iWave
Embedding Intelligence

Industrial IoT Gateway

The Industrial IoT Gateway powered by a powerful ARM Cortex A9 core is built for Industry 4.0 and digital transformation solutions across industries . The modular gateway with scalability on the wireless and peripheral cards can be custom configured to suit application based requirements.

With a wide range of industrial interfaces such as Analog Input Module , MODBUS RTU / TCP over RS485 and a plethora of wireless connectivity options such as 4G LTE , Cat – NB1 , Wi-Fi and BT/BLE , the gateway acts as a hub bridging legacy industrial machines to the cloud enabling data rich analytics. .

SPECIFICATIONS

CORE SPECIFICATIONS
Processor
ARM Cortex A9 Core1.2 GHz
Memory
1GB DDR3 RAM
Storage
4GB EMMC Flash
32GB SD Card Storage
Flash and Storage Expandable
Power
24V DC
Battery Back-Up
7.4V, 1000mAh Rechargeable Battery Back - Up
Operating Temperature
-20°C to +65°C *
Dimensions
220 *120* 47 mm
Mounting
Wall/Ceiling mount, Din Rail Mount (Optional)

WIRED INTERFACES
Interfaces
1 * Rs485
1 * RS232
USB
1 * USB Host
1 * Debug Serial Micro USB, Supports device configuration
1 * USB OTG*
Ethernet
1 * Port (GbE) & RJ45 Connector
HDMI: Display port version 1.4
Analog Input
8 Channel
0-10V Input Range
4-20mA current measurement
Digital Input
6 Channel
0-3.3V Input Range

WIRELESS
Cellular
4G LTE Cat -4
4G LTE Cat-M1
NB-IoT
Dual Sim Connectivity
Wi-Fi
802.11 a/b/g/n/ac
2.4GHz / 5GHz
Client and Hotspot Mode
BT / BLE
Bluetooth v5.0
Wirepas, Nordic SDK,ARMMbed
LoRaWAN
8 Channel Concentrator
865-867 MHz / 915MHz
LoRaWAN Class A and Class C
Integrated Packet Forwarder and Network Server
GNSS: GPS / GLONASS / BeiDou/ Galileo/QZSS

Cloud Ready

Enabled with MQTT and HTTP stacks over an UBUNTU OS integrated with Node-Red application, the gateway is developer friendly and provides the open environment required to build applications.

Moduar, scalable & Configurable

Enabled with a wide suite of wireless blocks and peripheral modules , The gateway can be customised to suit you use-case and serve the best economical fit . Powered by a SOM , The gateway processing core and the memory configurations can be increase if needed based on the computing power required.

Industrial Edge Intelligence

Powered by a powerful ARM Cortex A9 Core dual core processor coupled with the wide options of industrial input interfaces, the gateway can optimise data flow, take real time decisions leading to increased efficiency and performance of legacy assets.

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Software & Protocols

Operating System
UBUNTU LINUX 16.04
Network Communication
MQTT / HTTP / HTTPS
LWM2M
CoAP
Wirepas
TCP/IP, UDP, FTP
Industrial Protocols
MODBUS RTU, MODBUS TCP/IP
DLMS

LoRaWAN
LoRaWAN 1.0
Class A and Class C
Network Server and Packet Forwarder
Security
SSL/TLS Layer
128 bit AES (LoRa)
Firewall (IP Tables) & IP routing
Secure Boot*
External Watchdog
Auto reboot Logic & Safe shutdown logic

PLATFORMS SUPPORTED

Microsoft Azure · IBM · ORACLE®

CUMULOCITY IoT · aws · thingworx

iWave Systems Technologies is an ISO 9001:2015 certified company, head quartered in Bangalore India established in the year 1999. The company focuses on providing embedded solution and services for Industrial, Medical, Automotive and various other Embedded Computing applications. iWave Systems offers wide range of System On Modules and Single Board Computers built using wide range of CPU and FPGA SoC platforms with different form factors such as Qseven, SMARC, SODIMM and HPC by closely working with Tier-1 silicon companies such as NXP, Xilinx, Intel etc.

iWave Systems offers various state of art ready ODM solutions such as Connected Telematic Control Unit / OBD II devices for the automotive edge analytics, Comprehensive ARINC818 solutions for the low latency Aerospace applications and Rugged IP rated performance scalable HMI solutions for Industrial applications. iWave Systems also provides comprehensive Engineering design services involving Embedded Hardware, FPGA and Software development. iWave offers carrier board and custom hardware development with manufacturing and certification services.

iWave's Hardware expertise spans complex board design up to 30 layers; Analog, Digital & RF Designs; FPGA Development up to 3+ million gates and VHDL / Verilog RTL Development & Verification. Our Software expertise ranges from OS Porting, Firmware & Device Drivers Development and Wireless & Protocol Stacks to Embedded Application Development. With the established certified manufacturing eco system partners from Japan and Taiwan, iWave delivers high quality CPU modules, single board computers, custom carrier boards and customised chip on board designs for the global customer requirements.

Optional items not included in the standard deliverables.

Note: iWave reserves the right to change these specifications without notice as part of iWave's continuous effort to meet the best in breed specification. The registered trademarks are proprietary of their respective owners.

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The device can be ordered online from the iWave Website
https://www.iwavesystems.com/product/industrial-iot-gateway/
Or from our Local Partners in your region
http://www.iwavesystems.com/about-us/business-partner.html