

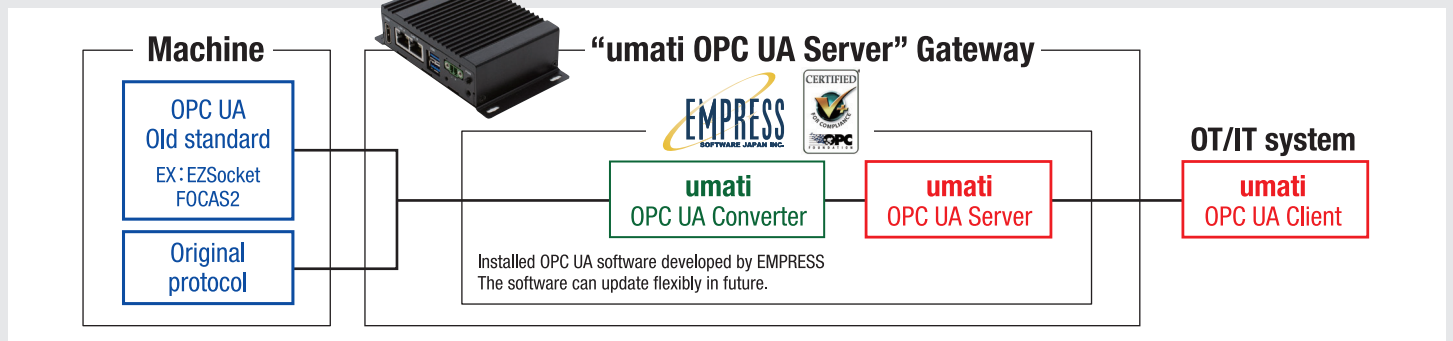
## “umati OPC UA Server” Gateway

With “umati OPC UA Server” Gateway using Umati information model, we can support you to achieve Industry 4.0 by linking machines and OT/IT system.

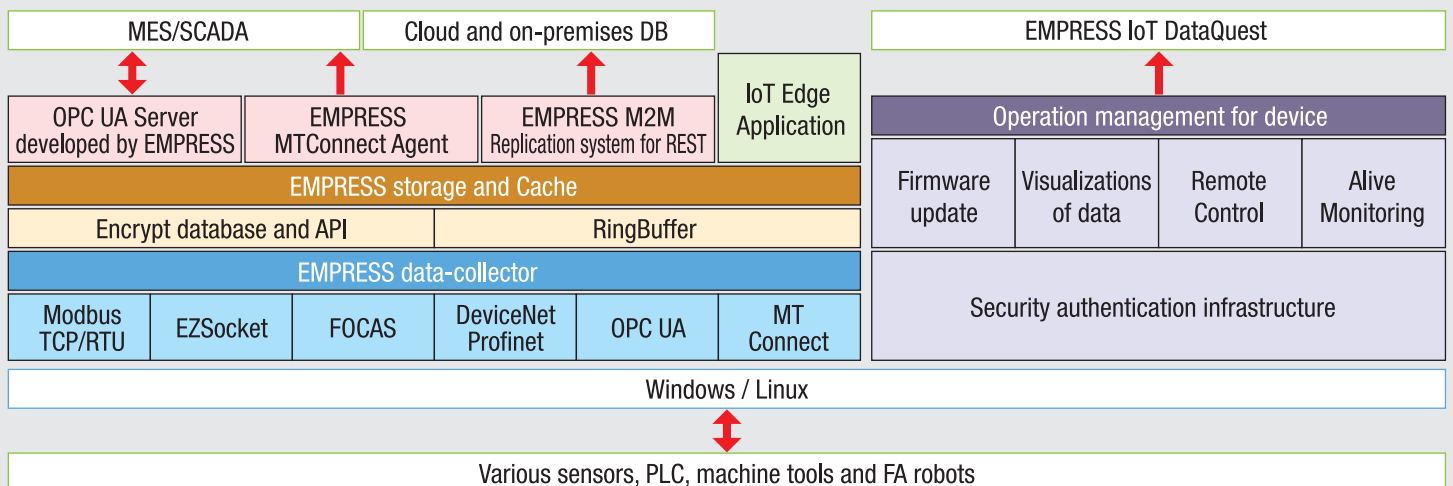


### Basic configuration of Gateway

“umati OPC UA Server” Gateway built based on “Tiny Gateway”, with security and power fail protection, can be embedded into machines or use as a relay device.



### EMPRESS Software Stack and features



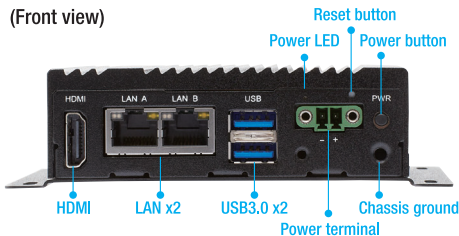
### Many user choose our OPC UA Server with features below

OPC UA Server developed by EMPRESS	In future, standards of OPC UA/information model would be updated. Our software can updated along with OPC UA's update flexibly. If you use commercial merchandise, you have to buy new software.
Consulting of Data mapping	We can also consult your data mapping.
Warranty of product	When you use your own information model into machines, you need to guarantee your products. EMPRESS can consult various information models, methods using OPC UA Client.
Experiences	EMPRESS is a information model specialist with many experience of working with EUROMAP, umati, and field of Robotics. Many companies in overseas take products and systems from EMPRESS.

# Feature of Gateway



(Front view)



(Rear view)

## Specification:

- CPU : Intel® Celeron® N3350 1.1GHz
- Storage : 20GB-320GB
- memory : 4GB LPDDR3 1886MHz
- Fan-less model
- Supply voltage : 9V-36V
- Dimension : 100(W)x70(H)x31(D)mm
- External Interfaces : HDMI x1  
LAN(RJ-45) x2  
USB3.0 x2  
microSD slot x1
- Windows 10 IoT Enterprise LTSB 2019 64bit

## Point-1

Standard installation of OPC UA Server software using "umati" information model. The feature of data traceability (synchronization) and secure data transmission. The software can update flexibly in future.



## Point-2

High security: Mounted "SecureSD", SD card with smart card and encryption.

### Advantage of SecureSD with the function of smart card

#### 1. Storage for encrypted database key of umati OPC UA Server software

Encryption database developed by EMPRESS can be used as below.

- ① Storage for IoT SDK's credential key
  - ② Storage for converter key of DB to OPC UA
  - ③ Storage for data connection key of Modbus
2. Storage for OPC UA Server and Client credentials  
3. Storage for Vendor Spec. Extensions



SecureSD

## Point-3

SSD for industrial equipment with original write filter achieve long-term continuous operation. Prevent corruption of file system which causes failure of booting an operation system.

3D NAND mSATA SSD



### Application

"umati OPC UA Server"  
(Converter)

Collection of  
Asset Information

Predictive  
maintenance

Software  
distribution

### Security

authentication / encryption  
(SecureSD)

Prevention of falsification  
(White List)

### Reliability

Hagiwara's SSD / Write Filter developed by Hagiwara



"OPC UA" - the recommended standard of "Industry 4.0"

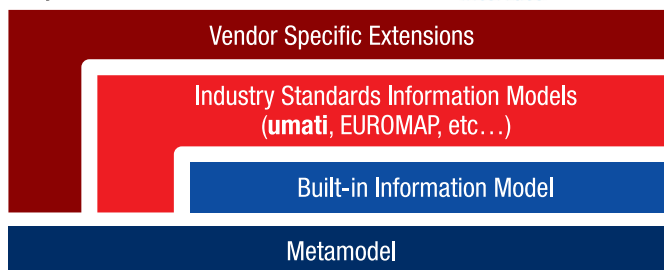
One of its feature is to link telecommunication standards of various industry/business together easily by expanding "information model". In this "information model", "Industry standards Information Models" enables to work with the other telecommunication standards.

## Industry Standards Information Models

- Machine Tool : Umati
- Injection Molding machine : EUROMAP
- FA Robotics : OPC UA Robotics etc...



### 4 layers of Information model



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