitakyushu, and Iizuka areas.

[Goals] Accumulate 300 system LSI development-related companies in the next 5 years

To achieve this goal, we plan to:

- For R & D, carry out 100 themes of industry-academia-government R & D projects each year, including application related-fields, to stimulate research and development of advanced system LSI throughout the regions.
- For human resources development, train 1000 engineers related to system LSI each year at the College of System LSI, Fukuoka and Hibikino Semiconductor Academy to promote accumulation.
- For global expansion, strengthen cooperation on a global level, conduct 20 joint R & D programs in 5 years with overseas organizations (companies, universities, research institutions, etc.), and mutually encourage foreign direct investment.

* Silicon Sea Belt Fukuoka Project (SSB Project)

The concept of the SSB project is to aim to become a hub of system LSI design and development in the Asian region ("the Silicon Sea Belt," the region linking South Korea, Kyushu (Japan), Shanghai, Taiwan, Hong Kong, Singapore, etc.) with intelligent resources and accumulation of industry in the system LSI design field.



Fukuoka area
Fukuoka Institute of System LSI Design Industry



Kitakyushu area
Kitakyushu Science and Research Park Collaboration Center



Iizuka area
Kyushu Institute of Technology Center for Microelectronic System

Promotion of Silicon Sea Belt Fukuoka Project To be a World-class Cluster

As a result of various approaches in the past, about 110 system LSI-related companies have accumulated in the Fukuoka area and Kitakyushu Science and Research Park. The number of these firms has increased over 5 times compared to the number at the beginning of the project.

To achieve the aforementioned goals in 5 years, we will focus on the following three items as a pillar of our strategy in the second stage.

- Promotion of strategic R & D
- Enhancement of human resources development
- Strengthening of global expansion.

Based on market needs and potential in the region, we actively promote R & D of advanced system LSI in 24 selected projects in major strategic fields such as the automobile and robot industry. In addition, the automobile-related industry in the Fukuoka area is growing rapidly, especially as indicated by automotive electronics. We are offering lectures to train engineers in embedded software at the Fukuoka Institute of System LSI and collaborating with the Car Electronics Center of Kitakyushu. To strengthen our international competitiveness in the region, we have established a team to promote global expansion at Fukuoka IST Foundation to work within the institute or companies throughout domestic and international organizations.

Project Director Eisaku Ohtsuru



Eisaku Ohtsuru is a former manager of Texas Instruments Japan Limited, deputy manager of Sony Semiconductor Kyushu Corporation, and guest Professor at Kyushu University. He has extensive experience in areas like new enterprise creation and management of technology in the semiconductor field.

Cluster Headquarters

- President.....Wataru Aso (Governor, Fukuoka Prefecture)
- Project Director.....Eisaku Ohtsuru
- Chief Scientist.....Hiroto Yasuura (Professor and Director, System LSI Research Center, Kyushu University)
- Deputy Project Director...Tomotsugu Rikitake, Reiji Oda
- Deputy Chief Scientist.....Mitsuo Tateiba (Dean, Graduate School of Information Science and Electrical Engineering, Kyushu University)
- Toyoki Kunitake (Vice President, The University of Kitakyushu)
- Kazuhiro Tanaka (Dean, Kyushu Institute of Technology Faculty of Computer Science and System Engineering)
- Science and Technology Coordinator...Masato Tsuru, Toshihiko Ohta, Yoshikazu Mikuriya, Tatsunori Murai
- Human Resources Development Coordinator...Kazuyuki Hirakawa
- Leader of Expansion Program...Megumi Takata
- International Science and Technology Coordinator ...Akihiro Kawaguchi

Core Organization

Fukuoka Industry, Science & Technology Foundation

Participating Research Organizations (Bold: Core Research Organization)

- Industry...CATS CO., LTD, Toyota Motor Corporation, RAIDRIX Co., Ltd, Vitec System Engineering Inc., Denso Corporation, Mazda Motor Corporation, Nissan Motor Co., Ltd., Renesas Technology Corp., IBC Co., Ltd., Toshiba Semiconductor Company, Central Uni Co., Ltd., RoboPlus Hibikino Co., Ltd., Miyazaki Oki Electric Co., Ltd, WALTs Co., Ltd, Nakaya Microdevices Corporation, NEC Micro Systems, LTD., Jedat Innovation Inc., etc.
- Academia...**Kyushu University, Kyushu Institute of Technology, The University of Kitakyushu, Fukuoka University, Waseda University**
- Government...Fukuoka Industrial Technology Center, Kitakyushu Foundation for the Advancement of Industry, Science and Technology, Fukuoka Industry, Science & Technology Foundation

(2) Concept overview

To increase the concentration of system LSI-related companies and accelerate cluster formation, we focus on R&D and human resources development.

i) Promotion of strategic R & D

We actively promote research and development of advanced system LSI in major strategic fields like fundamental technology for system LSI (embedded software, information communications), application technology (automobile, biotechnology, robotics), and system LSI packaging technology (packaging, design, advanced materials)

ii) Development of human resources with world-class technology

We focus on nurturing engineers for embedded software, a key technology for system LSI, and on establishing new systems of human resources development.

(3) Overview of Expansion Program (Promotion of collaboration with international business partners)

Actively using networks such as the Semiconductor Industry Association in the SSB area, we are enhancing regional cooperation such as implementing international cooperative research and development activities at regional research institutions. To ensure our international leadership and to speed up the establishment of a world-class R&D hub of advanced system LSI in Fukuoka, we have established a team to promote global expansion. We invite researchers or organizations / companies from overseas, exchange information, and promote mutual direct investment.

