

Fujitsu Components Group Environmental Report FY2018

The Fujitsu Components Group recognizes environmental management as one of the most important roles and contributes to build a sustainable society and participate in the global environmental conservation by striving to reduce harmful environmental impact generated by products or services offered throughout the business activities.

1. Greeting

The Fujitsu Components Group has been conducting activities that reduce the environmental impact since 1998. These activities are based on the Fujitsu Group companies' principle *"We shall keep the best corporate activities while improving our coexistence with the environment"*.

The Paris Agreement was adopted at the Conference of Parties (COP21) as a new international framework for greenhouse gas reduction in the post-2020 period, and it took effect in November 2016. It marks the beginning to move toward the creation of a carbon-free society. With global momentum for the environment rising, the Fujitsu Components Group is also taking various measures to play a role in environmental approaches.

Proactive development of Green Products is one of our major activities. It reduces our environmental impact in design/manufacturing stages. This activity provides our customers with environmentally friendly products as well as savings in terms of energy and resources.

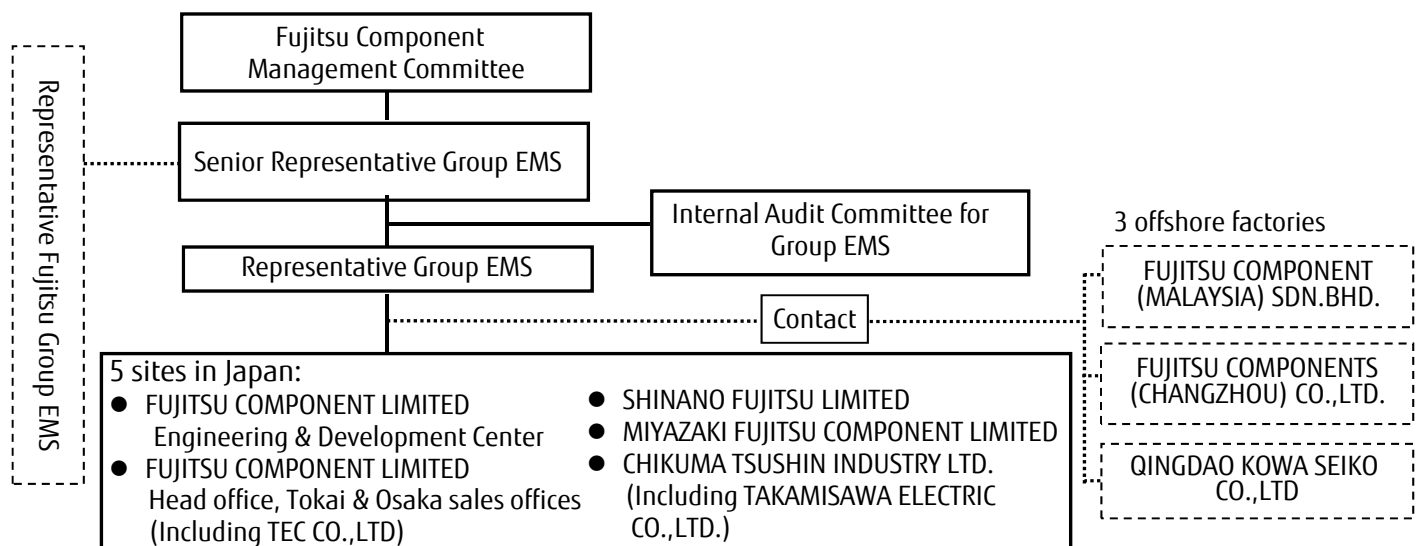
In the meantime, we have been also successfully developing Human Interface Technologies, which connect people and things.

Fujitsu Components Group strives to realize the human and environmental friendly society through our products.



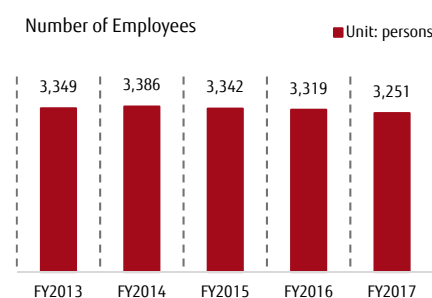
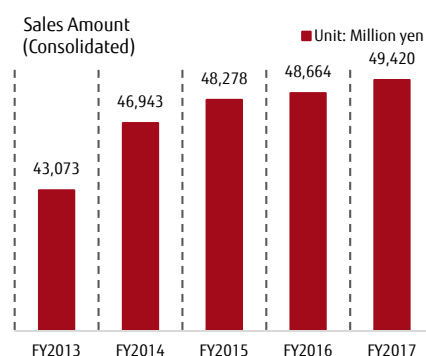
Hiroaki Kondo
President and
Representative Director

2. Organization for Environmental Activities



3. Group Profile

Head Office address	FUJITSU COMPONENT LIMITED Shinagawa Seaside Park Tower, 12-4, Higashi-shinagawa 4-chome, Shinagawa-ku, Tokyo 140-0002, Japan
President	Hiroaki Kondo
Founded	September 17, 2001
Main Business	Manufacturing and sales of switching devices (relays connectors, high voltage DC distribution devices, active optical cables) and human interface devices (touch panels, thermal printers, wireless modules, KVM switches)
Capital	6,764 million yen (As of March 31, 2018)
Sales	49,420 million yen (consolidated FY2017)
Financial Year End	March 31
Employees	3,251 (consolidated as of March 31, 2018)
Equity Market	Second Section of the Tokyo Stock Exchange, code 6719
Group Composition	The Group is composed of total 15 companies; 6 Japanese companies including 1 sales company, and 9 overseas companies including 6 sales companies



4. Environmental Policy & Environmental Protection Program

■ Fujitsu Components Group Environmental Policy

Philosophy

The FUJITSU COMPONENTS Group, member of the FUJITSU Group, recognizes the value and importance of protecting the global environment as one of the most important issues. Our environmental philosophy is:

“We shall keep the best corporate activities while improving our coexistence with the environment.”

As an enterprise that develops, designs, manufactures and sells electrical components, we promote environmental management to achieve a low carbon and affluent society in accordance with ISO14001.

Action Plans

- We continuously improve our environmental management system and promote the prevention of environmental pollution by affirming environmental aspects being led from our activities, products and services.
- We proactively offer products that contribute to both environmental and economical goals.
- We comply with various environmental laws which govern our activities, products and services and also other requirements we have committed to.
- We continue to ban of hazardous substances in our products as specified by Fujitsu Components Group. We do not use or include any hazardous substances in our products, nor do we discharge any hazardous substances into the environment.
- We will strive to improve the environment through sustainable materials use(*1), climate control and biodiversity conservation activities etc. with every employee working as a responsible cooperate citizen and spread such activities to the society.

*1: We proactively pursue environmental conscious design, reduction of waste and recycling to prolong the life of exhaustible materials.

Emphasis

We promote the following as the most important aspects of our environmental management policy in regards to our activities, products, and services:

1. Development and provision of eco-friendly products
2. Co-operation with society and contribution to social activities as a good corporate citizens
3. Reduction of greenhouse gas (GHG) emission
4. Improvement of energy efficiency
5. Promotion for reducing of CO₂ emission in partner companies
6. Control on waste emission

Supplements

1. This policy is documented and made public to our employees, our group members and other parties concerned
2. The Environmental Control Division is responsible for the policies mentioned above.

April 13, 2018 Fujitsu Components Group Environmental

5. The 7th Stage Group Environmental Protection Program (FY2016 to FY2018)

The 7th Stage of the Fujitsu Components Group Environmental Protection Program has been established. Detailed action plans up to FY2018 have been provided and actual activities are on their way.

Item	The 7th Stage Group Environmental Protection Program Goals	FY2017		FY2018
		Targets	Results	Targets
Social contribution activities	Improvement of environmental value throughout product lifecycle At least 15 new eco-friendly products ^(*1) have to be developed by FY2018. i. Product to lead in energy-efficiency ^(*2) ii. Product's resource efficiency is increased by 5% or more compared to those of FY2014 ^(*3)	Develop a minimum of 5 new eco-friendly products	Developed 6 new products	Develop 2 new products (Accumulation from FY2016 to 18: 16 products)
	Promotion of social contribution activities Each employee shall contribute to the society to affluent and sustainable society. i. Continuous cooperation with society. ii. Material support and other activities to resolve social/environmental issues such as biodiversity observation.	Implement 34 activities minimum	Implemented 36 activities	Implement 36 activities
Own business activities	Reduction of greenhouse gas (GHG) emissions We will control total emission amount of energy origin CO ₂ less than 115% (22,265t-CO ₂) ^(*4) compared to that of FY2013 (19,360t-CO ₂). (Purchased electricity CO ₂ conversion efficiency : 0.570t-CO ₂ /MWh)	Keep it below 22,379t-CO ₂ , 1.7% ^(*4) reduction against 22,750t-CO ₂ (118% of FY2013)	21,352t-CO ₂ (110% of FY2013)	Below 22,265t-CO ₂ (1.3% reduction against 22,560t-CO ₂ (117% of FY2013))
	Improvement of energy efficiency We will improve specific energy consumption unit ^(*5) in facilities by an average of 1% per year.	Minimum 3.8% improvement among 3 objective business sites	See table-1	Average of 1.0% per year improvement at 3 sites
	Promoting to reduce CO₂ emission in supply chain First-tier suppliers investigate all their second-tier suppliers by FY2018.	Extend it to 95% of suppliers	97%	Extend it to 100% of suppliers
	Control on waste emission We will reduce waste amount to less than 806t ^(*4) (129% of 626t, average of FY2012 to FY2014) by FY2018.	Reduce it to less than 733t, 117% against FY2012-2014 average	710t, 113% against FY2012-2014 average	Below 806t, 129% ^(*4) against FY2012-2014 average

*1: Program goal of new products was revised from 5 to 15 since previous goal was accomplished in FY2016.

*2: The products meet the criteria which is ranked in the top 25% in the market including leading products (world-first, industry-first, world-best, industry - best) in energy efficiency.

*3: Improvement of product's resources (smaller, lighter, thinner, reducing number of parts) or resource circulation (reducing waste amount, recycle capability).

*4: Target amount of greenhouse gas emission and waste emission were amended due to estimated production rise.

*5: Specific energy consumption unit means energy consumption amount per unit such as per sales amount, per production quantity, etc.

Table-1 Energy consumption per unit FY2017 results and FY2018 target

Site name	Calculation formula	Base figure (Base FY)	FY2017 results (Improved ratio against Base FY)	FY2018 target
FUJITSU COMPONENT Engineering & Development Center	$\frac{\text{Energy consumption (kl)}}{\text{sales amount (Million Yen)}}$	0.771 (FY2012)	0.4670 (39% against base figure)	Less than 0.4433 ^{*1}
SHINANO FUJITSU	$\frac{\text{Energy consumption (kl)}}{\text{sales amount (10 Million Yen)}}$	1.633 (FY2012)	1.391 (15% against base figure)	Less than 1.417 ^{*1}
MIYAZAKI FUJITSU COMPONENTS	$\frac{\text{Energy consumption (kl)}}{\text{production quantity (Kpcs)}}$	0.0158 (FY2012)	0.01409 (11% against base figure)	Less than 0.01396

*1: FY2018 Targets were amended based on 2018 production plan.

6. Environmental Activities

■ Development of Eco-friendly Products

We strive to develop and offer eco-friendly products which improve the environment and commercial aspects.

■ Highlight of New Developments

Low power wide area network modules (FWM7SLZ02)



Communication distance increases by 1.5 times compared with conventional products by adding a SAW filter, which suppresses radio interference from mobile devices and prevents deterioration of receiver sensitivities. It reduces gateways and repeaters by more than 5% in entire system.

1.5 times improvement in communication distance (*1)

4 ports KVM switches



45% reduction in weight(*1)

Battery operated control boards (FTP-62DDSL001-R)



79% reduction in size (*1)

17-inch short drawers



80% reduction in power consumption(*1)

Improvements	Products	Products developed	Reduction/Improvement
Resource efficiency	KVM	4 ports KVM switch	16% reduction in weight (*1)
	Thermal printer	Battery operated control board (FTP-62DDSL)	79% reduction in size (*1)
	Wireless module	Low power wide area network module (FWM7SLZ02)	1.5 times improvement in communication distance (*1)
Energy efficiency	KVM	17-inch short drawer	80% reduction in power consumption (*1)

(*1): Compared with our conventional products

Topics

Reduction of raw material usage by developing new flush surface touch panels

Conventional decorative touch panels needed decorative cover films on it. On the new touch panels, however, the decorative pattern is directly printed onto ITO film. It eliminated cover films and reduced resource usage.

Following technologies were required for development and mass production.

1. Direct printing technology on ITO film.
2. Technology to adhere the film flatly.
3. Establish new product line to achieve above technologies.

Elimination of cover films achieved total 7.31t of PET film saving in FY2017 in addition to produce thinner touch panels with lighter input force.



■ Global Warming Prevention Activities (Reduction of Energy Origin CO₂, Improvement of Energy Efficiency)

A working group comprising the members of 4 Japanese sites has been formed in order to suppress CO₂ emissions. Energy saving type machines were installed in FY2017. Each site has continued steady energy-saving activities. As the result, CO₂ emissions per production unit were reduced, although entire CO₂ emissions were increased because of increase of production amount.

■ Major Activities

Activities proceeded	Results (t-CO ₂)
Effective air nozzle control method was introduced in panel cleaning process. (Photo-1)	82
Minimizing air leakage not to generate excess air.	15
Thermal insulators were installed on the dies for molding.	24
Ducts for exhaust heat were installed on press machines. (Photo-2)	9
Application of anti-heat paint on roof	26

■ Transition of CO₂ emission

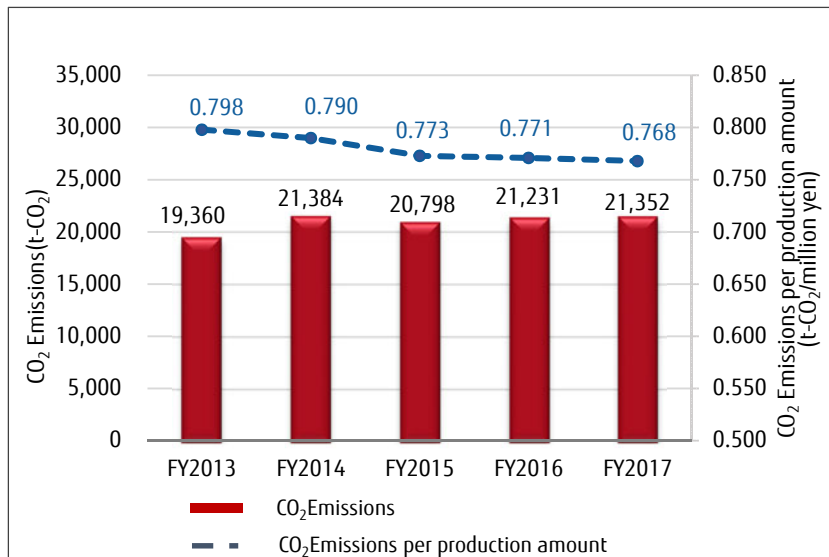
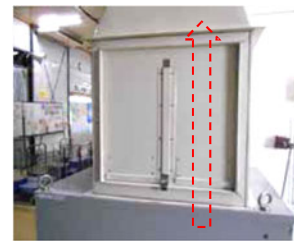


Photo-1: Saving air usage by using adequate air nozzle on touch panel cleaning process. (Engineering & development center)



Opened duct for Winter season



Closed duct for Summer season

Photo-2: Exhaust heat ducts on press machines for efficient air conditioning.
 Winter: Delivering warm air into room.
 Summer: Discharging hot air to outside (Chikuma Tsushin Industry)

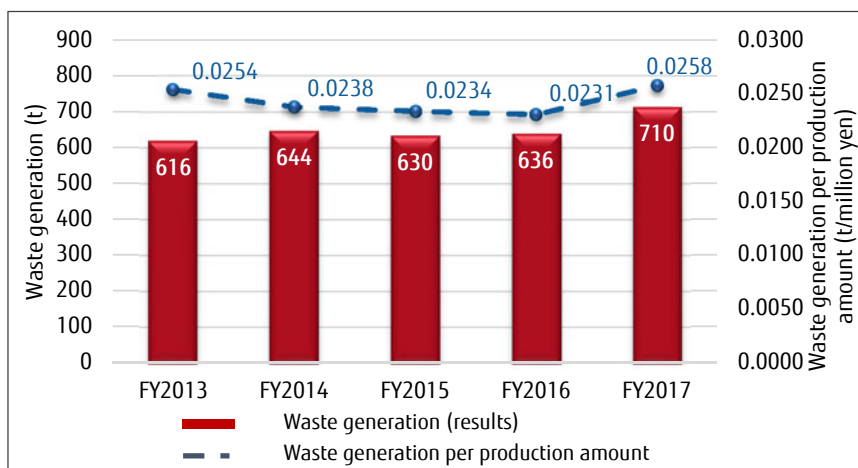
■ Industrial Waste Reduction Management

Every worker in the group recognizes the importance of the 3Rs (Reuse, Reduce and Recycle) and engages in waste separation. We have been working on reduction of environmental loads by minimizing the waste and converting them into the valuable resources.

However, the amount of waste increased this year because some plastics used to be recycled in the past had to be scrapped due to China's plastic trash ban.

To address this increase, we have started the study to segregate PET films and PVCs from other waste plastics to turn them to valuable plastics.

■ Transition of industrial waste reduction



7. Activities to Prevent Environmental Pollution

■ Status of Environmental Laws Compliance

We have complied with all environmental laws or regulations in FY2017.

Status of ground water contamination

Regarding the ground water contamination in which chlorinated organic solvent was found by an independent inspection done by Takamisawa in 1998, we have continuously cleanup the area by pumping aeration treatment and vacuum suction devices. We confirmed that there was no flow of contaminated water to the outside of facilities and no complaints from neighborhood or the competent administrative in FY2017.

FY2017 Measuring data						
TAKAMISAWA Shinshu plant	Laws	Items	Unit	Legal threshold (Ground water)	*Max. value at site	Max. value at observation well (located downstream of ground water)
	Measurement based on Soil Contamination Countermeasures Act	Tetrachloroethylene	mg/l	0.01	6.0	less than 0.005
		Trichloroethylene	mg/l	0.03	1.0	less than 0.005
		Cis-1,2- dichloroethylene	mg/l	0.04	1.7	less than 0.005

8. Chemical Substances Contained in Products

■ Management of Chemical Substances Contained in Products

As to additional regulation set on 4 phthalic esters and expiration of exemptions of European RoHS directives, we are studying the substitute materials and building screening analysis system by considering customer requests and validity of regulations.

The counter measures for those new regulations will be provided by December 2018 in line with Fujitsu Group policy. Communication schema for SVHC candidate substances etc. in REACH restrictions has been shifted from AIS^(*) to chemSHERPA^(**).

■ Green Procurement

All raw and auxiliary materials are procured in accordance with *Green procurement agreement* and *Environmental common procurement specification*, certificates confirming non-use of restricted materials specified by Fujitsu Limited and Fujitsu Components group and chemSHERPA data. We also ask all supply partners to build an environmental management system as well as prevention of global warming and biodiversity program to further reduction of the environmental impact throughout supply chain.

Actions to conflict minerals

Fujitsu Group procurement policy^(***) applies for treatments of conflict materials. In order to supply reliable information to the customers, the usage of conflict minerals under DRC conflict materials^(***) in our products are investigated in line with OECD Due Diligence Guidance and Conflict Materials Reporting Template (CMRT) developed by Responsible Minerals Initiative (RMI) .

*1 : AIS stands for Article Information Sheet, a standard format recommended by Joint Article Management Promotion-consortium(JAMP) to disclose/transmit information of chemical substances contained in a product.

*2: A scheme that facilitates sharing information on chemical substances in products conducted by Ministry of Economy, Trade and Industry. (Abbreviation of Chemical information Sharing and Exchange under Reporting Partnership in supply chain)

*3: Refer to : <http://www.fujitsu.com/jp/about/procurement/material/policy/>

*4: 4 minerals (tin, tantalum, tungsten and gold) mined in Democratic Republic of Congo and neighboring countries.

9. Status of Social Contribution Activities

Each site engages in social contributions, which not only our employees but also their family members join, for biodiversity conservation and engaging with local communities. Those activities are expanding year by year and are thoroughly acknowledged as wonderful activities among neighbors.

- Social contribution activities moving on with society
- Biodiversity conservation or activities solving/assisting environmental issues

■ Major Activities



Head office (Shinagawa, Tokyo)
Social contribution activities through collecting used stamps and bottle caps.



Shinano Fujitsu (Iiyama, Nagano)
Cleaning up activity through walk rally (right photo), extermination activities for deserted plants (left photo)



Engineering & Development Center (Suzaka, Nagano)
Taking part in Suzaka-city cleaning up activity

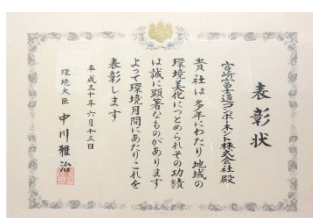


Miyazaki Fujitsu Component (Nichinan, Miyazaki)
Cleaning up of Kazetahama beach



Chikuma Tsushin, Takamisawa (Saku, Nagano)
Cleaning up activity around factory

■ Award



Miyazaki Fujitsu Components received the "Regional Environment beautification achievement Award" from the Minister of the Environment for their continuous activities including cleaning up events and walking-rally cleaning activities.

■ Contact

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