

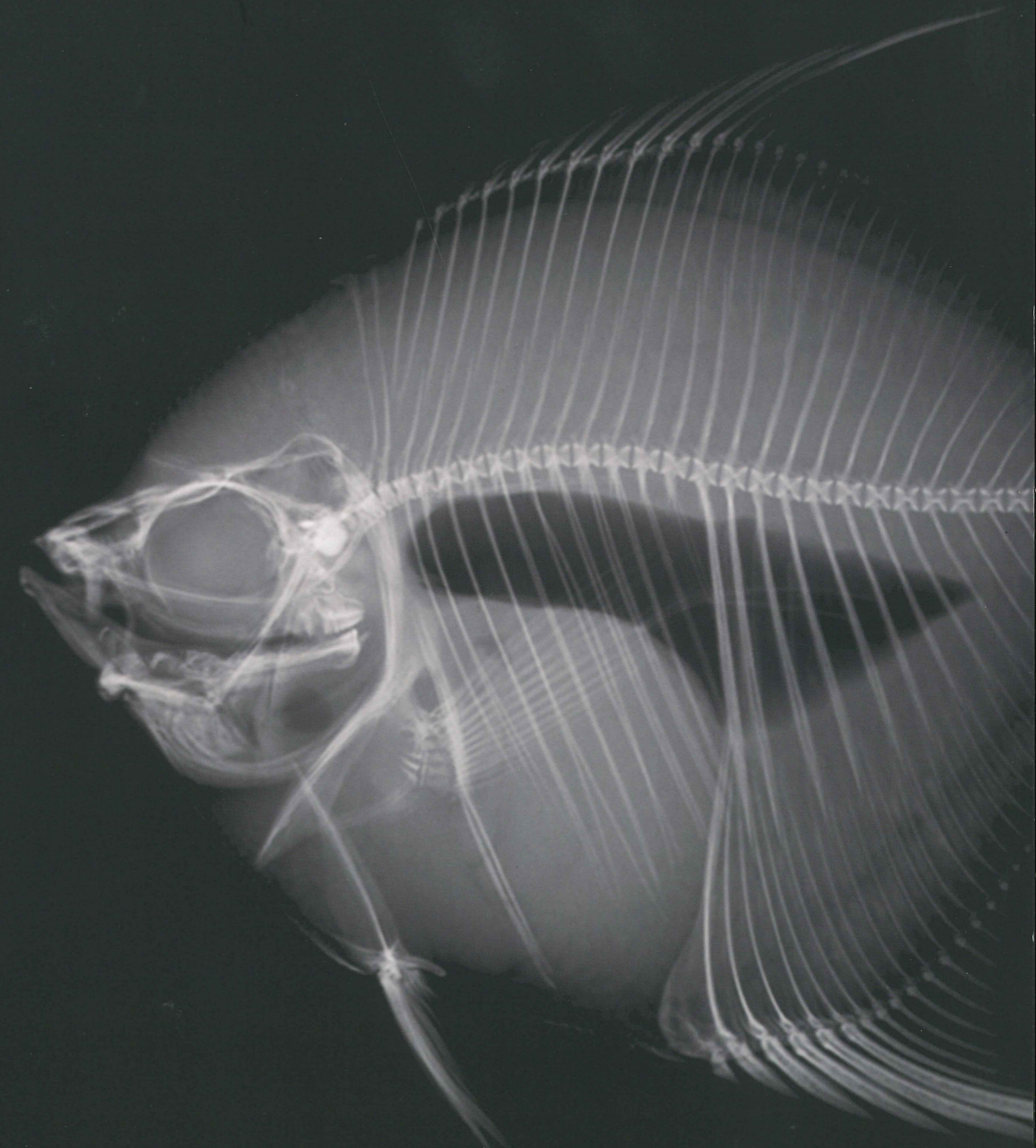
PIONEER OF SOFT X-RAY

SOFTEX

CORPORATE PROFILE



www.softex-kk.co.jp



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- Business Use

PIONEER OF SOFT X-RAY

SOFTEX

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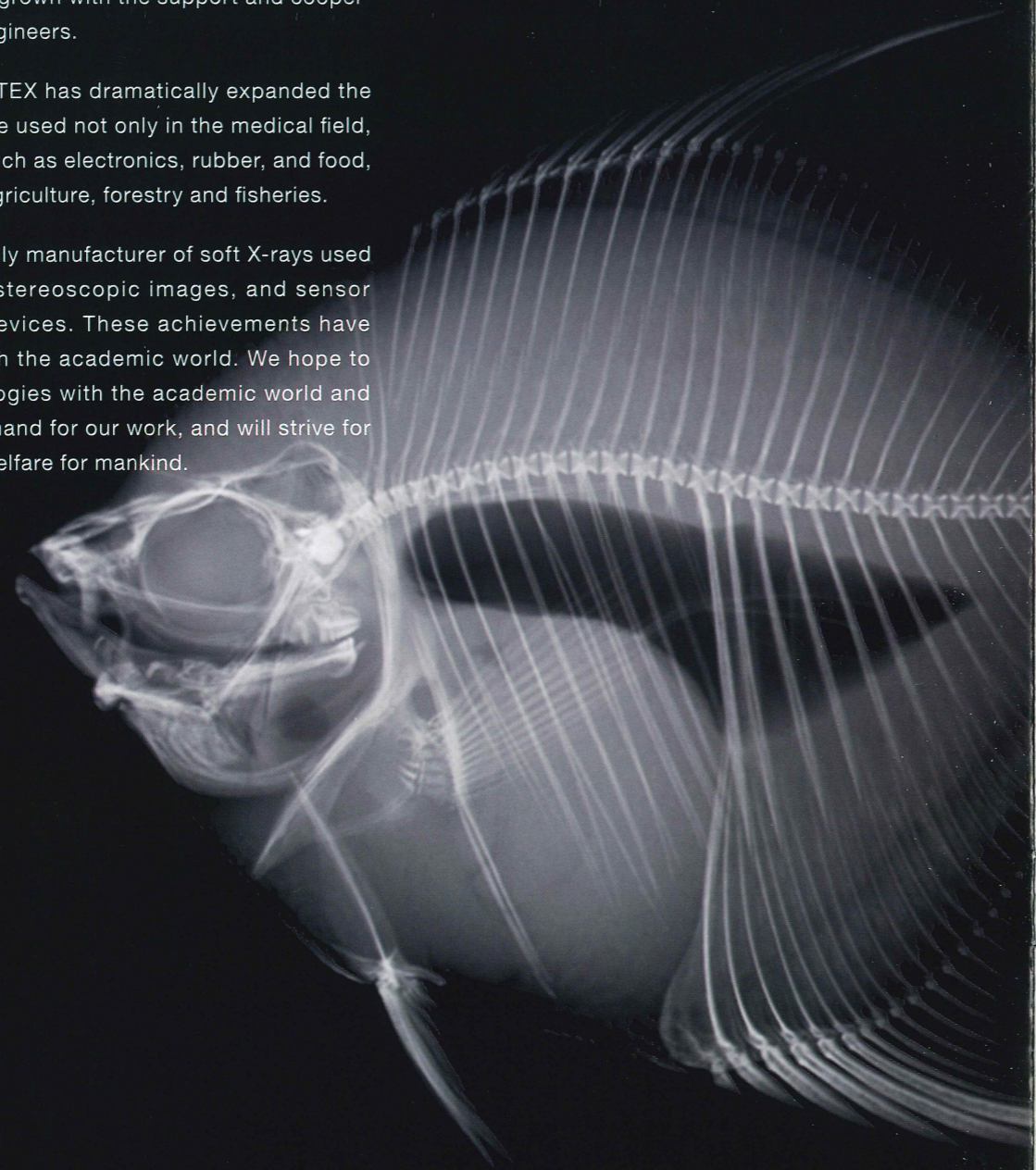
SOFTEX

SOFTEX is Creating a Future by Working with Soft X-rays from Japan.

We at SOFTEX have cultivated the importance of tradition creativity through repeated experiments and a collection of technologies. Our history spans 70 years from Koizumi X-ray Co., Ltd. through SOFTEX Corporation. We have grown with the support and cooperation of many scientists and engineers.

In the area of soft X-rays, SOFTEX has dramatically expanded the range of use of X-rays. They are used not only in the medical field, but also in various industries such as electronics, rubber, and food, as well as in testing areas for agriculture, forestry and fisheries.

We are known to be Japan's only manufacturer of soft X-rays used in developing microscopes, stereoscopic images, and sensor based automatic detection devices. These achievements have been made in conjunction with the academic world. We hope to continue to exchange technologies with the academic world and industries that provide the demand for our work, and will strive for social progress and effective welfare for mankind.



A Pioneer in Non-destructive Inspection Systems.

We are active in a wide range of fields as the center of non-destructive inspection systems beginning with many educational institutions involved in medicine, science, engineering, and such, as well as providing subject management for various industries such as agriculture, forestry, fisheries, construction, and for various laboratories, test sites, centers, and such of cultural properties, arts, and crafts.

The Relationship between X-ray Transmissions and Absorption, and Voltage and Current.

The "penetrating power" of X-rays for a certain subject depends primarily on the range of wavelengths (voltage), and secondarily on "absorption." This penetrating power resulting from influences by absorbance is called "permeability."

X-ray images are "shadow pictures." The difference between the X-ray transmission power and the absorbance of the object, or, in other words, the difference between the transmittance reaching the detector and film, creates an image of lights and shadows. In addition, "photographic density" refers to the degree of density created by exposure of the film.

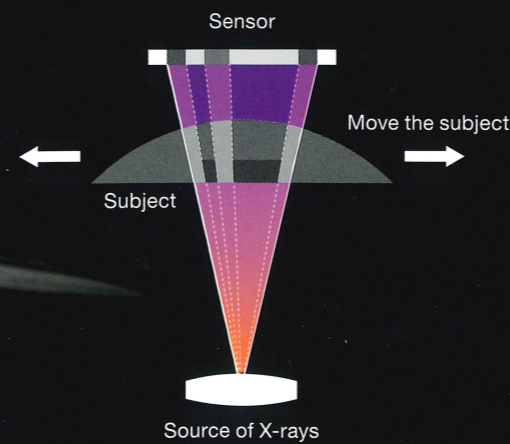
The role of electric current in X-ray irradiation is as the "carrier" of the penetrating power. Determining the photographic density of penetrating power (voltage)

that is suitable for a certain subject is "voltage strength (mA) × time." This is the "dosage (or more accurately, the cumulative dosage)."

The absorbance of X-rays increases as the density or thickness of the subject increases. In addition, longer wavelengths of soft X-rays show their transmittance according to slight differences in density and thickness, resulting in a detailed and distinct transmission with high-contrast.

The Formation of X-ray Images

An X-ray image is a shadow image formed by the difference between transmission and absorption that is proportional to the density and thickness of the subject. X-ray images, which are shadow images, are magnified and displayed the same as with the case of light.



Quality

Rich, gradated expressions allow for detailed images of organisms and structures such as less dense items, thin items, soft items, and small items using expressions that cannot be taken using ordinary X-rays.

Aftercare

SOFTEX has established a consistent support system from design to manufacturing, including aftercare.

Safety

All standard models except for medical and portable types employ X-ray-proof cabinets, ensuring a secure and the safe management system.

Showroom

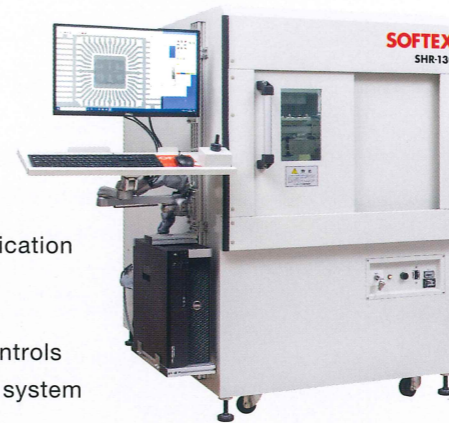
SOFTEX has a permanent showroom with full-time staff that can provide services from consultations to testing and technical guidance.

MICRO FOCUS



SFX Series

- This rich lineup will allow you to find the device that matches your samples
- Sharp images with high-contrast
- Mechanism for a wide range of zooming from low to high magnification
- Equipped with ZET-01 software for enhanced measurements and image processing
- All operations can be easily controlled by anyone through PC controls
- High-definition X-ray images are realized with a II camera digital system



SHR Series

- Equipped with closed micro focus
- Equipped with high speed flat panel detector
- Has functions for detector inclinations
- Smooth operations realized through PC controls
- Achieves high cost performance

MICRO FOCUS Soft X-ray Inspection Devices

These non-destructive inspection devices are equipped with micro focus, and are capable of performing internal inspections on a variety of industrial products. Mainly, they have the ability to clearly image the internal conditions of IC, and to detect defects in BGA and CSP, as well as defects in electronic devices, and voids and cracks in plastic and die-cast products, all in real time. They can also be customized.



WORK-LEADER Series

- Equipped with SOFTEX MICRO FOCUS
- Achieves high cost performance
- Equipped with mechanism that allows for zooming for a wide range for shooting from low to high magnification
- Sharp, clear images
- Equipped with ZET-01 software for enhanced measurements and image processing
- All operations can be easily controlled by anyone through PC controls
- High-definition X-ray images are realized with a II camera digital system

Soft X-ray Inspection Devices

These use SOFTEX tubes, allowing for film photography. Even large items can be X-rayed at one time. You can handle them with confidence as they are completely protected. They can also be customized.

VIX Series

- MILLI FOCUS is a multipurpose inspection system for a wide range of products
- Success in situations where you want to shoot a wide field of view without magnification
- Multi-device for filming
- Equipped with ZET-01 software for enhanced measurements and image processing



▲ VIX-150

Compact MICRO FOCUS Soft X-ray Inspection Devices

These light and compact desktop types are equipped with our own micro focus tubes. They provide easy analysis of defects in electronic devices. You can handle them with confidence as they are completely protected.



EMT Series

- Compact and high-performance EMT Series
- Type J: High resolution model with electron tube camera
- Type F: Desktop model with FPD
- Produces clear images
- Equipped with ZET-01 software for enhanced measurements and image processing
- All operations can be easily controlled by anyone through PC controls



▲ SX-104



▲ SX-103

X-ray Multilayer Circuit Board Inspection Device

This equipment is specialized for inspection of multilayer circuit boards. You can handle them with confidence as they are completely protected.

SX Series

- SX-103: Fixed magnification model with MILLI FOCUS
- SX-104: High resolution model with variable magnification using MICRO FOCUS
- Devices specialized for inspection of printed circuit boards
- Easy operations by simply inserting circuit board
- Easily measures deviations from drilling positions
- Clear images from low to high magnification with a mechanism for raising and lowering the camera

M Series

- This multi-functional device can perform both film and digital sensor shooting
- Widely used in universities, research, test sites, etc.
- Has a digital timer for film shooting
- M-150WE: Model capable of obtaining a large dosage of 22Gy/min

MILLI FOCUS

Overview

Name SOFTEX Co., Ltd
Headquarters 1-37-3 Kitazawa, Setagaya-ku, Tokyo 155-0031
 TEL. 03-3412-2661
Executives CEO: Kazuhiko KOIZUMI
 Director: Ryuta KOIZUMI
 Director: Akito TERUI
 Director: Nobuhiro KITTAKA
Established 1 February 1946
Capital ¥15,000,000 (October 1975)
Business Lines The manufacture, sale, and repair of various types of soft X-ray generators for industrial, research, medical and educational purposes, as well as special X-ray tubes. Sales of related accessories. Development and manufacture of special devices.
Business fields University medical departments / research laboratories / hospitals / electronic parts / automobile parts / rubber / test sites for food industries and agriculture, forestry, and marine products
Employees 32 persons (2019)

Business Department **Business Headquarters**
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 531 Shirane, Isehara-shi, Kanagawa Prefecture 259-1147
China Office
 Shanghai 光復西路 2077-72-101 (200062)
 TEL. 021-62609201

Affiliated Companies **SOFTEX IT Consultant**
 5-19-18 Higashi-Kashiwagaya, Ebina-shi Kanagawa Prefecture 243-0401
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 TEL. (82)-31-908-0046-7
 FAX. (82)-31-908-9876
SOFTEX TECHNOLOGY (THAILAND) LTD PARTNERSHIP
 4/1048 Moo 4 Serithai Rd. Bungkum, Bangkok 10240
 (66)-2-914,6836

History

- Feb. 1946** ● Koizumi X-ray Company established (Kitazawa, Setagaya-ku, Tokyo)
- Dec. 1947** ● Company reorganized as Koizumi X-ray Corporation
- 1952** ● Development of "A Model" compact soft X-ray device for educational purposes
- 1956** ● Development of "A-401 Model" soft X-ray device for dermatological purposes
- Mar. 1960** ● Established Japan SOFTEX and began sales of SOFTEX devices
- 1964** ● Development of "CMR Model" soft X-ray precision imaging device for basic medical research
 Development of "EMB Model" soft X-ray device for basic medical, agriculture, forestry, and marine products
- 1967** ● Development of X-ray TV devices equipped with "PbO Vidicon" soft X-ray imaging tubes
- Apr. 1968** ● SOFTEX Device Plant moved to Hiroo, Shibuya-ku, Tokyo
- Jun. 1969** ● Koizumi X-ray Corporation merges with Japan SOFTEX, and name is changed to SOFTEX Corporation
- Jul. 1971** ● Tube and device factory moves to Ebina-shi, Kanagawa Prefecture
- 1975** ● Development of "M Model" soft X-ray device for industrial use
 Development of "CW Model" inline type (I.O. system) X-ray TV inspection device
- May 1977** ● Headquarters moves to The Japan Society for the Advancement of Inventions in Sakuragaoka-cho, Shibuya-ku, Tokyo
- 1983** ● Development of "GX-30 Model" inline type (line sensor system) X-ray automatic inspection device
 Korea SOFTEX established in Seoul (Currently known as SOFTEX KOREA CO., LTD.)
 Development of "SX Model" soft X-ray TV inspection device for printed circuit boards
- Mar. 1987** ● Osaka office opens
- 1991** ● Development of "SFX Model" MICRO FOCUS X-ray TV inspection device
- Aug. 1992** ● Business headquarters moves to Ebina Plant
- 1993** ● Development of "VIP" X-ray imaging automatic measuring system
- Jan. 1994** ● Headquarters moves to Kitazawa, Setagaya-ku, Tokyo
- 2000** ● Development of "Line Checker" high velocity X-ray automatic line inspection device for ICs
- 2001** ● Development of "SFX-80FA Model" complete wire flow inspection device
- 2002** ● Development of "LSX Model" multipurpose soft X-ray inline automatic inspection device
 Development of "ZET-1" X-ray image processing and measurement system
- 2003** ● Development of our company's "901 Model" MICRO FOCUS
 Development of "Work-Leader 90 Model" equipped with SOFTEX MICRO FOCUS
- 2007** ● Development of "905 Model" SOFTEX MICRO FOCUS tubes with specifications for small focus and high pressure resistance
 Development of "Work-Leader100 Model"
- 2008** ● Development of "EMT-F Model" desktop SOFTEX MICRO FOCUS device equipped with flat panel
- Mar. 2009** ● Osaka office closes
 Bangkok, Thailand office opens
- 2012** ● Development of SOFTEX Add-on CT
- 2013** ● Development of "SHR Model" MICRO FOCUS device equipped with high-speed flat panel
- 2019** ● Isehara office opens in Isehara-shi, Kanagawa Prefecture

(As of December 2019)

Customization

Of the more than 17,000 SOFTEX units, 60% are customized. We build devices from our abundant experience and knowledge. Beginning from image evaluations in laboratories, extending to selective X-rays and cameras, as well as determining specifications for device systems, we respond speedily, combining in-house sales, design, manufacturing, and aftercare.



Delivery Record

- Semiconductors, etc.**
 Renaissance Electronics / Rome / Fuji Electric / Toshiba / Seiko Epson / Mitsubishi Electric / Amkor Technology Japan / Sony / Fujitsu / Texas Instruments Japan, other
- Automobiles, car parts, etc.**
 Toyota / Nissan / Honda Technology / Nisshin / Yanagawa Seiki / Hitachi Automotive Systems / Bosch / Bridgestone / TOYO TIRE / Sumitomo Rubber / Stanley Electric / Koito Manufacturing / DENSO / AISIN AW / NGC Spark Plugs / Yazaki Corporation, other
- Electronics, electronic parts, etc.**
 Murata Manufacturing / Alps Alpine / Nippon Chemi-Con / Casio / Taiyo Yuden / Panasonic / Rubycon / Omron / Mitsumi Electric / TDK / Nichicon / JVC Kenwood / Meidensha Corporation / Fuji Xerox / Fuji Film / Sony Energy Device / Sumitomo Electric / Mitsubishi Electric / Kyocera / CMK Corporation (Japan) / Hitachi Chemicals / Toppan / Dai Nippon Printing / Ibiden, other
- Containers, moldings, etc.**
 Yoshino Industries / Toyo Seikan / Shiseido / Albion / Kao / Lion / Sun Star / Pola Chemicals, other
- Industrial machinery, etc.**
 Fujikura / Hitachi Metals / Tokyo Electric / Kyushu Electric / Mitsui Chemicals / Fanuc / OGC / Showa Electric / Furukawa Electric / Oki Electric Cables / Seiko Time Systems / Nippon Avionics / Horiba / NGK Insulators, other
- For medical, dental, pharmaceutical research**
 Tokyo University / Kyoto University / Osaka University / Tohoku University / Kyushu University / Keio University / Tokyo Medical and Dental University / Nippon Dental University / Tokyo Dental College / Taisho Pharmaceuticals / Takeda Pharmaceuticals / Otsuka Pharmaceuticals / Astellas Pharmaceuticals / Taiho Pharmaceuticals / Sanofi / Daiichi Sankyo / Kobayashi Pharmaceuticals, other
- Testing, investigations, etc.**
 National Institute of Technology and Evaluation / National Police Agency / National Printing Bureau / National Consumer Affairs Center of Japan / Consumer Product End-use Research Institute / Various prefectural industrial research institutes, other
- Marine products**
 Tokyo University / Tokyo University of Marine Science and Technology / National Fisheries University / Kindai University / Maruha Nichiro / Nissui / Mikimoto / National Research Institute of Fisheries Engineering / Various prefectural fisheries research and education agencies, other
- Museums, cultural assets, etc.**
 Tokyo National Museum / National Museum of Nature and Science / National Museum of Ethnology / National Museum of Western Art / Imperial Household Agency / Nara National Research Institute for Cultural Properties / Various prefectural cultural property centers, other
- Foreign deliveries**
 AMD / INTEL / PSI TECHNOLOGIES / AMKOR TECHNOLOGIES / CHIPPAC / KOREA CIRCUIT / SIGNETICS / CIRCUIT ELECTRONICS / KOREAN MICRO SYSTEMS / SIEMENS / CYNTEC / LG / STARMICRO / DAEWOO / LUCENT TECHNOLOGIES / SAMSUNG / FAIRCHILD SEMICONDUCTOR / TEXAS INSTRUMENTS / FOXCONN / HANA SEMICONDUCTOR / UNISEM / HYUNDAI ELECTRONICS / IBM / PHILIPS / ROHM INTEGRATED SYSTEMS (THAILAND) / ROHM ELECTRONICS PHILIPPINES, other (in no particular order)