

Data Access Unit for IoT

DeviceGateway®



Supports 170 series of devices

Compatible with Industry 4.0

Compatible with Various Cloud Services

Easy Setup with a Web Browser

TAKEBISHI
PRODUCTS
CHECK!



Hardware Products

Model	DGW-W710	DGW-C10	DGW-F20	DGW-L30
Exterior			 For Japan only	 For Japan only
List Price	USD 2,280	USD 1,980	-	-
Ethernet Interfaces	2Ports (10/100/1000BASE-T)	2Ports (10BASE-T/100BASE-TX/1000BASE-T)	-	-
Serial Interfaces	RS-232C/485 × 1Port (DSUB9) RS-485 × 2Port (Terminal block)	RS-232C × 1Port (DSUB9)	RS-232C × 1Port (DSUB9) RS-485 × 1Port (DSUB9)	RS-232C × 1Port (DSUB9)
Bluetooth Interfaces **	-	Bluetooth Beacon, DeviceAdapter	(Up to 3 units can be connected)	
Digital Inputs	4ch(voltage/non-voltage input, photo coupler isolated)	-	8ch(voltage/non-voltage input, photo coupler isolated)	-
Digital Outputs	4ch(open collector, photo coupler isolated)	-	4ch(open collector, photo coupler isolated) 4ch(photoMOS relay, photo coupler isolated)	-
Analog Inputs	-	-	4ch(voltage/current mode, 16-bit resolution)	-
SD Card Slot	microSD 1 Slot	1 Slot (SD/SDHC compatible)	-	-
USB **	-	USB 2.0 (Type-A) × 1 port	-	-
Power Supply	Power Supply Input	DC 24V 2-pin screw-fastened connector	DC12V DC jack (AC adapter)	DC12V DC jack (AC adapter) or
	Included AC Adapter	-	100 to 240VAC input (50 to	-
	Included AC Cable*2	-	Plug A (for Japan) 7A/125V	-
SIM Card Slot*3	-	-	-	1slot (Japanese Multi-carrier LTE)
Antenna Connector	-	-	-	MAIN:SMA/SUB:SMA
Included Antenna*4	-	-	-	-
Maximum Power Consumption	5W	4.5W(max using100VAC)	10.5W(max using100VAC)	7.2W(max using100VAC)
Operating Temperature	-20°C to +55°C * No condensation	-20°Cto+60°C * No condensation	-20°C~+50°C (100BASE-TX) -20°C~+40°C (1000BASE-T) * No condensation	-20°Cto+40°C * No condensation
External Dimensions (mm) (Excluding protrusions)	W115.58 x D73 x H36	W81×D137×H29	W137 × D137 × H40	W81 × D137 × H40.2
Weight	170g	380g	700g	480g
Standards and Compliance	CE, FCC, UL CCC (Exemption applied)	cCSAus	-	-
Warranty Period*5	1 year from the date of purchase			

*1 When using Bluetooth Beacon or Bluetooth Serial Communication, Bluetooth conversion adapter (recommended product: BLEDD112 by Silicon Labs) is required. DGW-W710 is not supported.

*2 Please change to products that comply with local standards.

*3 When using "nanoSIM", please use the included conversion adapter.

*4 Please contact us for use of waterproof or outdoor antenna.

*5 Please check the Provision matters (<https://www.faweb.net/en/support/document/>) for the warranty details.

Software Products

Price List

Product Name	Line up	Model	List Price
DeviceGateway on Docker	Hardware Key	DGW-D20-HW-E	USD 1,700
	Software Key	DGW-D20-SW-E	USD 1,700
	Hardware Key 10 licenses	DGW-D20-HW-A10-E	USD 14,000
	Software Key 10 licenses	DGW-D20-SW-A10-E	USD 14,000
	Hardware Key 50 licenses	DGW-D20-HW-A50-E	USD 62,000
	Software Key 50 licenses	DGW-D20-SW-A50-E	USD 62,000



TAKEBISHI CORPORATION

29, Mamedacho, Nishikyogoku, Ukyo-Ku, Kyoto, 615-8501, Japan

Support Desk

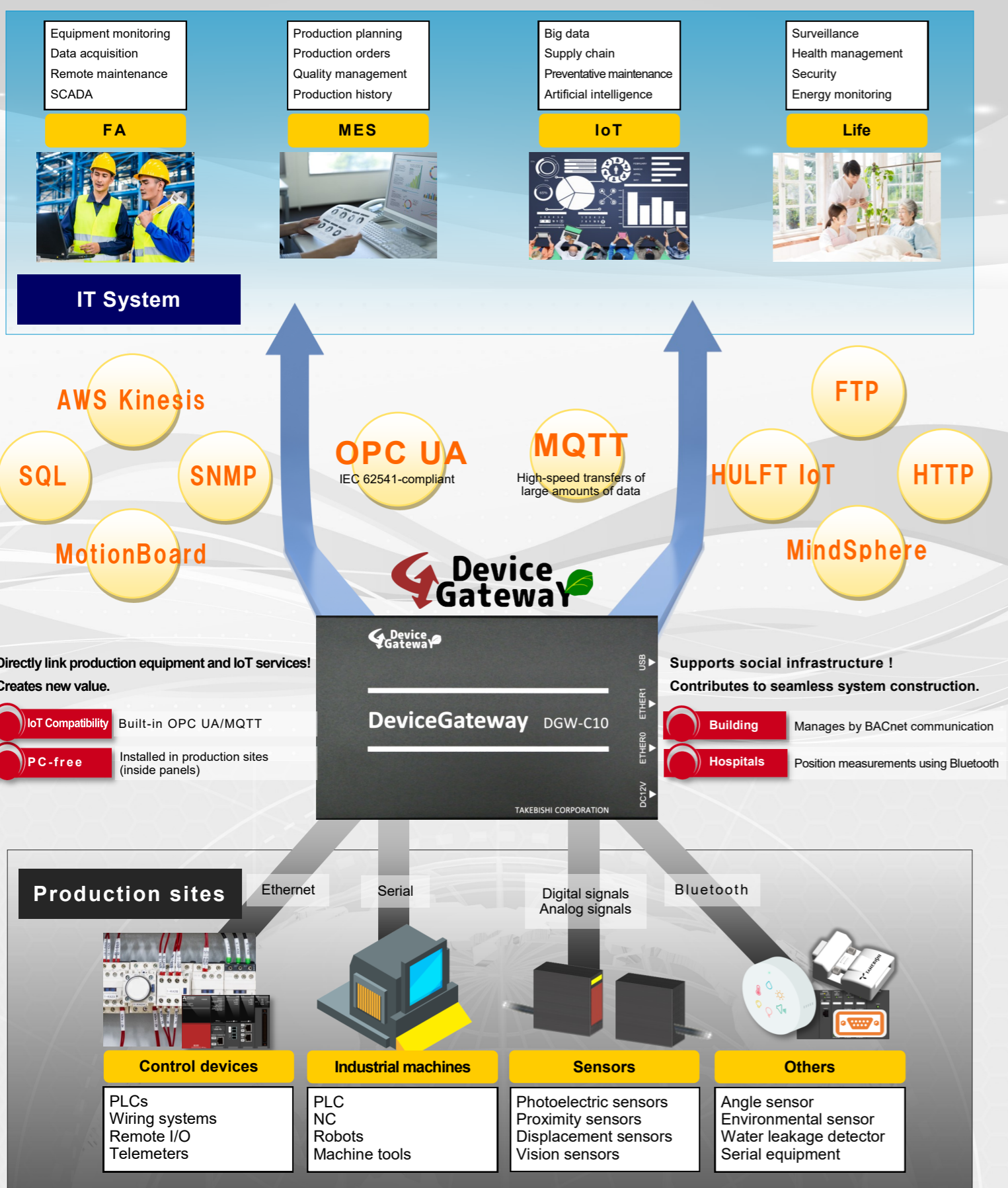
Available: Weekday:9:00-17:00
(Japan local time)

Form : www.faweb.net/en/support/form/
E-mail : fa-support@takebishi.co.jp
TEL : +81-75-325-2261
Movies : On YouTube "Takebishi FAWEB" channel



Directly Link Production Equipment and IT Systems

Accesses sensor information and improves production efficiency!



Line up



DGW-C10

Compact model



- ◆ Space saving
- ◆ Wide temperature range (-20 to 60 °C)
- ◆ Serial 1 port (RS232C)

DGW-W710

Compliant with safety standards, High spec model



- ◆ CCC exemption application completed
- ◆ Safety standards (CE / FCC / UL)
- ◆ Equipped with DIO terminal
- ◆ Wide temperature range (-20 to 55 °C)
- ◆ DIN rail mounting
- ◆ 3 serial ports (RS232C x 1, RS485 x 2)

DGW-F20

I/O equipped, Factory model

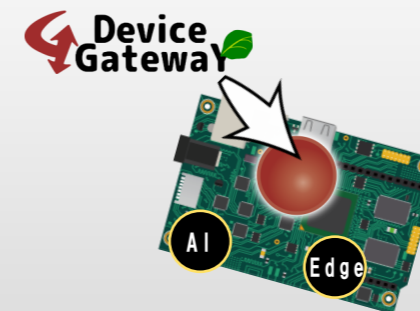


(For Japan only)

- ◆ 8 digital inputs / 8 outputs
- ◆ 4 analog inputs
- ◆ Pin terminal power input
- ◆ 2 serial ports (RS232C x 1, RS485 x 1)

DGW-D20

Software version, Docker model



- ◆ Works in Linux environment
- ◆ Docker virtual image provided
- ◆ Other application linkage

DGW-L30

LTE equipped model



(For Japan only)

- ◆ Japanese multi-carriers support
NTT docomo, SoftBank
KDDI, SORACOM, etc.
- ◆ LTE compatible (3G not possible)
- ◆ Dual antenna
- ◆ Serial 1 port (RS232C)

Features



The device has functions needed to construct IoT system. It cooperates various IoT services flexibly.


Easy setup with browser

Specific application is not required to set up this product. Simply enter the IP address from your browser to configure.



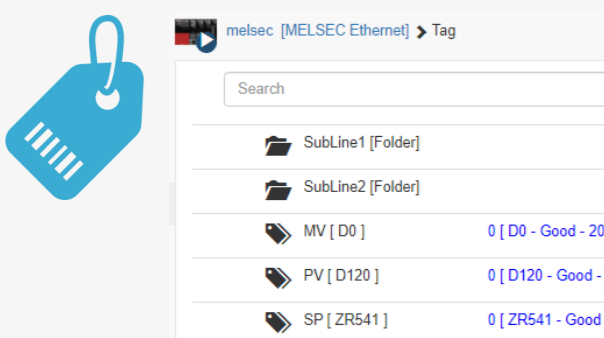
Supports 170 series devices

Supports many kinds of devices such as PLCs, measuring instruments, processing machines and robot controllers. You can register multiple connection settings as data sources.



Data Management as tags

Data from devices are managed as tags with specified name. Tags can be managed in a hierarchical structure (Address Space) using folders. You can create tags with various data types, and use scale/BCD conversion just by setting.



Data Access Unit for IoT DeviceGateway®






Cooperates with various services

- Industry 4.0**
Built-in OPC UA server function
- IoT**
Compatible with various services
MQTT connections to AWS/Azure/GCP/Alibaba
- HULFT**
HULFT IoT
Secure communication with mission-critical systems
- BI**
MotionBoard
Visualization / Analyzation by BI tools
- SNMP Agent**
Monitors status by upper layer system. (e.g. Zabbix)

etc...


Event driven sequence logic

- Cycle, Time execution**
Specify event execution interval
- Alarm detection**
Monitors the rate of change and deviation of tag data
- Conditional branch**
Realizes complex processing without programming
- Message creation**
Makes JSON automatically by tag definition
- Feedback to production equipment**
Writing to tag

etc...

Partners / Device certification

Introduces Device certification that DeviceGateway having, and alliance partners that we have joined.



Partner Name	Device certification or alliance name
Amazon Web Services	AWS Partner Device Catalog
WingArc1st	Dr.Sum E model
SB Cloud	Alibaba Cloud IoT Platform Certified Device
OGIS-RI	IoT Partner
OKI	AI Edge Partner
OPC Foundation	OPC UA Certified
SAISON INFORMATION SYSTEMS	HULFT Collaboration Partner
SORACOM	SPS Certified Device Partner
NSW	Toami Ready
Fujitsu	COLMINA Ready
Microsoft	Azure Certified for IoT Device (Legacy)
Mitsubishi Electric	e-F@ctory Alliance Partner
YE DIGITAL	MMCloud Ready

(In May 2021)

Convenient management tools

- Switching Language**
English and Japanese are available
- Time Synchronization**
Synchronizes with NTP Server
- Updatable firmware**
New functions are available

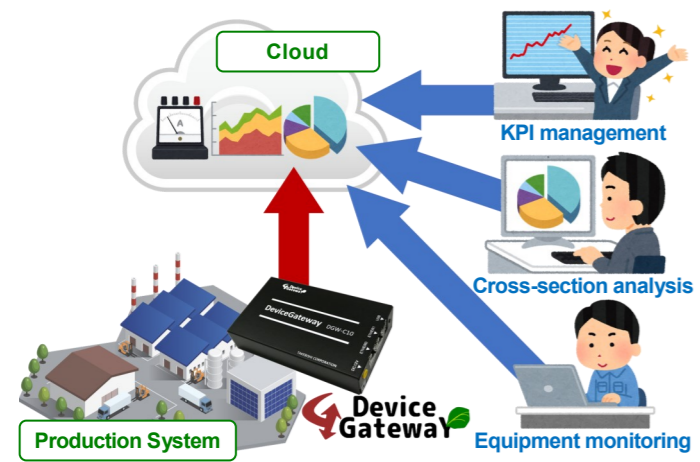
etc...

Use Cases



KPI dashboard and Cross-section analysis by BI tool

Realizes equipment monitoring remotely or KPI management by using dashboard products. In addition, by BI tool, you can combine collected data as various perspectives and analyze cross-cutting.

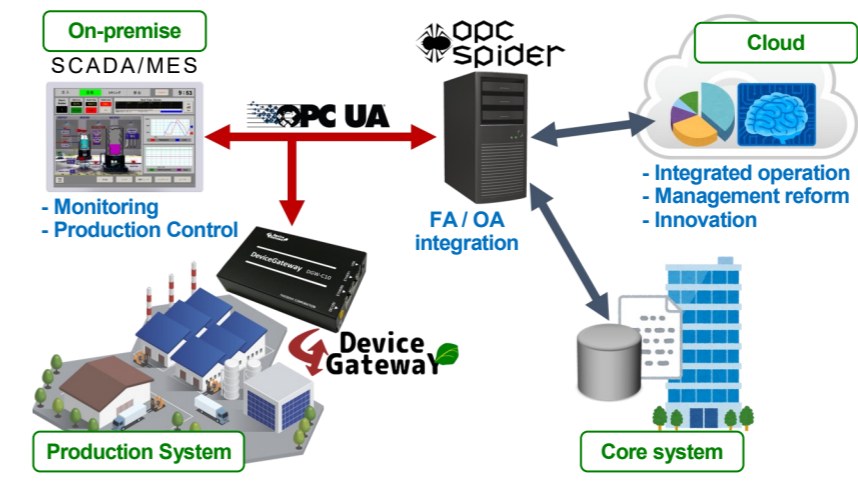


Dashboard / BI product examples

Makers	Products
Amazon Web Services	Amazon QuickSight AWS IoT SiteWise Amazon Elasticsearch
Alibaba Cloud	Alibaba Cloud DataV
SB Technology	IoT Core Connect
WingArc1st	MotionBoard
SORACOM	SORACOM Lagoon
Hitachi	Lumada Mfi
Fujitsu	COLMINA
Microsoft	Azure Stream Analytics Power BI
YDC	YDC SONAR

Monitoring / Production control / DX by OPC UA

Realizes monitoring / production control with low cost by using SCADA / MES packages. The ETL tool "OPC Spider®" integrates FA and OA systems without programming by using OPC UA, DB, and various interfaces, and promotes DX.



OPC Client product examples

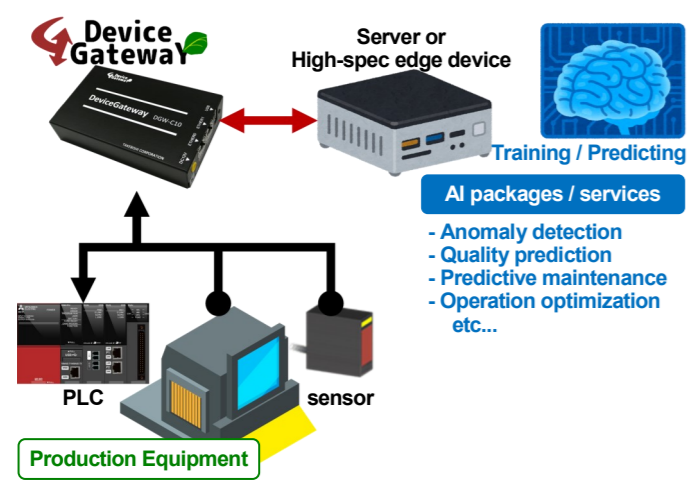
Makers	Products
Mitsubishi Electric (ICONICS)	GENESIS64
Siemens	WinCC
Rockwell	RSView
AVEVA (Wonderware)	InTouch/Historian
Takebishi	DxpLOGGER
Takebishi	OPC Spider

DeviceGateway passed OPC Certification testing. In addition, it was tested by various OPC Client products every years at the Inter Operability Workshop Testing.



Strengthening of competitiveness by cooperating with AI

By cooperating with AI packages/services, you can add new value into production line or your products and strengthen competitiveness. Realizes gathering data, indicating to predict, sending feedback into controller.

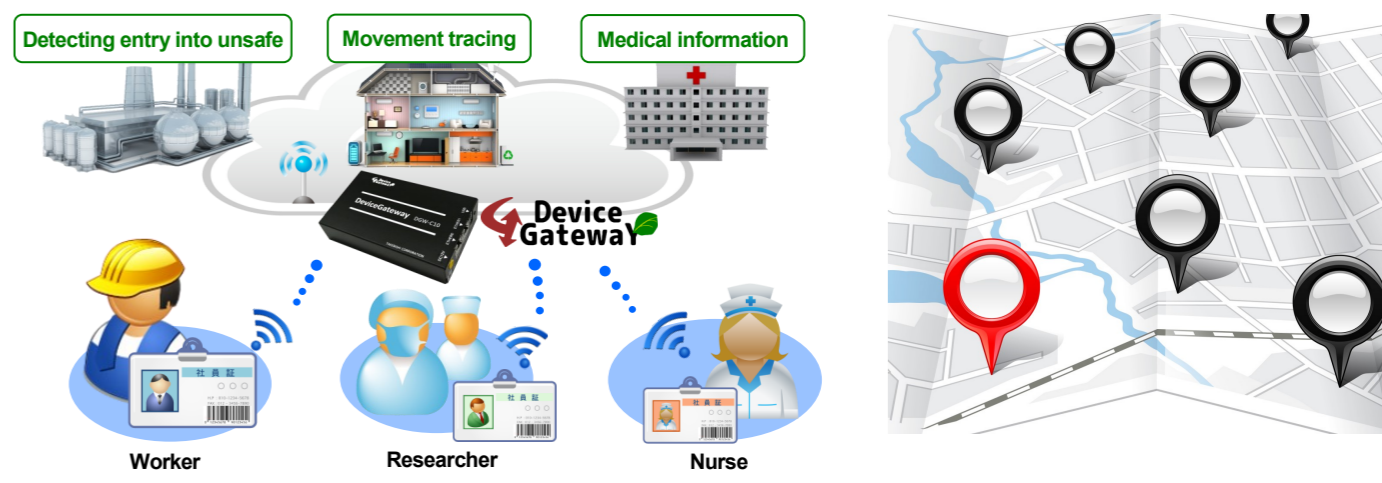


AI product examples

Makers	Products
Amazon Web Services	Amazon SageMaker
Cross Compass	MANUFACIA
SKYDISC	SkyAI
Brains Technology	Impulse
Microsoft	Azure Machine Learning
RapidMiner	RapidMiner

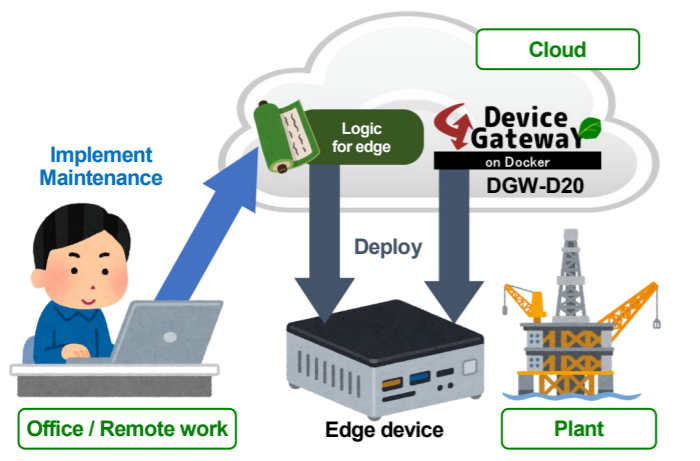
Detecting invasion and managing the movement by Bluetooth positioning

Captures radio waves from Bluetooth tags and calculates position information from its strength. Improves safety by detecting entry into unsafe areas and managing the movement of staff.



Edge development with cloud centralized management

Software version (DGW-D20) runs on the device you chose. Realizes cloud centralized management with using deployment for about DeviceGateway and your business logic into the edge.



Cloud service examples

Maker	Products
Amazon Web Services	AWS IoT Greengrass
Microsoft	Azure IoT Edge

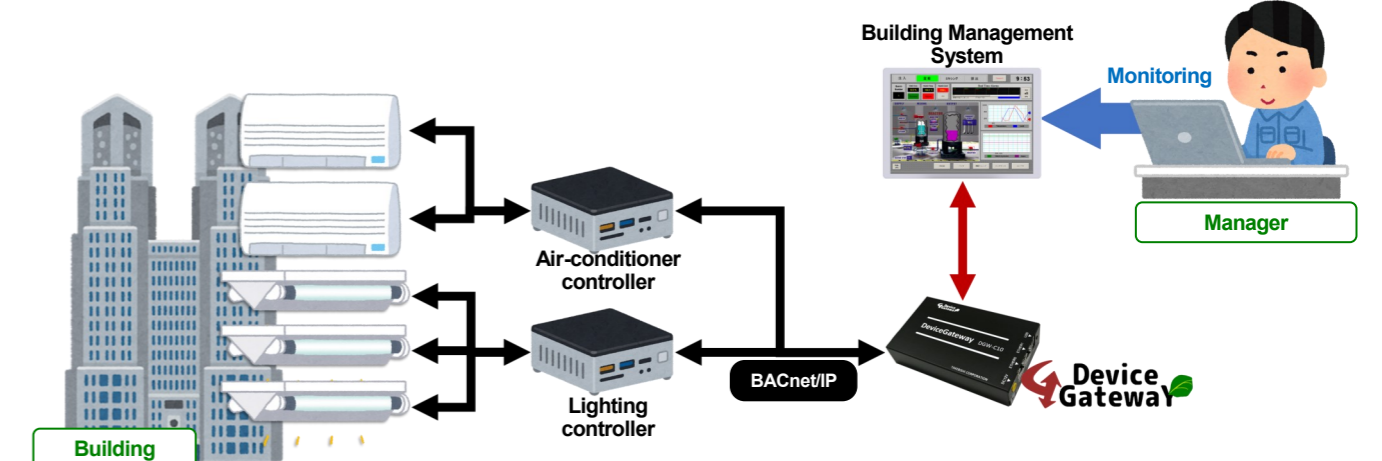
Get via Azure Marketplace

Edge device examples

Makers	Products
OKI	AI Edge Computer "AE2100"

Monitors buildings equipment by BACnet communications

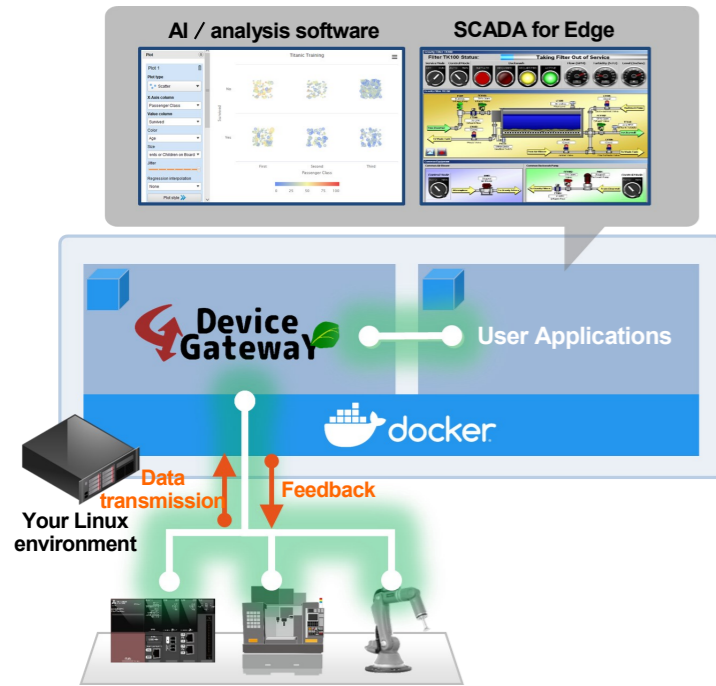
Supports the open protocol "BACnet/IP" for building-automation. Contributes to efficient building management by gathering data from air-conditioner, lighting, and others.



DeviceGateway® on Docker

Provided as software and coexists with user application

“DeviceGateway on Docker” (DGW-D20) is a software product as an image for virtualization container “Docker”.
You can make coexist with other packaged software or your application in Linux environment and cooperate data.



Operates in a virtualized environment
The software is provided as a Docker image.
You can use it for edge computing.

Porting not required
Quick start by only loading Docker image.

Recommended operating environment

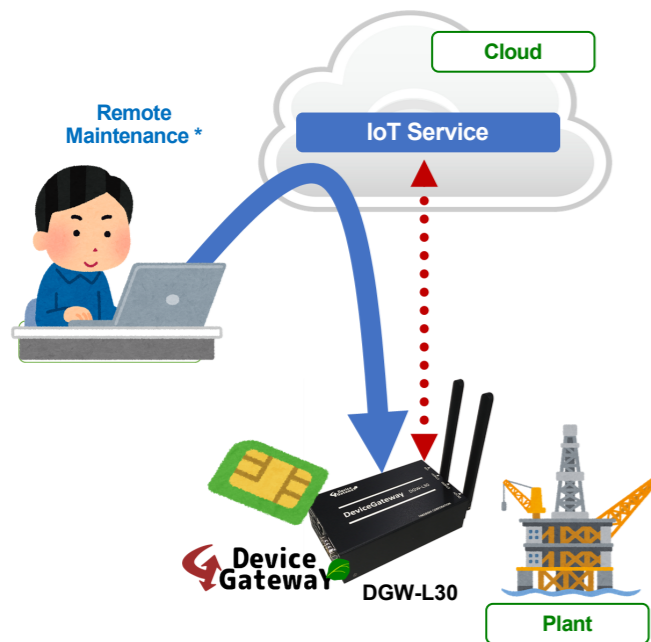
DeviceGateway on Docker	CPU: Intel Core i Series or higher Cortex-A15 1GHz or higher RAM: 512MByte or higher ROM:(x86_64) 90MByte or higher (ARMv7)70MByte or higher *A storage area for Volume Mount and Storage Mount is required separately.
License management server *	Windows 8.1 or later 32bit/64bit Mac OS X 10.11 or later Debian x86 /x64/ armhf/ aarch64 (DEB package) RedHat x86 / x64 (RPM package)

* When selecting the software license key or in the execution environment where the hardware license key (USB) cannot be accessed from the Docker container, it is necessary to set up the license management server on the host or an external computer.

DeviceGateway® LTE model

Multiple carrier LTE module on board

LTE model (DGW-L30) has multiple carrier LTE module, so it is able to connect to the cloud via mobile network.
It is useful for the embedding into the equipment shipped to end-user, or the difficult environment for wired network.



Carrier/MVNO examples

- Docomo
- au
- Softbank
- SORACOM
- NTT PC
- etc...

SORACOM service examples

Services	Description
SORACOM Napter	On demand remote accessing
SORACOM Harvest	Data gathering / storing
SORACOM Lagoon	Dashboard
SORACOM Funnel	Cloud resource adapter

Functional Specifications

Item	Description	Item	Description		
Data sources	External Interfaces	Ethernet, Serial, Digital I/O, Analog Input etc.	Endpoint URL	opc.tcp://[IP address]:[port number]/	
	Device Protocols	SLMP, MODBUS, MTConnect(1.3), BACnet etc.	Profile	Embedded UA Server Profile	
	Max Connections	8 connections (DGW-D20 is 16 connections)	Security Policy	None, Basic128Rsa15, Basic256, Basic256Sha256, Aes128Sha256RsaOaep, Aes256Sha256RsaPss	
Tag Management	Max Tags & Points	8,192 points (DGW-D20 is 16,384 points)	Security Mode	None, Sign, SignAndEncrypt	
	Data Types	(U)Int8/16/32/64, Float, Double, Boolean, String * Arrays are supported for all types except String	User Authentication	Anonymous, User name/password X.509 user certification	
	Extended Settings	Specify bit position of registers Byte swapping, Read/Write only attributes Specify byte position of word registers	Supported Command	Get, GetNext, GetBulk, Notification(Trap)	
	Simulation	Random, Increment, Sign, Static	MIB	Supplies original objects of this product	
	System Calculation	BCD conversion	Max Trap Targets	2 SNMP Managers	
	Scale Conversion	Linear, Square Root, Power factor	MQTT(S) Client (Ver3.11)	Sending and receiving	Subscribe, Publish
	Alarms	Rate of change, Deviation, Level, Discrete	Protocol	TCP (WebSocket not supported)	
Configuration	Operation	Web browser setup page (HTTP/HTTPS) is provided * Microsoft Internet Explorer 10 or higher	Authentication	User name/password, TLS authentication	
	External	Import/Export (CSV/JSON format)	Supported functions	QoS0/1/2, Retain/Will, TLS/SLL	
Events	Max Events	64 events	HTTP(S) Client (Ver1.1)	HTTP Authentication	None, Basic authentication, Digest authentication OAuth2.0 authorization(only ROPC)
	Triggers	Cycle, Time, Changed value, Area changed value, Received MQTT, Tag alarm changed, Area alarm changed, Disk size, Beacon detection, Update beacon data	HTTP Method	GET, PUT, POST, DELETE, OPTIONS, HEAD, TRACE	
	Actions	Loop start/end, Jump, Sleep, Compare value, Compare text, Calculate, Edit text, Get text, Get CSV element, Get Json element, Write value, Refresh, Make message Send MQTT, Send HTTP, Send SQL, FTP upload, Send Kinesis, Send MindSphere Send MotionBoard, Send kintone Buffer historical values, Extract buffered records, Reshape array elements, Write file, Read file, Rename file, Copy file, Move file, Delete file(s), List files, Get file count, Output log message, Restart, Shutdown, Make beacon list	Proxy Server	Supported (User name/password authentication also supported)	
Buffering	Max Tags	32 tags (4 point per 1 setting, max 8 settings)	Interface	JDBC 4.2	
	Max Data	8,192 records each (converted data accumulated as 1 record)	Database	Microsoft SQL Server2014 Oracle Database 11g MySQL5.6, PostgreSQL 9	
	Applicable Interfaces	MQTT, HTTP(S), SQL, FTP, AWS Kinesis SIEMENS MindSphere, WingArc1st MotionBoard	Query	SELECT, UPDATE, INSERT, DELETE	
Offline Buffering	Max Queue Size	8,192 queries	Max Columns	512 columns per query	
	Operation Mode	Enabled (constantly) Enabled (when there is an communications error) Disabled	User Authentication	User name/password	
Diagnostics	Network Diagnostics	Ping, Traceroute	Transfer Mode	Active/Passive	
	Diagnostics Log	Data Source, Event, IoT Interface etc.	FTP(S) Client	User Authentication	Anonymous, User name/password
User Accounts	Applicable Target	WebUI, FTP server, OPC UA server	Transfer Mode	Active/Passive	
	Max Users	64 users	Command	PutRecord	
General Functions	Language switching	English, Japanese	Partition Key	Arbitrary fixed value	
	File Management	Diagnostics log, Certificates, Backup/restore	Proxy Server	Supported (User name/password authentication also supported)	
	Time Management	Correction of internal clock data (NTP server synchronization) (DGW-D20 is out of scope)	SIEMENS MindSphere Client	Command	api/agentmanagement/v3/register api/agentmanagement/v3/oauth/token api/mindconnect/v3/exchange
	Update	Firmware Update (DGW-D20 is out of scope)	Security Policy	SHARED_SECRET	
	Firewall	Access restricted from external functions (DGW-D20 is out of scope)	Proxy Server	Supported (User name/password authentication also supported)	
Option	DAP Communication	Virtual serial mode / Manual connection mode, Max 3 DAPs	Authentication	Login ID, Authentication key	
			Command	POST, Realtime data connection WebAPI(JSON)	
			Supported Data	Status (Text, Number, Boolean)	
			Max Columns	50 Status per query	
			Method	GET, PUT, POST	
			Authentication	API token	
			Proxy Server	Supported (User name/password authentication also supported)	
			File Transfer	Encryption, Data compression	
			Proxy Server	Supported (User name/password authentication also supported)	
			Standard Interface	Communication Method: MQTT(receive), HTTP(send) Contents Type: JSON	
			General Standard Interface	OPC UA	
			Machine Tool	8 Machine Tools - Operates as up to 2 converters per one this product. - Supports 4 machines per one converter.	

* An SD card is required to use the event function, buffering, offline buffering, HULFT IoT, diagnostic log function, and other functions.
* To use the SQL connection function, a relay service (for Windows or Linux) dedicated to this product must be set up.
* To use the DAP Communication, DeviceAdapter is required.
(DAP Communication makes serial communication wireless by Bluetooth.)
* To use HULFT encryption, please apply HULFT encryption implemented firmware.
(HULFT encryption implemented firmware is available on faweb.)

Applicable Devices



PLC(Programmable Logic Controller)

Manufacturer	Series/Product	CPU module	Ethernet module	Other communications
MITSUBISHI *5	MELSEC iQ-R	R120(P)/32(P)/16(P)/08(P)/04	Built-in Ethernet port RJ71EN71	RJ71C24(-R2/R4)
	MELSEC iQ-F	FX5U(C/J)	Built-in Ethernet port	
	MELSEC-Q (Universal high-speed)	Q26/13/06/04/03UDV	Built-in Ethernet port QJ71E71-100/B2/B5	
	MELSEC-Q (Universal)	Q100/50UDEH, Q26UD(E)H Q20/13/10/06/04/03UD(E)H Q02/01/00U(J)	Built-in Ethernet port QJ71E71-100/B2/B5	
	MELSEC-Q (Process)	Q26/13/06/04UDPV Q25/12/06/02PH		QJ71C24N(-R2/R4)
	MELSEC-Q (Redundant)	Q25/12PRH		
	MELSEC-Q (High performance)	Q25/12/06H, Q02(H)	QJ71E71-100/B2/B5	
	MELSEC-Q (Basic)	Q01, Q00(J)		
	MELSEC-Q (C language controller)	Q24DHCCPU-V Q12DCCPU-V, Q06CCPU-V	Built-in Ethernet port	
	MELSEC-Q (Motion controller)	Q170M, Q172D(S)CPU(-S1) Q173D(S)CPU(-S1)	Built-in Ethernet port	
	MELSEC-L	L26CPU-(P)BT L06CPU-(P) L02(S)CPU-(P)	Built-in Ethernet port LJ71E71-100	LJ71C24(-R2) L6ADP-R2/R4
	MELSEC-FX	FX3S/U/UC/G/GC FX2(N/2NC/2C) FX1(S/N/NC), FX0(S/N)	FX3U-ENET(-L) FX3U-ENET-ADP	FXxx-232/485-BD FXxx-232/485ADP(-MB)
	MELSEC-QnA	Q4A(R), Q3A Q2A(S/SH)(-S1)	A(1S)J71QE71(N)-T A(1S)J71QE71(N)-B2/B5	AJ71QC24(N)(-R2/R4) A1SJ71QC24(N)(-R2)
	MELSEC-A	A4U, A3(N/A/U) A2(N/A/U)(S/SH)(-S1) A1(N)(S/SH)	AJ71E71(-S3) A(1S)J71E71(N)-T A(1S)J71E71(N)-B2/B5	A(1S)J71UC24 AJ71C24-S8
OMRON *5	SYSMAC-NX	NX701	Built-in Ethernet port	
	SYSMAC-NJ	NJ501, NJ301, NJ101	Built-in Ethernet port CJ1W-EIP21	
	SYSMAC-CJ	CJ2H, CJ2M CJ1G, CJ1H, CJ1M	Built-in Ethernet port CJ1W-ETN11/21 CJ1W-EIP21	Built-in Serial port CJ1W-SCU42/32/22 CJ1W-SCU41/31(-V1) CJ1W-SCU21(-V1)
	SYSMAC-CS	CS1G CS1H CS1D	CS1W-ETN21/11/01 CS1W-EIP21 CS1D-ETN21D	Built-in Serial port CS1W-SCU31/21(-V1) CS1W-SCB41/21(-V1)
	SYSMAC-CP	CP1E CP1L(-EM/EL) CP1H	Built-in Ethernet port CP1W-CIF41 CP1L-ETN CJ1W-ETN21/EIP21	CP1W-CIF12/11/01 CJ1W-SCU41/31(-V1) CJ1W-SCU21(-V1)
	SYSMAC-CV	CVM1(D), CV2000 CV1000, CV500	CV500-ETN01	Built-in Serial port CV500-LK201
	SYSMAC-C	C200H CQM1(H) CPM1/2 C2000H/C1000H		Built-in Serial port C500-LK203/201/103/101 C200H-LK202/201/101 C120-LK202/201/101
	SYSMAC-NSJ	NSJ	Built-in Ethernet port NSJW-ETN21	
YOKOGAWA	e-RT3	RP71-R	Built-in Ethernet port LE12-1T	
	FA-M3V	F3SP71-4S/N F3SP76-7S/N	Built-in Ethernet port F3LE12/11/01-0T	
	FA-M3R	F3SP67-6S, F3SP66-4S F3SP59-7S, F3SP58-6H/S F3SP53-4H/S, F3SP38-6N/S F3SP35-5N, F3SP28-3S/N F3SP25-2N, F3SP22-0S F3SP21-0N, F3SP08/05-0P	F3LE12-0T/1T F3LE11-0T/1T F3LE01-0T/1T/5T	
JTEKT	TOYOPUC-Plus	Plus CPU	Built-in Ethernet port Plus EX(2)	
	TOYOPUC-PC10	PC10G(E) PC10P	Built-in Ethernet port EN-I/F(-T) FL/ET-net-5 FL/ET-T-V2(H) 2PORT-EFR	
	TOYOPUC-PC3J	PC3JG-P PC3J(L/D/M/NM/NF)-CPU MULTI-GW	EN-I/F(-T) FL/ET-net-5 FL/ET-T-V2(H) 2PORT-EFR	
	TOYOPUC-PC2J	PC2J(C/S/R) PC2J16(R/H/PR/HR)	EN-I/F(-T) FL/ET-net-5 FL/ET-T-V2(H)	
HITACHI	HX *1	HX-CP1S08(M)/HX(C)-1H16(M)	Built-in Ethernet port	
	EH150-EHV	EHV-CPU128/64/32/16	EH-ETH(2) Built-in Ethernet port	
	EH150	EH-CPU548/516/316A EH-CPU208A/104A	EH-ETH(2)	
	H	H-4010/2002/1002 H-702/302/252	LAN-ETH(2)	

Manufacturer	Series/Product	CPU module	Ethernet module	Other communications
SHARP	SATELLITE JW-300	JW-311CU / 312CU / 321CU JW-322CU / 331CU / 332CU JW-341CU / 342CU / 352CU JW-362CU		
	SATELLITE JW-30H	JW-31CUH/H1 JW-32CUH/H1 JW-33CUH/H1, CUH2, CUH3	JW-300/25T/255CM	
	SATELLITE JW-20H	JW-21CU / 22CU		
	SATELLITE JW-100H	JW100 / 100H / 100CUH		
	SATELLITE JW-70H	JW70 / 70H	JW-50CM/51CM	
	SATELLITE JW-50H	JW50 / 50H		
FUJI	J-Board Z-500	Z-511J / 512J		Z339J
	J-Board Z-300	Z-311J / 312J		
	MICREX-SX SPH5000	NP1PU1-512H		
	MICREX-SX SPH3000	NP1PU-48E / 256E NP1PU2-048E	Built-in Ethernet port NP1L-ET1/2	NP1L-RS1/2/3/4/5
	MICREX-SX SPH2000	NP1PM-48R / 48E / 256E / 256H		
	MICREX-SX SPH300EX	NP1PS-74D		
	MICREX-SX SPH300	NP1PS-32(R) / 74(R) / 117(R) NP1PS-245		
	MICREX-SX SPH200	NP1PH-08 / 16		
	MICREX-F F150	FPU150S / 152S / 154S		
	MICREX-F F140	FPU140S	FFU170B	FFU120B
MICREX-F F120	FPU120S			
MICREX-F F70	F70(S)	NC1L-ET1	NC1L-RS2/4	
MICREX-F F55	F55		NV1L-RS2	
MICREX-F F50	F50		Built-in Serial port	
PANASONIC *13	FP0H	FP0H C32ET/C32EP	Built-in Ethernet port	
	FP7	FP7	Built-in Ethernet port	AFP7CC(S1/S2/M1/M2) AFP7CCS1M1
	FP2	FP2(SH)	FP2 ET-LAN(2)	
	FP-X	FP-X C60/30/14 R/T/P(D)	FP-X COM5	FP-X COM1/2/3/4/5/6
	FPΣ *1	FPΣ		AFP801/802/806
	FP0R *1	FP0R		Built-in Serial port
	FP-e *1	FP-e		Built-in Serial port
	Web Datalogger Unit	AFL1200	Built-in Ethernet port	
KEYENCE	KV-8000 *12	KV-8000		
	KV-7000	KV-7500/7300	Built-in Ethernet port	
	KV-5000	KV-5500/5000	KV-XLE02	
	KV-3000	KV-3000	KV-LE21V/EP21V KV-LE20(V/A)	
	KV-1000	KV-1000		
	KV-700	KV-700		
	KV Nano	KV-Nano	KV-NC1EP	
TOSHIBA	nv(type1, type1 light)	PU811, PUM11/12/14	EN811/EN821	
	V(S3)	S3PU65A, S3PU55A, S3PU45A	EN711/721/731 EN741/751(A)/761	
	V(S2)	S2PU82, S2PU72A, S2PU72D	EN611/621/631/641 EN651(A)/661	
	V(S2T)	PU672T, PU662T	EN611/631/651A	
	PROSEC T(T3H)	PU325H, PU326H	EN311	
YASKAWA	MP3200	CPU-201, CPU-202		
	MP2400	MP2400	Built-in Ethernet port	
	MP2300	MP2310, MP2300(S)	218IF-01/02	
	MP2200	MP2200		
MP900	MP920	218IFA		
IDEC *1	MicroSmart	FC5A-D16RK1/D16RS1 FC5A-D32K3/D32S3 FC5A-C10R2(D/C) FC5A-C16R2(D/C) FC5A-C24R2(D/C)	Built-in Ethernet port	Built-in Serial port FC5A-SIF2/4 FC4A-HPC3
	DirectLOGIC 05	DL05	H0-ECOM100	D0-DCM
KOYO *1	DirectLOGIC 06	DL06		D0-DCM
	DirectLOGIC 205	D2-240, D2-250, D2-260	Built-in Ethernet port H2-ECOM/EBC100	D2-DCM
	DirectLOGIC 305	D3-340, D3-350		Built-in Serial port
	DirectLOGIC 405	D4-450		Built-in Serial port
	SU	SU-5/5E/6B/5M/6M/6H		Built-in Serial port U-01DM
	KOSTAC SZ	SZ-4/4M		Built-in Serial port U-01DM
	KOSTAC S	SG-8B		U-01DM
	KOSTAC PZ	PZ3		Built-in Serial port
	KOSTAC SJ	SJ-00DD1/2-D, SJ-00DR/AR-D SJ-02DD1/2-D, SJ-02DR-D SJ-30DD1-D	Built-in Ethernet port	Built-in Serial port
	T1K	T1K-MODBUS	T1H-EBC100	Built-in Serial port T1H-CTRIO

Applicable Devices



PLC(Programmable Logic Controller)

Manufacturer	Series/Product	CPU module	Ethernet module	Other communications
DELTA *1	AH500	AH500	AH10EN-5A	
	DVP-EH	DVP-EH2/3	DVPENE01-SL	
	DVP-SV	DVP-SV(2)		
	DVP-SE	DVP-SE	Built-in Ethernet port	
	DVP-MC	DVP-MC		
	DVP-EX	DVP-EX(2)		
	DVP-ES	DVP-ES(2)		Built-in Serial port
	DVP-EC	DVP-EC3		
	DVP-SX	DVP-SX(2)		
	DVP-SA	DVP-SA(2)		
	DVP-SS	DVP-SS(2)		
	DVP-SC	DVP-SC		
	DVP-PM	DVP-PM		
3S *1	CoDeSys	(general PC)	Built-in Ethernet port	Built-in Serial port
ROCKWELL	AB GuardLogix	5570		
	AB ControlLogix	5550/5553/5555/5561/5562/5563/5572/5573/5574/5575/5580	1756-ENBT 1756-EN2T	
	AB CompactLogix	5320/5323/5330/5331/5332/5335/5345/5370/5380/5400	Built-in Ethernet port 1769-L32E/1769-L33ER 1769-L35E/1768-ENBT	
	AB FlexLogix	5433/5434		
	AB DriveLogix	5720/5730	1788-ENBT	
SIEMENS	SIMATIC S7-1500	CPU 1511/1513-1 PN CPU 1515-2 PN CPU 1516(F)-3 PN/DP CPU 1518(F)-4 PN/DP	Built-in Ethernet port	
	SIMATIC S7-1200	CPU 1211/1212 CPU 1214C/1215C/1217C	Built-in Ethernet port	
	SIMATIC S7-400H	CPU 412-3H, CPU 414/417-4H	CP443-1	
	SIMATIC S7-400	CPU 412-1/2, CPU 417-4 CPU 414-2/3 (PN/DP) CPU 416-2/3 (PN/DP)	CP443-1	
	SIMATIC S7-300	CPU 312/314/315-2 (PN/DP) CPU 317-2 (PN/DP)	CP443-1	
	SIMATIC S7-200	CPU 222	CP243-1	
	SIMATIC WinAC	WinAC RTX	Built-in Ethernet port	
GE *5	90-30	IC693CPU311/IC693CPU313 IC693CPU321/IC693CPU323 IC693CPU331/IC693CPU340 IC693CPU341/IC693CPU350 IC693CPU351/IC693CPU352 IC693CPU360/IC693CPU363 IC693CPU364/IC693CPU374 IC693CSE311/IC693CSE313 IC693CSE323/IC693CSE331 IC693CSE340		Power Unit built-in Serial port

NC(Numerical Control) Equipment

Manufacturer	Series/Product	CPU module	Ethernet module	Other communications	
FANUC *2 *5	FANUC CNC	0(i)	0(i)		
		15(i)	15(i)		
		16(i)/18(i) 20(i)/21(i)	16(i)/18(i)/20(i)/21(i)		Built-in Serial port (DPRNT communication)
		30i/31i/32i	30i/31i/32i		
		Power Mate-D/F/H	Power Mate-D/F/H		
		Power Mate-I	Power Mate-I		
MITSUBISHI *2 *5	三菱CNC	M800/M80	M800W, M800S, M80W, M80		
		E80	E80		
		C80	C80		Built-in Serial port (DPRNT communication)
		M700V	M700V		
		M70V	M70V		
		E70	E70		
		C70	C70		
Shibaura Machine *5 *9	TOSNUC	T-PX200	T-PX200		
		T-PX100	T-PX100	Built-in Ethernet port	
		T-999	T-999		
		T-888	T-888, T-888.2		
	TCmini	TC9	TC9-00		Built-in Serial port
		TC7	TC7-00/01/02		
		TC6	TC6-00		
		TC5	TC5-02/03		
		TC3	TC3-00/01/P01/02		

Machine Tools

Manufacturer	Series/Product	CPU module	Ethernet module	Other communications	
MITSUBISHI *10	Wire EDM	MV	MV		
		MP	MP		
		MX	MX		
		NA	NA		
		BA	BA		
		PA	PA		
		FA	FA	Built-in Ethernet port	
	QA	QA			
	Die-sinker EDM	SV-P	SV-P		
		EA	EA		
		MA2000	MA2000		
	Fine hole EDM	VS	VS		
		SH	SH		
		VH	VH		
MAZAK *11	INTEGREX series etc.		MTConnect Agent		

Remote I/O System

Manufacturer	Series/Product	CPU module	Ethernet module	Other communications
M-System	Remote I/O *1	R1	R1	
		R3	R3	R3-NE1
		R5(H)	R5(H)	R5-NE1
		R6	R6	R6-NE1/R6-NE2
		R7	R7	Built-in Ethernet port
		R8	R8	Built-in Serial port
				R8-NM1
	TC10 *1	TC10		TC10EM-A-M2 TC10NM-A-M2
	Loop Controller *1	SC200, SC210		Built-in Ethernet port
Tower Light PATLABOR *1	IT60(W1/RE)		Built-in Ethernet port	
Data Logger *1	DL8		Built-in Ethernet port	
Tablet Recorder *1	TR30-G		Built-in Ethernet port	
ANYWIRE *1	DB A40	AG428-ES/EC, AG413-E1	Built-in Ethernet port	
WAGO *1	I/O System	750-341/342/352 750-841/842/843/873/881	Built-in Ethernet port	
		750-312/314/315/316 750-812/814/815/816		Built-in Serial port
		750-830	Built-in Ethernet port	
MTT *1	Alchis	MRH-T each modules	MRH-T-NMT1	
PHOENIX CONTACT	AXL F BK	AXL F BK ETH *1		
		AXL F BK EIP *8	Built-in Ethernet port	
	AXL E *8	AXL E EIP		
CONTROL *1	IO-Link Master Gateway Modbus TCP	IO-Link Master 4-EIP IO-Link Master DR-8EIP IO-Link Master 8-EIP	Built-in Ethernet port	

Protocol Converter for Machine Tools

Manufacturer	Series/Product	CPU module	Ethernet module	Other communications
silex *11	FBR-100AN	FBR-100AN	Built-in Ethernet port	

Motion / Robot Controller

Manufacturer	Series/Product	CPU module	Ethernet module	Other communications
YAMAHA	Robot Controller	RCX	RCX340	
	Tool	RCX-Studio	RCX340 emulator	Built-in Ethernet port
IAI *5	Positioner *1	ACON	ACON-CB/CGB/CYB/PLB/POB/CA/C/CG/PL/PO/SE/CY	
		DCON	DCON-CB/CGB/CYB/PLB/POB/CA	
		PCON	PCON-CA/CFA/CB/CGB/CFB/CGFB/CYB/PLB/POB/C/CG/CF/PL/PO/SE/CY	Built-in Serial port
		SCON	SCON-CB/CGB/CB-F/CA/CAL/CGAL/C	
	Program Controller	RSEL	G	
X-SEL		P/Q/PCT/QCT/PX/QX/R/S/RX/SX/RXD/SXD/RA/SA/RAX/SAX/RAXD/SAXD		
TT		TTA		Built-in Serial port
SSEL		SSEL		
ASEL		ASEL		
PSEL		PSEL		
MSEL	PC/PG/PCF/PGF/PCX/PGX			
SANYO DENKI *8	SANMOTION C	SMC100A/B	Built-in Ethernet port	

Applicable Devices



Display Panel

Manufacturer	Series/Product	Model	Ethernet module	Other communications
HAKKO *1	MONITOUCH	V815/812/810/808/806 V715/712/710/708 V608/606	Built-in Ethernet port	Built-in Serial port

Vision Sensor

Manufacturer	Series/Product	Model	Ethernet module	Other communications
COGNEX *1	In-Sight	In-Sight Micro/5000/EZ	Built-in Ethernet port	

BACnet Unit

Manufacturer	Series/Product	Model	Ethernet module	Other communications
M-System	BACnet Controller	BA3-CB1	Built-in Ethernet port	
UNITEC	BACnet Unit for MELSEC	(MELSEC-Q series CPU)	BAQ08V	
	BACnet Unit for LonWorks	(LonWorks unit)	BL750	
	BACnet Unit for Multi-Connection	(MELSEC/SYSMAC/MODBUS)	BP750-PM	

Monitoring Product / Power Supply

Manufacturer	Series/Product	Series/Product	Model	Ethernet module	Other communications
OMRON	Monitoring Product	K6CM *1 *8	- Modbus communication K6CM-CI2MA-EIP K6CM-CI2MD-EIP K6CM-CIMA-EIP K6CM-CIMD-EIP K6CM-VBMA-EIP K6CM-VBMD-EIP K6CM-ISMA-EIP K6CM-ISMD-EIP	Built-in Ethernet port	
			- EtherNet/IP communication K6CM-CI2MA-EIP K6CM-CI2MD-EIP K6CM-VBMA-EIP K6CM-VBMD-EIP		
		K6PM *8	K6PM-THMD-EIP	Built-in Ethernet port	
	Power Supply *1	S8VK-X	S8VK-X	Built-in Ethernet port	

Meter / Recorder / Controller

Manufacturer	Series/Product	Model	Ethernet module	Other communications
AZBIL	Instrumentation network	NX-S01/11/12/21 NX-D15/D25/D35 NX-DX1/DX2, NX-DY1/DY2	NX-CB1 NX-CL1/CR1 NX-TL1/TR1	
	Digital Regulation Meter	DMC50	Built-in Ethernet port	
	Digital Direction	SDC46/45/36/35/26/25/15		
	Recorder	SRF101/102/103/106/201 SRF202/203/206/212/224		Built-in Serial port
	Mass Flow	CMS, CMF, CMQ-V CML, MPC, MVF		
	Sensor	PBC		
	Burner Controller	AUR350C/450C, RX		
	Communication Converter	CMC15G, CMC10B		
	Program Regulation Meter	DCP31/32, DCP551/552		
	YOKOGAWA *1	STARDOM	FCN, FCJ	Built-in Ethernet port
Recorder SMARTDAC+		GX10/20/60/90, GP10/20		
Recorder DXAdvanced		DX1012/1006/1004/1002(N/T) DX2048/2040/2030/2020/2010 DX2008/2004(T)		
Recorder MVAdvanced		MV1024/1012/1008/1006/1004 MV2048/2040/2030/2020/2010 MV2008	Built-in Ethernet port	Built-in Serial port
	DAQSTATION	CX2620/2610/2420/2410/2220 CX2210/2200/2020/2010/2000 CX1206/1200/1006/1000		
Eurotherm *1	Unit Controller	2500 *3	Built-in Ethernet port	
	Regulation Meter	nanodac		
RKC INSTRUMENT *1	Regulation Meter	PF900/901, FB100/400/900 HA430/930, SA200/201/100 RB, SRV/SRX, H-PCP-J		Built-in Serial port

Manufacturer	Series/Product	Model	Ethernet module	Other communications
CHINO *1	Recorder	LE5000/5100/5200/5300 AH3000/AL3000 KR5100/5200/5300 KR2000/3000/BR1000		Built-in Serial port
	Regulation Meter	LT230/300/350/370/400/830 DP1000G/3000G, DB1000 DB2000, KP1000/2000/3000		
PANASONIC *1	Regulation Meter	KT2/4(H/B), KT7/8/9		Built-in Serial port
	Eco Power Meter	KW1M(-H/R), KW2G(-H) KW4M, KW7M, KW8M, KW9M		
MITSUBISHI *1	Energy Monitoring Unit	EcoMonitorLight		Built-in Serial port
	Indicating Instrument	New-S, Super-S, S		
	Smart Meter	M5CM		
HIOKI *1	Remote Measurement & Monitoring System	2300	2301/2302/2303/2304 2305/2332/2341/2342 2343/2353	
Mitutoyo *14	Measurement Data Management Wireless Communication System "U-WAVE"	U-WAVE-R 02AZD810D		USB

Network Switch

Manufacturer	Series/Product	Model	Ethernet module	Other communications
MOXA *1	Industrial Ethernet Switch	EDS-828/728, EDS-518/516(A) EDS-P510A/506, EDS-G509/500 EDS-508/505/408/405A	Built-in Ethernet port	

Sensor

Manufacturer	Series/Product	Model	Ethernet module	Other communications
OMRON *4	Photoelectric sensor			Digital Signal Wire Analog Signal Wire (Extension connector)
	Fiber sensor			
	Proximity sensor			
	Laser sensor			
	Displacement sensor			
	Vision sensor			
	Environment sensor	2JCIE-BU01, 2JCIE-BL01		Bluetooth *5
ABLIC	Batteryless Water leakage detector	CLEAN-Boost	S-CBTGAAAC	Bluetooth *5
SIRC	Angle sensor for mechanical meter	PAK02		Bluetooth *5
CORE	Smell sensor	Cagou-B		Bluetooth *5

General (I/O, Open Protocol etc.)

Manufacturer	Target device	Communication Protocol / Connection Type
Each manufacturer	Digital Input/Output device *4	Digital Input/Output (DI/DO)
	Analog Input device *4	Analog Input (AI)
	Modbus server(slave) device	MODBUS/TCP (Ethernet) MODBUS/ASCII (Ethernet) MODBUS/RTU (Serial) *5
	EtherNet/IP server(adapter) device	EtherNet/IP (Ethernet)
	BACnet/IP server(slave) device	ANSI/ASHRAE Standard 135-2012 / IEIEJ-G-0006:2006 (Ethernet)
	IEC61850MMS server device	IEC61850MMS (Ethernet)
	SLMP server device	SLMP (Ethernet)
	MTConnect Agent device	MTConnect (Ethernet)
	Bluetooth built-in device *5	Bluetooth Beacon
	Serial I/F built-in device *5 *7	Serial communication (using User Protocol communication function)
Takebishi	DeviceAdapter *5 *6	Serial communication (via Bluetooth)

*1 Accessible by MODBUS Ethernet or MODBUS Serial communication function. See also *5 for Bluetooth Serial communication.
 *2 Accessing to FANUC CNC and Mitsubishi CNC is limited to models that can use the DPRNT function.
 *3 The base unit (2500B) is required in addition for the Eurotherm 2500 Series.
 *4 Digital input / output is compatible with DGW-F20 or DGW-W710, and analog input is compatible with DGW-F20 only.
 *5 When using Bluetooth Beacon or Bluetooth Serial Communication, Bluetooth conversion adapter (recommended product: BLED112 by Silicon Labs) is required. DGW-W710 is not supported.
 *6 When using Bluetooth Beacon or Bluetooth Serial Communication, Bluetooth conversion adapter is separately required. DGW-W710 is not supported.
 *7 When using the User Protocol communication function, you can access a device that has an arbitrary ASCII communications protocol. (A definition of the protocol specification is required.)
 *8 Accessible by EtherNet/IP communication function.
 *9 Please confirm to Shibaura Machine whether your machine tool has connectivity.
 *10 Accessible by MITSUBISHI EDM Ethernet or MTConnect communication function.
 *11 Accessible by MTConnect communication function.
 *12 Accessible by KV Ethernet or EtherNet/IP communication function.
 *13 Use "Modbus Connection" to connect with Panasonic FP series via serial communication.
 *14 DGW-W710 is not supported.