TAKEBISHI

OPC FOUNDATION MEMBER

Data Access Unit for IoT

DeviceGateway

Device Gateway

Equipped with Communications Functions for 150 Types of Devices

Compatible with Industry 4.0

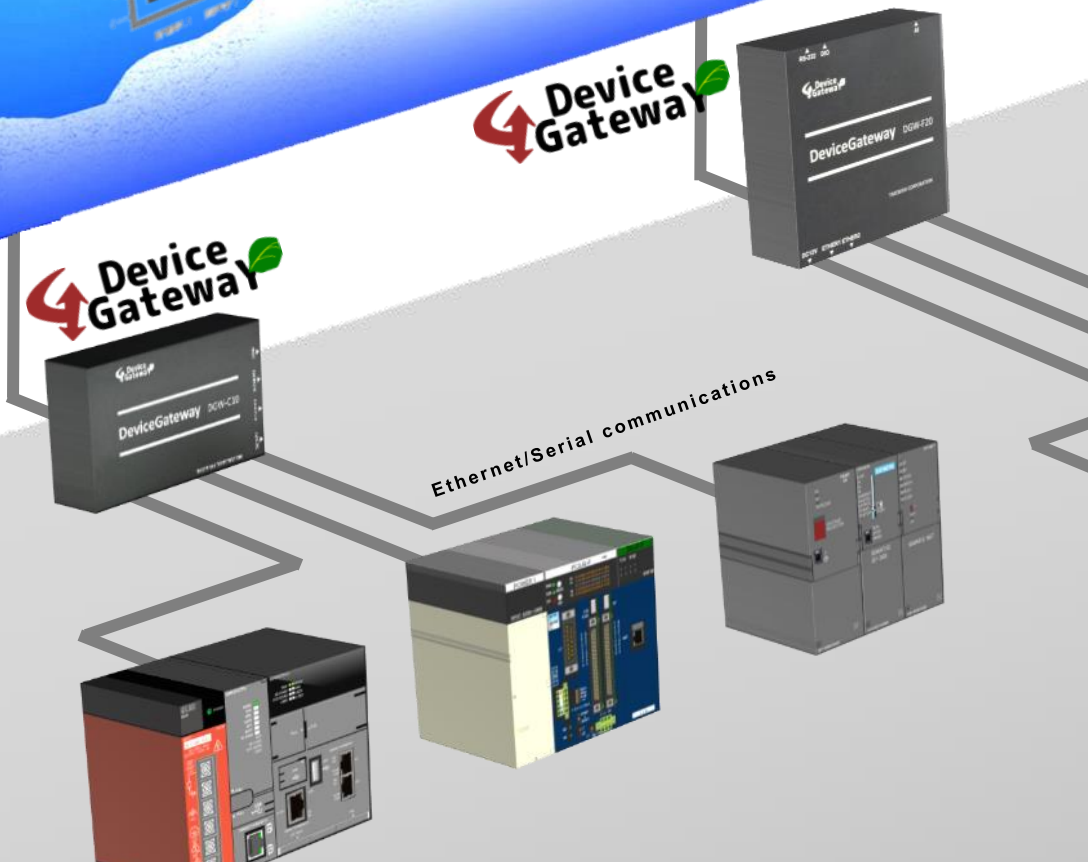
Compatible with Various Cloud Services

Easy Setup with a Web Browser

CERTIFIED FOR COMPLIANCE OPC FOUNDATION

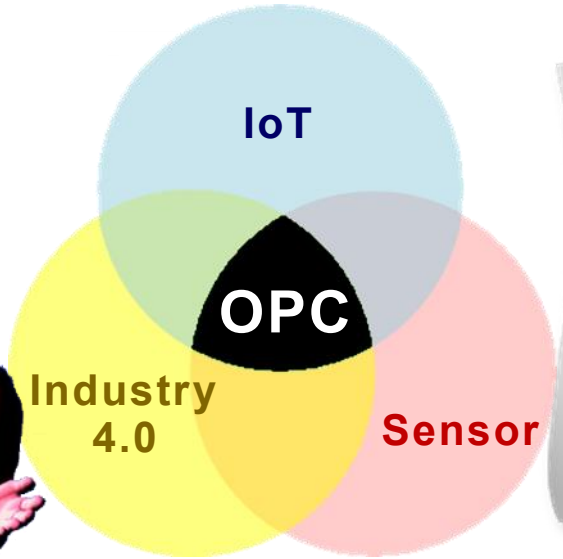
TAKEBISHI CORPORATION

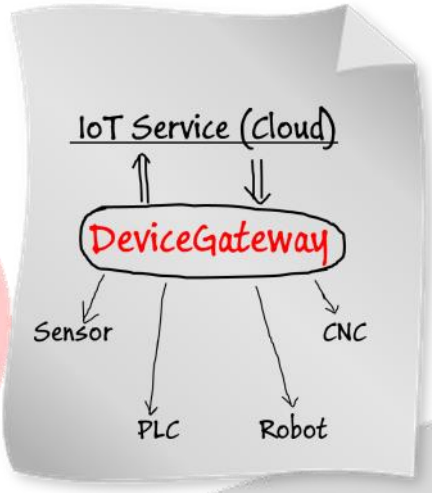
Connecting to the Future throughout the Ages

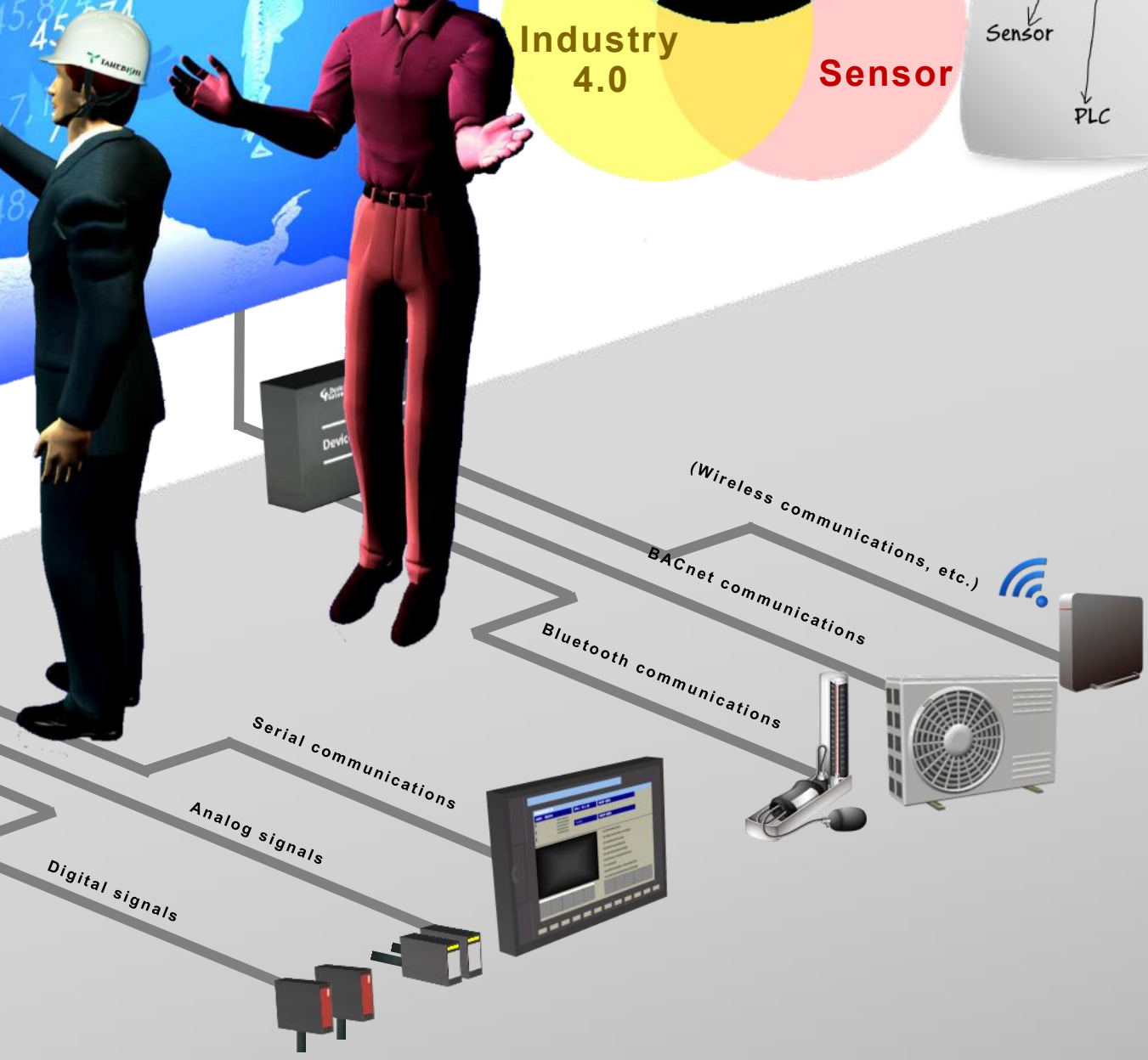


Optimal IoT Solutions for Evolving Equipment and Changing Production Sites.

OPC technologies to support production sites. DeviceGateway, an IoT data access unit, derives the maximum benefit from these technologies. We provide solutions that solve the problems of future society.







Directly Link Production Equipment and IT Systems

Access sensor information and improve production efficiency!

FA	MES	IoT	Life
Equipment monitoring Data acquisition Remote maintenance SCADA	Production planning Production orders Quality management Production history	Big data Supply chain Preventative maintenance Artificial intelligence	Surveillance Health management Security Energy monitoring




Upper layer systems

SQL
OPC UA
IEC 62541-compliant
AWS Kinesis
SNMP
MotionBoard

MQTT
High-speed transfers of large amounts of data
FTP
HULFT IoT
HTTP(S)
MindSphere

Directly link production equipment and IoT services! Create new value

- **IoT Compatibility** Built-in OPC UA/MQTT
- **PC-free** Installed in production sites (inside panels)

Sensing lifestyles! Providing safety and peace of mind using IoT

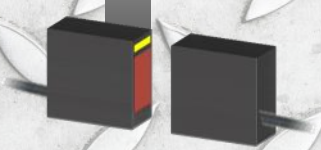
- **Caregiving** Management of vitals through NFC
- **Hospitals** Position measurements using Bluetooth

Device Gateway

Production sites

Ethernet
Serial
Digital signals
Analog signals
Bluetooth/NFC※





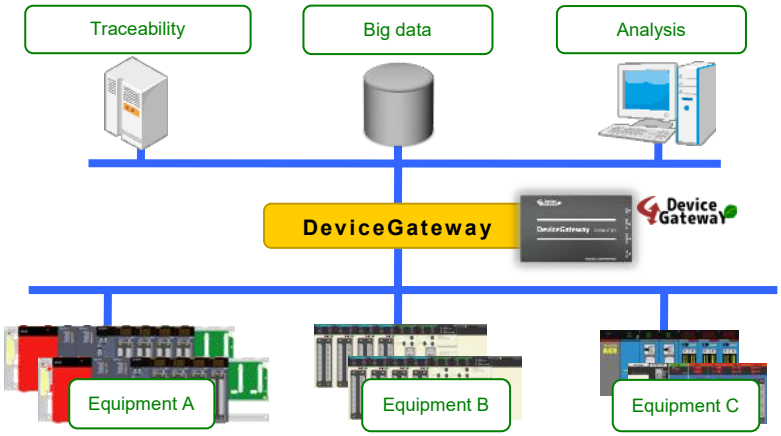

Control devices	Industrial machines	Sensors	Health care
PLCs Wiring systems Remote I/O Telemeters	PLC NC Robots Machine tools	Photoelectric sensors Proximity sensors Displacement sensors Vision sensors	Infusion pumps Body composition analyzers Blood pressure monitors Scales

* If NFC communication is required, please consult separately.

Use Cases

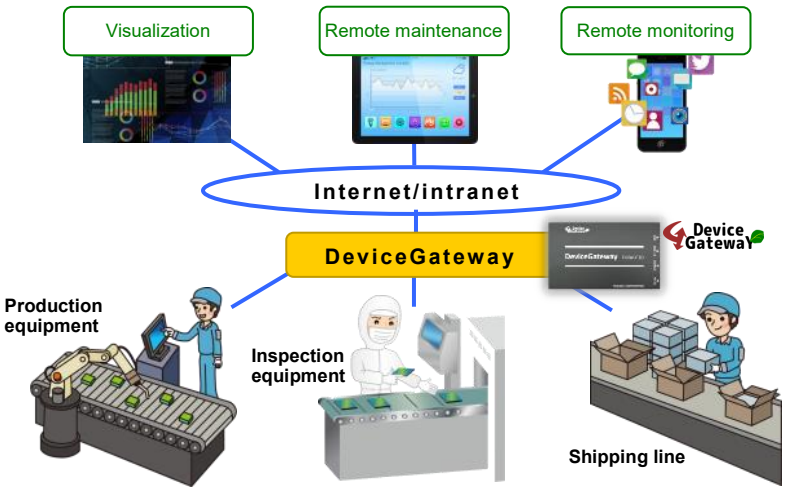
Yield Improvements ••• Big Data, Traceability, and Analysis

Acquire information from production sites through DeviceGateway and use it as big data in cloud-based databases. Analyze the data at factory hosts and use it to reduce stoppage time due to equipment breakdowns and to improve quality.



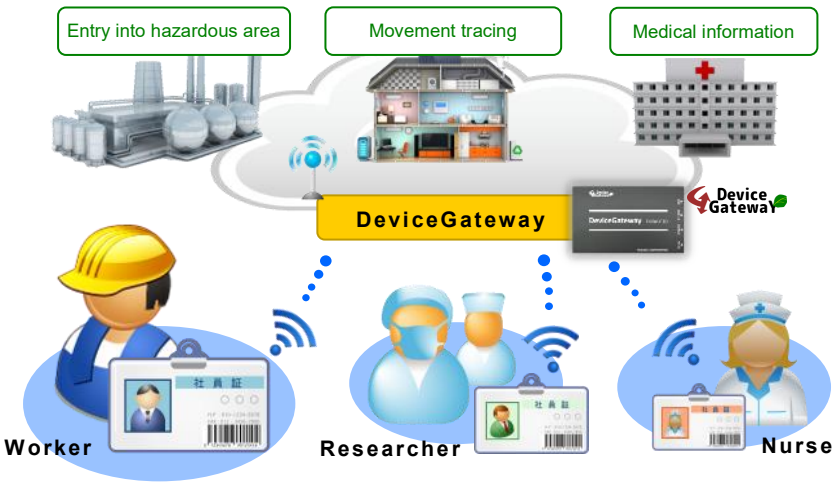
Productivity Improvement ••• Visualization, Remote Maintenance, and Remote Monitoring

Remotely monitor the operating status of production and manufacturing equipment operating at remote sites. Able to understand the status of equipment without visiting the site so users can smoothly take basic measures when problems or alarms occur, improving productivity.



Safety and Security (Position Measurement) ••• Flow Management, Location Management, and Security Monitoring

DeviceGateway captures radio waves generated by Bluetooth tags and calculates position information from the radio wave strength. Safety can be improved by detecting entry to hazardous areas and managing the movement of staff.

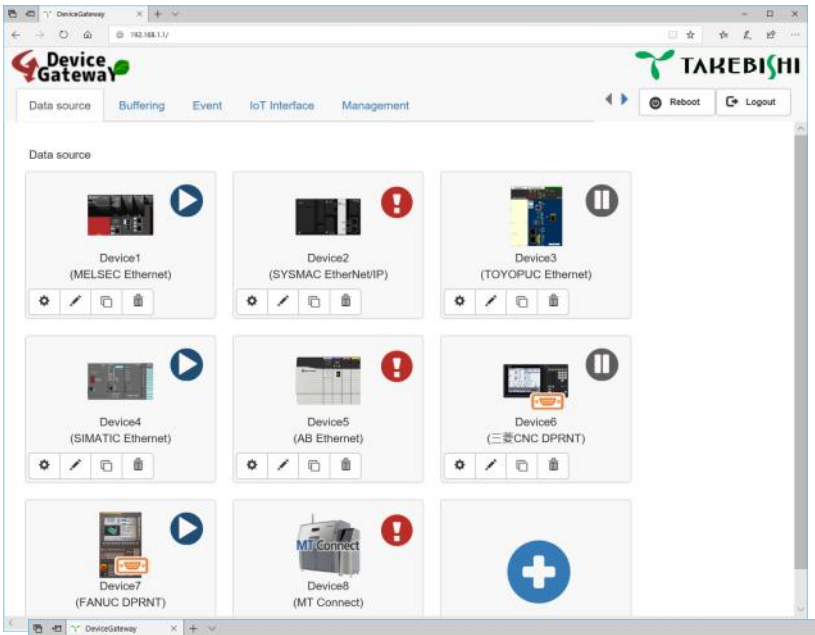


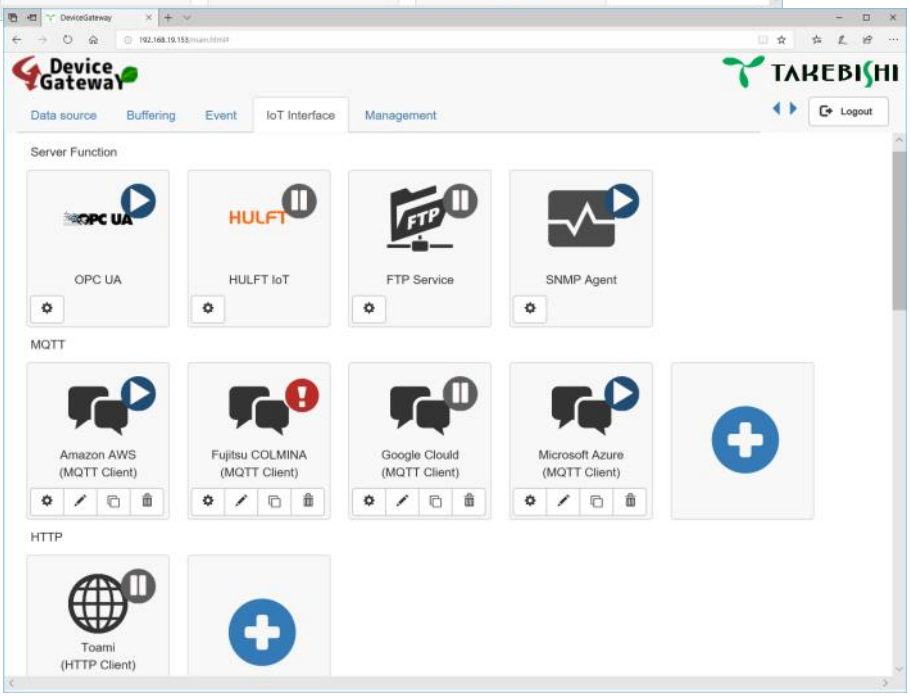
Features

Hardware ••• Equipped with various external interfaces

* Only available for DGW-F20 model

Software ••• Supported devices and function performance are greatly enhanced





Built-in communications protocols
Access 150 types of devices, such as PLCs, sensors, etc.

Ethernet/serial communications
Communicate with older devices using RS-232C/RS-485

Digital I/O and analog inputs
Read sensor signals

Beacon communications with Bluetooth tags
Measure position information

Network Management (SNMP Agent)
Monitor status by upper layer system. (eg. Zabbix)

Industry 4.0
Built-in OPC UA server function

Link to IoT platforms
MQTT connections to AWS/Azure/Bluemix

HULFT IoT
Implement secure communications with mission-critical systems

Edge computing
Detect triggers and issue SQL queries/ JSON requests

Offline buffering
Retain data during disconnections on the SD card

Alarm detection
Monitor the rate of change and deviation of tag data

Scale conversions and BCD conversions
Data processing with engineering value conversions

Language switching (English/Japanese)
Switch between English and Japanese

Functional Specifications

Software

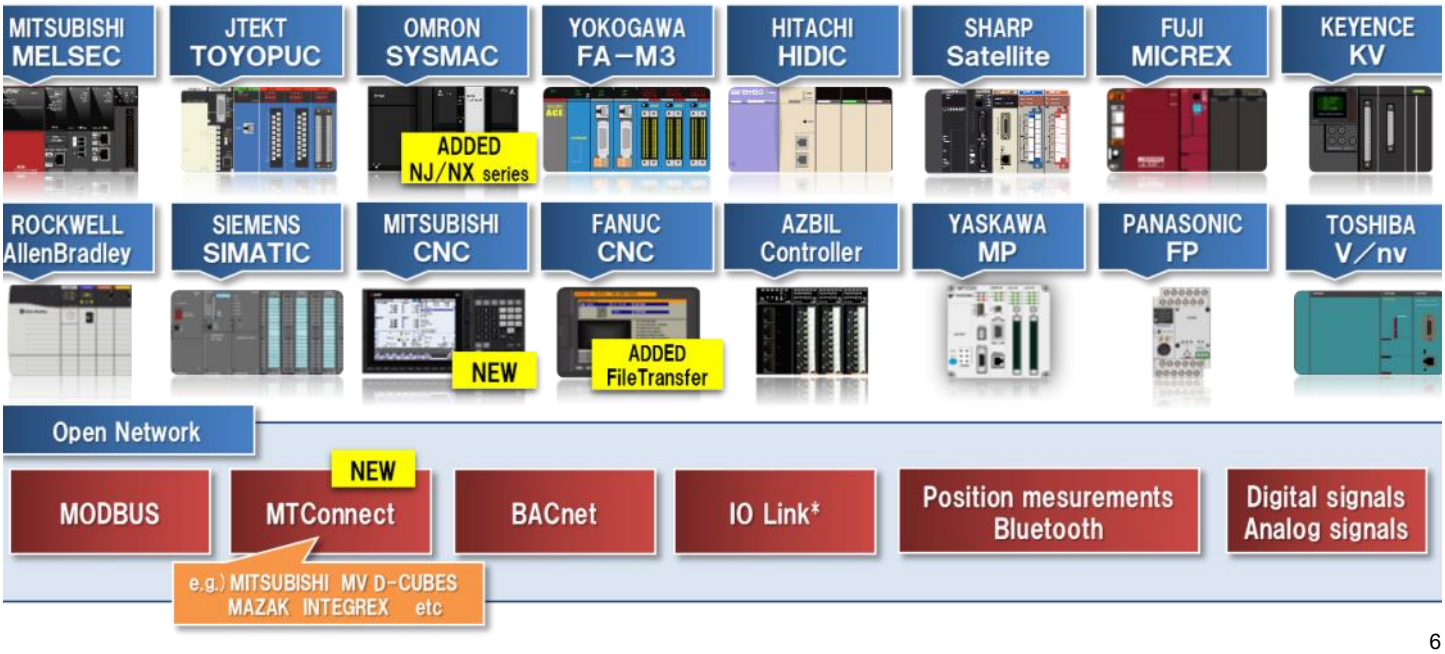
Item		Description
Data sources	External Interfaces	Ethernet, Serial, Digital I/O, Analog Input etc.
	Device Protocols	SLMP, MODBUS, MTConnect(1.3), BACnet etc.
	Max Connections	8 connections
Tag Management	Max Tags & Points	8,192
	Data Types	(U)Int8/16/32/64, Float, Double, Boolean, String * Arrays are supported for all types except String
	Extended Settings	Specify bit position of registers Byte swapping, Read/Write only attributes Specify byte position of word registers
	Simulation	Random, Increment, Sign, Static
	System Calculation	BCD conversion
	Scale Conversion	Linear, Square Root, Power factor
	Alarms	Rate of change, Deviation, Level, Discrete
	Monitor Values	Current values can be monitored from the web browser
Configuration	Operation	Web browser setup page is provided * Microsoft Internet Explorer 10 or higher
	External	Import/Export (CSV/JSON format)
Events	Max Events	64 events
	Triggers	Cycle, Time, Changed value, Area changed value, Received MQTT, Tag alarm changed, Area alarm changed, Disk size, Beacon detection, Update beacon data
	Actions	Loop start/end, Jump, Compare value, Compare text, Calculate, Edit text, Get text, Get CSV element, Get Json element, Write value, Send MQTT, Send HTTP, Send SQL, FTP upload, Send Kinesis, Send MindSphere, Send MotionBoard, 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, Make beacon list
Buffering	Max Tags	32 tags (4 point per 1 setting, max 8 settings)
	Max Data	8,192 records each (converted data accumulated as 1 record)
Offline Buffering	Applicable Interfaces	MQTT, HTTP(S), SQL, FTP, AWS Kinesis SIEMENS MindSphere, WingArc1st MotionBoard
	Max Queue Size	8,192 queries
	Operation Mode	Enabled (constantly), enabled (when there is an communications error), disabled
Diagnostics	Network Diagnostics	Ping, Traceroute
	Diagnostics Log	Data Source, Event, IoT Interface etc
User Accounts	Applicable Target	WebUI, FTP server, OPC UA server
	Max Users	64 users
General Functions	Language switching	English, Japanese
	File Management	Diagnostics log, Certificates, Backup/restore
	Time Management	Correction of internal clock data (NTP server synchronization)
	Update	Firmware Update
Option	DAP Communication	Virtual serial mode / Manual connection mode, Max 3 DAPs

IoT Interface

Item		Description
OPC UA Server (Ver. 1.03)	Endpoint URL	opc.tcp://[IP address]:[port number]/
	Profile	Embedded UA Server Profile
	Security Policy	None, Basic128Rsa15, Basic256, Basic256Sha256
	Security Mode	None, Sign, SignAndEncrypt
	User Authentication	Anonymous, User name/password, X.509 user certification
SNMP Agent (Ver2c)	Supported Command	Get, GetNext, GetBulk, Notification(Trap)
	MIB	Supplies original objects of this product
	Max Trap Targets	2 SNMP Managers
MQTT Client (Ver3.11)	Sending and receiving	Subscribe, Publish
	Protocol	TCP (WebSocket not supported)
	Authentication	User name/password, TLS authentication
	Supported functions	QoS0/1/2, Retain/Will, TLS/SLL
HTTP(S) Client (Ver1.1)	HTTP Authentication	None, Basic authentication, Digest authentication
	HTTP Method	GET, PUT, POST, DELETE, OPTIONS, HEAD, TRACE
	Proxy Server	Supported (User name/password authentication also supported)
SQL Client	Interface	JDBC 4.2
	Database	Microsoft SQL Server2014 Oracle Database 11g MySQL5.6, PostgreSQL 9
	Query	SELECT, UPDATE, INSERT, DELETE
	Max Columns	512 columns per query
FTP Server	User Authentication	User name/password
	Transfer Mode	Active/Passive
FTP Client	User Authentication	Anonymous, User name/password
	Transfer Mode	Active/Passive
AWS Kinesis Client	Command	PutRecord
	Partition Key	Arbitrary fixed value
	Proxy Server	Supported (User name/password authentication also supported)
SIEMENS MindSphere Client	Command	api/agentmanagement/v3/register api/agentmanagement/v3/oauth/token api/mindconnect/v3/exchange
	Security Policy	SHARED_SECRET
	Proxy Server	Supported (User name/password authentication also supported)
WingArc1st MotionBoard Client (MBCloud compatible)	Connection Authentication	Login ID, Authentication key
	Command	POST, Realtime data connection WebAPI(JSON)
	Supported Data	Status (Text, Number, Boolean)
	Max Columns	50 Status per query
HULFT IoT Agent (Ver. 1.3)	File Transfer	Encryption, Data compression
	Proxy Server	Supported (User name/password authentication also supported)

* 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.)

Applicable Models



* IO Link connection can be supported using the IO-Link Master Gateway (Modbus TCP) by Comtrol.

Applicable Devices

PLC(Programmable Logic Controller)

Manufacturer	Series/Product	CPU module	Ethernet module	Other communications	DGW -C10	DGW -F20
MITSUBISHI	MELSEC iQ-R	R120/32/16/08/04	Built-in Ethernet port RJ71EN71	RJ71C24(-R2/R4)	✓	✓
	MELSEC iQ-F	FX5U(C)	Built-in Ethernet port			
	MELSEC-Q (Universal high-speed type)	Q26/13/06/04/03UDV	Built-in Ethernet port QJ71E71-100/B2/B5	QJ71C24N(-R2/R4)		
	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	QJ71C24N(-R2/R4)		
	MELSEC-Q (Process)	Q26/13/06/04UDPV Q25/12/06/02PH	QJ71E71-100/B2/B5	QJ71C24N(-R2/R4)		
	MELSEC-Q (Redundant)	Q25/12PRH	QJ71E71-100/B2/B5	QJ71C24N(-R2/R4)		
	MELSEC-Q (High performance)	Q25/12/06H, Q02(H)	QJ71E71-100/B2/B5	QJ71C24N(-R2/R4)		
	MELSEC-Q (Basic)	Q01, Q00(J)	QJ71E71-100/B2/B5	QJ71C24N(-R2/R4)		
	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	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	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-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)			
HITACH	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)			

PLC(Programmable Logic Controller)

Manufacturer	Series/Product	CPU module	Ethernet module	Other communications	DGW-C10	DGW-F20
SHARP	SATELLITE-JW	JW300, JW100H, JW70H JW50H, JW30H, JW20H	JW-300/25T/255CM JW-50CM/51CM		✓	✓
	J-Board	Z-500, Z-300	Z339J			
FUJI	MICREX-SX	SPH3000, SPH300, SPH300EX SPH2000, SPH200	Built-in Ethernet port NP1L-ET1/2		✓	✓
	MICREX-F	F150S, F140S F120S/H, F80H/F70/F55	FFU170B NC1L-ET1			
PANASONIC	FP7	FP7	Built-in Ethernet port		✓	✓
	FP2	FP2(SH)	FP2 ET-LAN(2)			
	FP-X	FP-X C60/30/14 R/T/P(D)	FP-X COM5			
	FPΣ※1	FPΣ		AFPG801/802/806		
	FP0R※1	FP0R		Built-in Serial port		
	FP-e※1	FP-e		Built-in Serial port		
KEYENCE	KV	KV-7500, 7300 KV-5500, 5000 KV-3000, 1000, 700	Built-in Ethernet port KV-LE21V/EP21V KV-LE20(V/A)		✓	✓
		KV-Nano	KV-NC1EP			
TOSHIBA	nv(type1)	PU811	EN811/EN821		✓	✓
	nv(type1) Light	PUM11, PUM12, PUM14				
	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			
	PROSEC T(T2N)	PU235N, PU245N	Built-in Ethernet port			
IDEC※1	MICROSmart	FC5A	Built-in Ethernet port	Built-in Serial port FC5A-SIF2/4 FC4A-HPC3	✓	✓
KOYO※1	DirectLOGIC 05	DL05	H0-ECOM100	D0-DCM	✓	✓
	DirectLOGIC 06	DL06				
	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				
	SU	SU-5/5E/6B/5M/6M/6H		Built-in Serial port U-01DM		
	KOSTAC SZ	SZ-4/4M				
	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		
YASKAWA	MP3200	CPU-201, CPU-202	Built-in Ethernet port 218IF-01/02	218IF-01/02 217IF-01	✓	✓
	MP2400	MP2400				
	MP2300	MP2310, MP2300(S)				
	MP2200	MP2200				
	MP2100			217IF-01		
	MP900	MP920	218IFA	Built-in Serial port		
DELTA※1	AH500	AH500	AH10EN-5A		✓	✓
	DVP-EH	DVP-EH2/3	DVPENE01-SL	Built-in Serial port		
	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)				

Applicable Devices

PLC(Programmable Logic Controller)

Manufacturer	Series/Product	CPU module	Ethernet module	Other communications	DGW-C10	DGW-F20
DELTA※1	DVP-EC	DVP-EC3		Built-in Serial port	✓	✓
	DVP-SX	DVP-SX(2)				
	DVP-SA	DVP-SA(2)				
	DVP-SS	DVP-SS(2)				
	DVP-SC	DVP-SC				
	DVP-PM	DVP-PM				
ROCKWELL	AB GuardLogix	1756	1756-ENBT 1756-EN2T(/C,T)		✓	✓
	AB ControlLogix	1756	1756-ENBT 1756-EN2T(/C,T)			
	AB CompactLogix	1769-L35/32E 1768	Built-in Ethernet port 1768-ENBT			
	AB FlexLogix	1794	1788-ENBT			
	AB DriveLogix	5730, 5720	1788-ENBT			
3S※1	CoDeSys	(汎用PC)	Built-in Ethernet port		✓	✓
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 WinAC	WinAC RTX	Built-in Ethernet port			

Remote I/O System

Manufacturer	Series/Product	CPU module	Ethernet module	Other communications	DGW-C10	DGW-F20
M-SYSTEM	Remote I/O R3※1	R3	R3-NE1	R3-NM1/R3-NM3	✓	✓
	Remote I/O R5※1	R5(H)	R5-NE1	R5-NM1		
	Remote I/O R6※1	R6	R6-NE1/R6-NE2	R6-NM1/R6-NM2		
	Remote I/O R7※1	R7E	Built-in Ethernet port	Built-in Serial port		
	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			
	BACnet controller	BA3-CB1	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			

NC(Numerical Control) Equipment

Manufacturer	Series/Product	Model	Ethernet module	Other communications	DGW-C10	DGW-F20
FANUC ※2	FANUC CNC	Series 0(i) Series 15(i) Series 16(i)/18(i)/20/21(i) Series 30i/31i/32i		Built-in Serial port (DPRNT communication)	✓	✓
	FANUC Power Mate	Power Mate-D/F/H Power Mate-I				
MITSUBISHI ※2	Mitsubishi CNC	M800/M80 series E80 series C80 series M700V series M70V series E70 series C70 series		Built-in Serial port (DPRNT communication)	✓	✓

Machine Tools

Manufacturer	Series/Product	Model	Ethernet module	Other communications	DGW-C10	DGW-F20
MITSUBISHI	Electric discharge machine MV D-CUBES series etc		MTConnect Agent		✓	✓
MAZAK	INTEGREX series etc		MTConnect Agent		✓	✓

Other (Display Panel, Vison Sensor)

Manufacturer	Series/Product	Model	Ethernet module	Other communications	DGW-C10	DGW-F20
HAKKO※1	MONITOUCH	V815/812/810/808/806 V715/712/710/708	Built-in Ethernet port	Built-in Serial port	✓	✓
		V608/606				
COGNEX※1	In-Sight	In-Sight Micro/5000/EZ	Built-in Ethernet port		✓	✓

Other (Sensor, Recorder, Meter, Network switch etc)

Manufacturer	Series/Product	Model	Ethernet module	Other communications	DGW-C10	DGW-F20
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	Built-in Serial port	✓	✓
	Digital Regulation Meter	DMC50	Built-in Ethernet port			
		DMC10				
	Digital Direction Regulation Meter	SDC46/45/36/35/26/25/15				
	Recorder	SRF101/102/103/106/201 SRF202/203/206/212/224				
	Mass Flow	CMS, CMF, CMQ-V CML, MPC, MVF				
	Sensor	PBC				
	Burner Controller	AUR350C/450C, RX				
	Communication Convertor	CMC15G, CMC10B				
	Program Regulation Meter	DCP31/32, DCP551/552				
YOKOGAWA※1	STARDOM	FCN, FCJ	Built-in Ethernet port	Built-in Serial port NFLR111/121	✓	✓
	Recorder SMARTDAC+	GX10/20/60/90, GP10/20	Built-in Ethernet port	Built-in Serial port		
	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				
	DAQSTATION	CX2620/2610/2420/2410/2220 CX2210/2200/2020/2010/2000 CX1206/1200/1006/1000				
Eurotherm※3	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	✓	✓
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	2300	2300	2301/2302/2303/2304 2305/2332/2341/2342 2343/2353		✓	✓
MOXA※1	Switching Hub	EDS-828/728, EDS-518/516(A) EDS-P510A/506, EDS-G509/500 EDS-508/505/408/405A	Built-in Ethernet port		✓	✓
COMTROL※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		✓	✓
UNITEC	BACnet Unit for MELSEC	(MELSEC-Qシリーズ CPU)	BAQ08V		✓	✓
	BACnet Unit for LonWorks	(LonWorks unit)	BL750			
	BACnet Unit for Multi-Connection	(MELSEC/SYSMAC/MODBUS)	BP750-PM			
OMRON	Sensors (Photoelectric, Fiber, Proximity, Laser, Displacement, Vision)	(N/A)	Digital Signal Wire Analog Signal Wire (Extension connector)		–	✓

General (I/O, Open Protocol etc)

Manufacturer	Communication/Connection	Target device	Ethernet module	Other communications	DGW-C10	DGW-F20
Each manufacturer	Contact Input (DI/DO)	(N/A)	(N/A)		–	✓
	Relay Output (DO)	(N/A)	(N/A)		–	✓
	Analog Input (AI)	(N/A)	(N/A)		–	✓
	MODBUS	MODBUS Slave devices	Ethernet port	Serial port	✓	✓
	BACnet/IP Slave ※4	BACnet/IP Slave devices			✓	✓
	SLMP Slave	SLMP compatible devices	NZ2GF-ETB		✓	✓
	MTConnect	MTConnect Agents	Ethernet port		✓	✓
	Bluetooth Beacon ※5	Bluetooth devices			✓	✓
	Bluetooth Serial Communication ※5	Device Adapter			✓	✓
	Other device※6	(N/A)		Serial port	✓	✓

*1 Accessible by MODBUS Ethernet or MODBUS Serial
*2 Accessing to FANUC CNC and Mitsubishi CNC is limited to models that can use the DPRNT function.
*3 The base unit (2500B) is separately required for the Eurotherm 2500 Series.
*4 ANSI/ASHARE standard (135-2012) and IEIEJ-G (0006:2006) are supported for BACnet.
*5 When using Bluetooth Beacon or Bluetooth Serial Communication, Bluetooth conversion adapter is separately required.
*6 When using the user protocol function, you can access a device that has an arbitrary communications protocol. (A definition of the protocol specification is required.)

DeviceGateway Lineup

Model		DGW-C10	DGW-F20
Exterior			
Standard price			
Ethernet Communications		2 ports (10BASE-T/100BASE-TX/1000BASE-T)	2 ports (10BASE-T/100BASE-TX/1000BASE-T)
Serial Communications		RS-232C × 1 port (D-sub 9-pin/male)	RS-232C × 1 port (D-sub 9-pin/male) RS-485 × 1 port (D-sub 9-pin/male)
Bluetooth Communications *1		Bluetooth Beacon, DeviceAdapter (max 3 DeviceAdapter is available)	Bluetooth Beacon, DeviceAdapter (max 3 DeviceAdapter is available)
Digital Inputs (contact inputs)		—	8 channels (voltage/non-voltage input, photocoupler isolated)
Digital Outputs (contact outputs)		—	4 channels (open collector, 4 points/1 common, photocoupler isolated)
Digital Outputs (non-contact outputs)		—	4 channels (photoMOS relay, independent common, photocoupler isolated)
Analog Inputs		—	4 channels (voltage/current mode selection, 16-bit resolution)
SD Card Slot		1 slot (SD/SDHC compatible)	1 slot (SD/SDHC compatible)
USB *1		USB 2.0 (Type-A) × 1 port	USB 2.0 (Type-A) × 1 port
Power Supply	Power Supply Input	DC12V DC jack (AC adapter)	DC12V DC jack (AC adapter) or 3-pin screw-fastened connector
	Included AC Adapter	100 to 240 VAC input (50 to 60 Hz)/12 VDC output	100 to 240 VAC input (50 to 60 Hz)/12 VDC output
	Included AC Cable *2	Plug A (for Japan) 7 A/125 V	Plug A (for Japan) 7 A/125 V
Maximum Power Consumption		4.5 W (maximum when using 100 VAC)	10.5W (maximum when using 100 VAC)
Operating Temperature		-20°C to +60°C * No condensation	-20°C to +50°C (when using 100BASE-TX) * No condensation -20°C to +40°C (when using 1000BASE-T) * No condensation
External Dimensions (mm) (excluding protrusions)		W81 × D137 × H29	W137 × D137 × H40
Weight		380g	700g
Standards and Compliance		CE, cCSAus	—

*1 When using Bluetooth Beacon or Bluetooth Serial Communication, Bluetooth conversion adapter (recommended product: BLED112 by Silicon Labs) is required.
*2 Please change to products that comply with local standards.
* Custom support is available if a Wi-Fi, 3G, or LTE network connection is required on DeviceGateway. Please contact us to discuss your requirements.

Related Products

DeviceAdapter

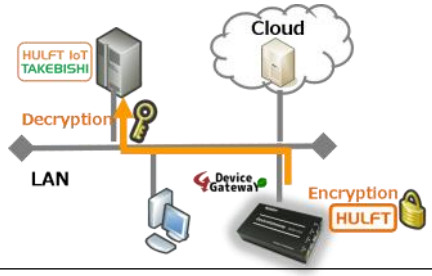
Serial/Bluetooth converter
(for position measurement function)

DeviceXPlorer OPC Server

Industrial communications software (Windows)

HULFT IoT TAKEBISHI

Secure compressed file transfer service



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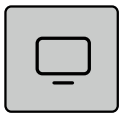
Japan local time

You need to version up the firmware 2.2 (2.2 was released at June 2019) to use all function in this brochure.

June 2019



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