

At Edgex Consortium,  
many leading companies with cutting-edge technologies have gathered,  
for going beyond the border of FA and IT.  
We are working together for an IoT open innovation.

#### Board Members



OMRON Corporation



Trend Micro Incorporated



NEC Corporation



IBM Japan, Ltd.



Oracle Corporation Japan



Hitachi, Ltd.



Mitsubishi Electric Corporation

## Join our Consortium ?

### For Manufacturers

**We can work together to overcome challenges in manufacturing.**

By bringing up challenges, we can generate solutions together by using the wide range of knowledge held by member companies in the consortium. You can also find appropriate solution partners to solve issues by interaction with them in the consortium.

### For Vendors and System Integrators

**You can drive forward the open innovation of IoT.**

By obtaining Edgex's specifications and sharing the latest information with member companies in the consortium, you can accelerate the development of high value-added solutions. You can also introduce your developed products at the marketplace, promote through the consortium events, in order to expand your company's business.

## Membership Advantages

Membership Rank	Advantages
All	Increase user recognition on both the FA and IT sides by increasing your company's exposure through the consortium
	Obtain Edgex specifications and the latest information
	Gain the latest information and build a business ecosystem by networking with the FA/IT member companies
Regular	Obtain development kits for developing Edgex compatible products
	Contribute to your company's business by selling your S/W through the Marketplace (The marketplace is valid only in Japan)
	Widely promote your company's industrial PC as a recommended product
	Get priority participation at all types of events

## Membership Categories

Item	Regular	Registered	Advisor*4
Initial membership fee	JPY 100,000	—	—
Annual membership fee (starting from the following year)	JPY 200,000	—	—
Obtaining Edgex specifications	✓	✓	✓
Obtaining development kits (SDK, DDK, GDK)	✓*3	—	✓*3
Development, manufacturing, and sales of Edgex compatible products	✓	—	—
Technical Working Group Member eligibility*1	—	—	✓
Marketing Working Group Member eligibility	✓	—	—
Certification tests	✓*3	—	✓*3
Laboratory use*2	✓	—	✓
Use of Edgex Logo	✓	—	—
Registration of products on Marketplace*5	✓	—	—
Listing of advertisements on Website *2	✓*3	✓*3	✓*3
Displays at exhibitions*2	✓*3	✓*3	✓*3
Information on all public events	✓	✓	✓
Participation in events for members*2	✓	✓	✓
Listing of company name on the Consortium's website	✓	✓	✓

\*1. To participate in the Technical Working Group, advisor membership is required. (Approval from the Board members is required. Please send a separate inquiry to the Edgex Consortium Secretarial office). \*2. The order of priority for use or participation is as follows: Executive, Regular, Registered, Advisor. \*3. The fees specified by the Consortium must be paid separately. \*4. Limited to academic institutions, research institutions, and other related nonprofit organizations. \*5. Marketplace is valid only in Japan

## Inquiries

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## Website

<https://www.edgex.org/en/>



## E-mail magazin

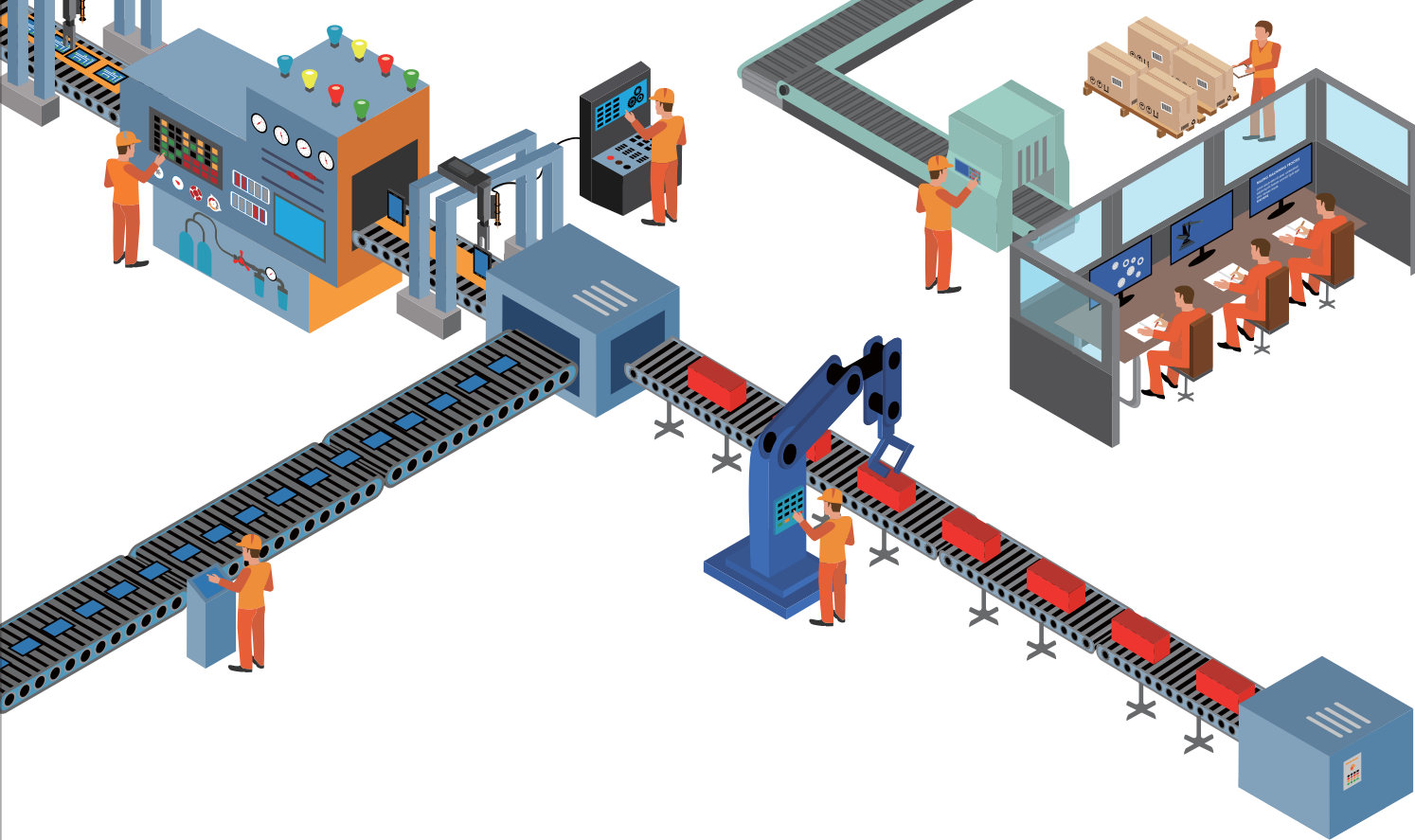
"EDGE CROSS communication"



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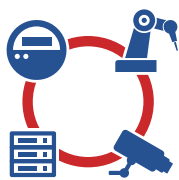
# EDGE CROSS CONSORTIUM



# The open IoT, for the freedom of manufacturing innovation

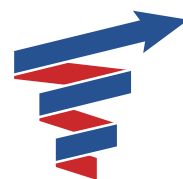
Edgecross Consortium is a nonprofit organization with gathering of the world's leading companies, going beyond the border of FA and IT. We support open manufacturing innovation that is not dependence on a specific vendor.

## The Value Provided by Edgecross's Solutions



### Any equipment can be connected

Link any equipment and machine, regardless of vendor or network. You can easily introduce IoT.



### Innovation can extend to everywhere

From visualizing each facility, to optimizing your supply chain, you can expand IoT flexibly by using an abundance of tools.



### Coordinating FA and IT is easy

Crossing the boundary of the production floor, communications, and IT systems, IoT standardization is achieved. FA and IT is easily coordinated.

Edgecross's solutions solve various challenges.

## Consolidated management of data from manufacturing equipment through different communication protocols.

### Challenge

A wide variety of old and new equipment exists in the factory, and their communication protocols vary too. It's difficult to manage the operation data centrally.

### Solution

Data collectors from Edgecross can absorb the differences in communication protocols. It becomes easy to manage data centrally and make the entire factory visible.



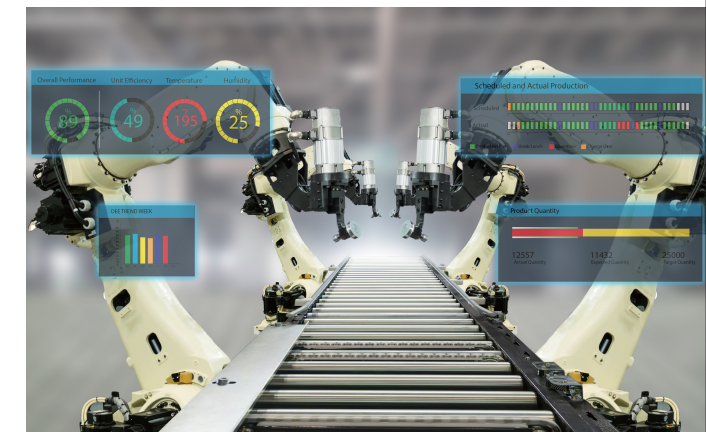
## Improve quality yield rates through real-time defect detection.

### Challenge

I want to detect the main cause of defect occurrences in the production process in real time, to keep the cost of unnecessary losses as small as possible.

### Solution

If you use Edgecross edge applications, you can detect equipment in defect condition through real-time diagnosis.



## Accumulate massive amounts of data in the cloud, for high-level analysis and predictive maintenance.

### Challenge

I want to carry out predictive maintenance for equipment by using a cloud analytics system. However, I'm having a trouble importing equipment data into the IT system.

### Solution

Edgecross's IT Gateway can make linking of an IT system and equipment data. Making high-level analysis of equipment data is possible.

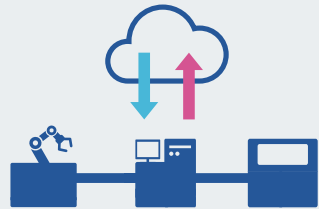


# Our manufacturing site expertise is consolidated into solutions.

In Edgexcross's solutions, our consortium's knowledge and expertise of the manufacturing site is consolidated. By combining our Edgexcross Basic Software with "Data Collector", "Edge Application" and "IT Gateway", in accordance with your needs, your desired solution can be realized.

## Coordination of the production floor and IT system

IT Gateway handles various IT protocols. You can realize seamless data coordination between various IT systems, including analytical systems and/or Manufacturing Execution Systems (MES) in the cloud and/or on-premise server, to optimize the supply chain and engineering chain.



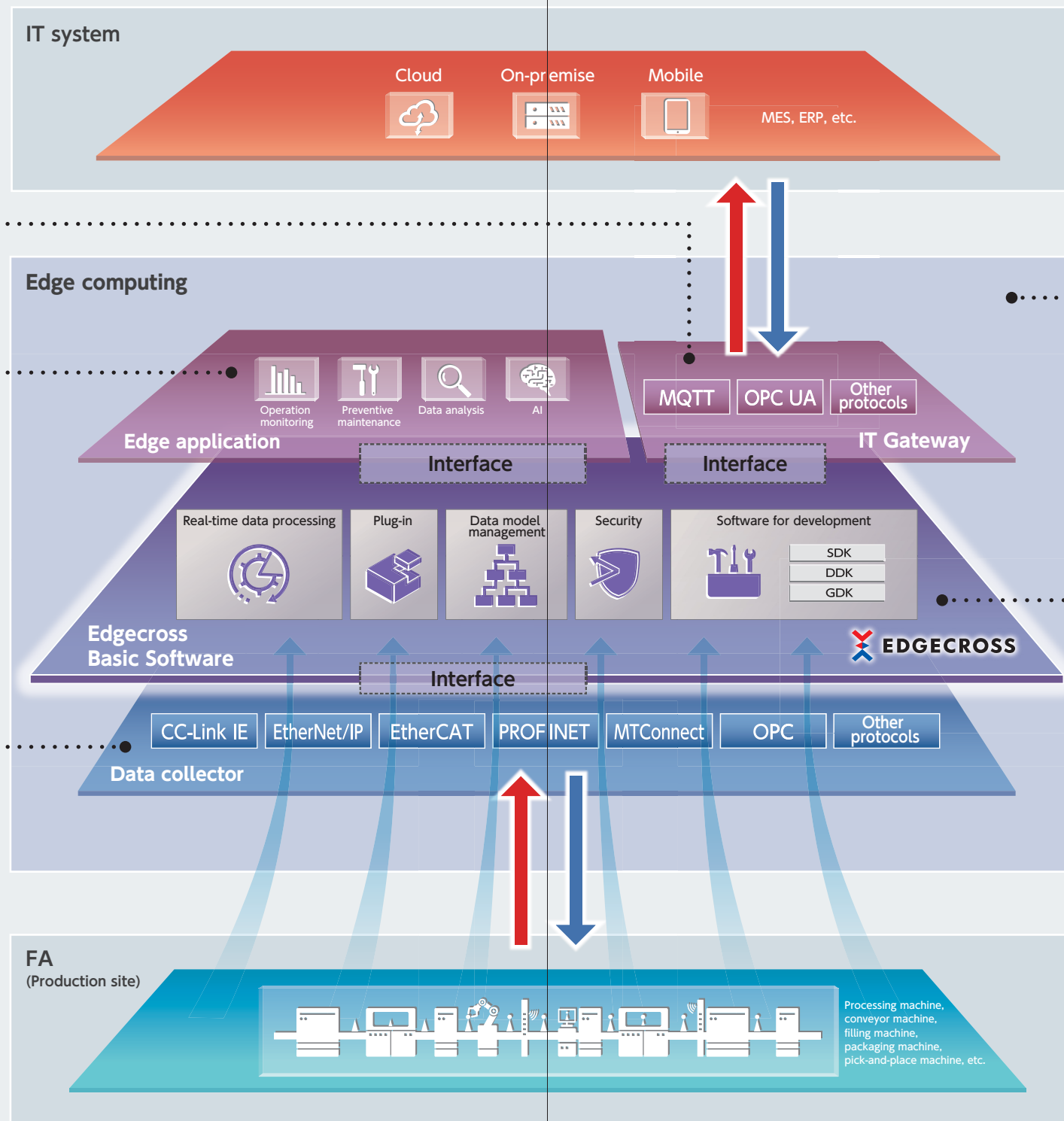
## Providing diverse solutions

A wide variety of edge applications that handle operation monitoring, preventive maintenance, and so on is available. By choosing appropriate applications based on your needs, you can find a solution within the edge computing layer.



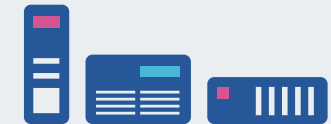
## Collect data from any equipment

By choosing appropriate data collectors based on your production site network, you can absorb network differences. Regardless of old or new, or manufacturer of equipment, you can easily collect and use data from various devices, equipment, lines, and cells.



## Abundance of operating environment

Edgexcross doesn't rely on a specific hardware, and operates on various industrial PCs. You can use the industrial PC that you are already using.



## Abundance of functions for utilizing data

Edgexcross Basic Software has an abundance of functions that easily utilize data, from data collection to data feedback. By combination with Edge applications and IT systems, you can realize various solutions.

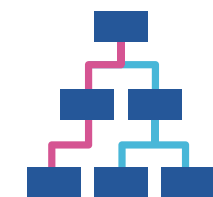
### Real time data processing function

Produces time-series data in real time collected from production site and makes real-time analysis and diagnosis.



### Data model management function

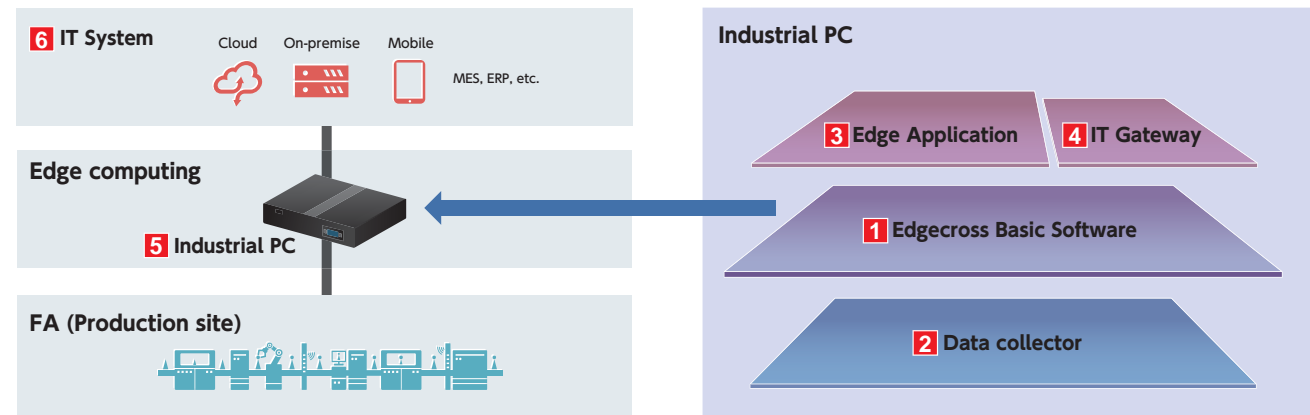
Manages production site data in hierarchy and abstraction manner for easy data utilization.





# What you need for installing Edgexross.

You do not need special hardware for installing Edgexross. You can build up solutions by installing "Basic Software", "Data collector", and if necessary, "Edge application" and "IT Gateway" to the industrial PC you currently use.



## Items required for customers

	Item	Classification	Provider	Requirement	Comments
1	Basic Software	Software	Edgexross Consortium	○	
2	Data Collector	Software	Consortium Member	○	<ul style="list-style-type: none"> <li>When collecting data from multiple networks, multiple data collectors must be arranged</li> <li>Certified by the Edgexross Consortium</li> </ul>
3	Edge Application	Software	Consortium Member	(Optional)	<ul style="list-style-type: none"> <li>Certified by the Edgexross Consortium</li> </ul>
4	IT Gateway	Software	Consortium Member	(Optional)	<ul style="list-style-type: none"> <li>Certified by the Edgexross Consortium</li> </ul>
5	PC	Hardware	Consortium Member Other Company	○	<ul style="list-style-type: none"> <li>Mainly industrial PCs</li> <li>Recommendations from the Edgexross Consortium</li> </ul>
6	IT System	Software	Consortium Member Other Company	(Optional)	<ul style="list-style-type: none"> <li>Certified by the Edgexross Consortium</li> </ul>

## Operating Environment for Edgexross Basic Software

Item	Specifications (Recommended)*	Specifications (Minimum)*
OS	Windows®10(Pro, Enterprise, IoT Enterprise) Windows Server®2019(Datacenter, Standard, Essentials) Windows Server®2016(Datacenter, Standard, Essentials)	
CPU	Intel® Core i3 and above	Intel® ATOM E3826 1.46GHz and above
Memory	8GB and above	4GB and above
Storage	64GB and above	4GB and above
External Interface	Ethernet Board	

\*The required hardware specifications may change based on the customer's usage environment and Edgexross compatible software being used.

## Outline of Pricing and Form of Sales for Edgexross Basic Software

Item	Model Name	Price (Tax Excluded)	For purchase	Form of Licensing
Edgexross Basic Software Windows Edition (1-License Edition)	ECP-BS1-W	JPY 98,000	Within Japan : Please purchase from Edgexross Marketplace	Installation Licensing Agreement (One license can be used for one device or one partition)
Edgexross Basic Software Windows Edition (5-License Edition)	ECP-BS1-W-5	JPY 240,000	Outside Japan : Please contact to Edgexross consortium secretarial office	
Edgexross Basic Software Windows Edition (10-License Edition)	ECP-BS1-W-10	JPY 450,000		

# Use Cases

Various companies are already working on manufacturing innovation with Edgexross solutions. The open IoT has conducted in a variety of results, including increased productivity and shorter lead times.

<https://www.edgexross.org/en/case/>



### OMRON Corporation, Kusatsu Plant "Improving productivity with Edgexross compatible i-Belt Viewer"

The introduction of i-Belt Viewer, that supports Edgexross, has visualized the number of completed assemblies, the status of transportation, and the number of inspection waits in control device production process, and contributed a significant reduction in lead time.



### IIYAMA SEIKI CO., LTD. "Precise cost control in the precision machining industry"

Edgexross Data Collectors allow easy collections of actual operation data from machine tools regardless of machine tool vendors. In conjunction with the existing production management system, a flexible ANDON system has been installed.



### JIMTOF (Japan International Machine Tool Fair) 2018 "Data Collections from various CNC machine tools."

Edgexross Data Collectors absorb differences of communication protocols and collect data on the operating status of 50 machine tools from 18 companies, realizing a unified visualization in real time.



### Mitsubishi Electric Corporation, Nagoya Works "Reducing loss costs using Real Time Data Analyzer"

At the servo motor manufacturing factory, the loss cost was reduced by using Edgexross-compatible software "Real-Time Data Analyzer" to perform preventive maintenance at the stage prior to the increase in defects.

Further information of Edgexross Consortium is available on our website.



You can watch various video contents on the Edgexross Consortium YouTube channel.

