

The Machfu

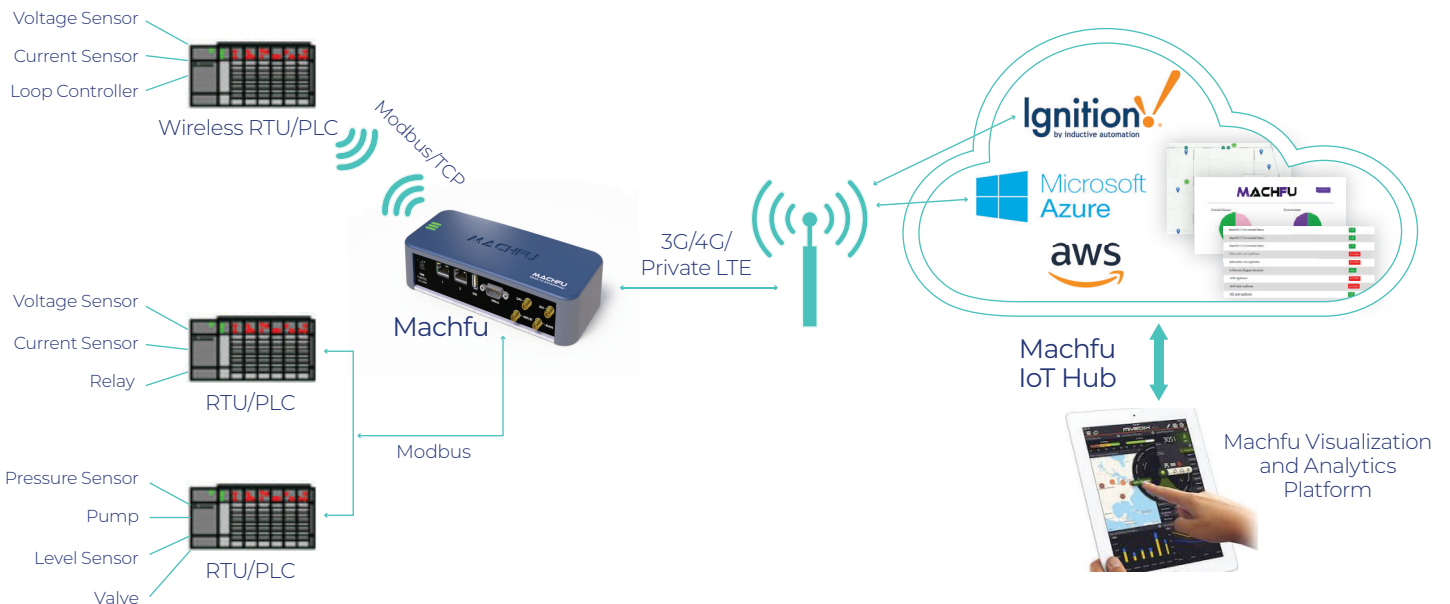
Industrial IoT Gateway



The Machfu is designed to address edge computing needs for critical infrastructure and industrial applications. Machfu provides secure edge to cloud connectivity for industrial controllers, SCADA systems and other sensors in the field. Its unique low power edge intelligence capabilities, powered by a sandboxed, customizable application framework, greatly simplifies configuring, connecting, managing and processing data from sensors and controllers speaking legacy or modern protocols. Machfu increases visibility of critical infrastructure, reduces operational downtime and maintenance costs.

Applications:

- SCADA
- Well Head Automation (Oil & Gas)
- Smart Water and Agriculture
- Industrial Controllers
- Smart Grid



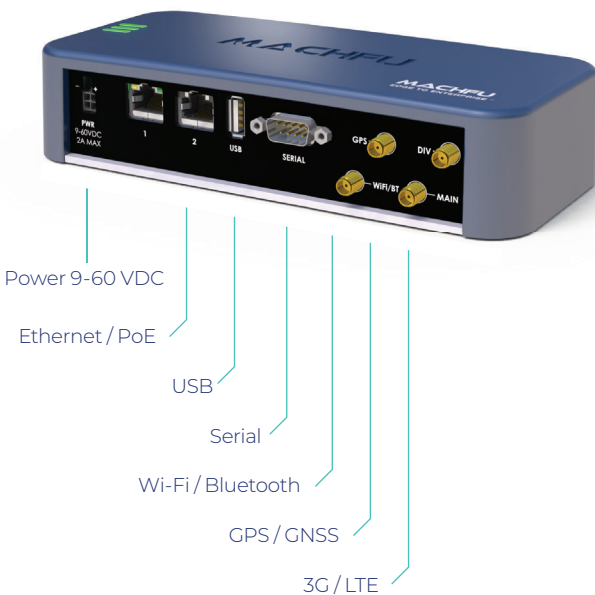
Enabling a graceful transition to IIoT.

Benefits

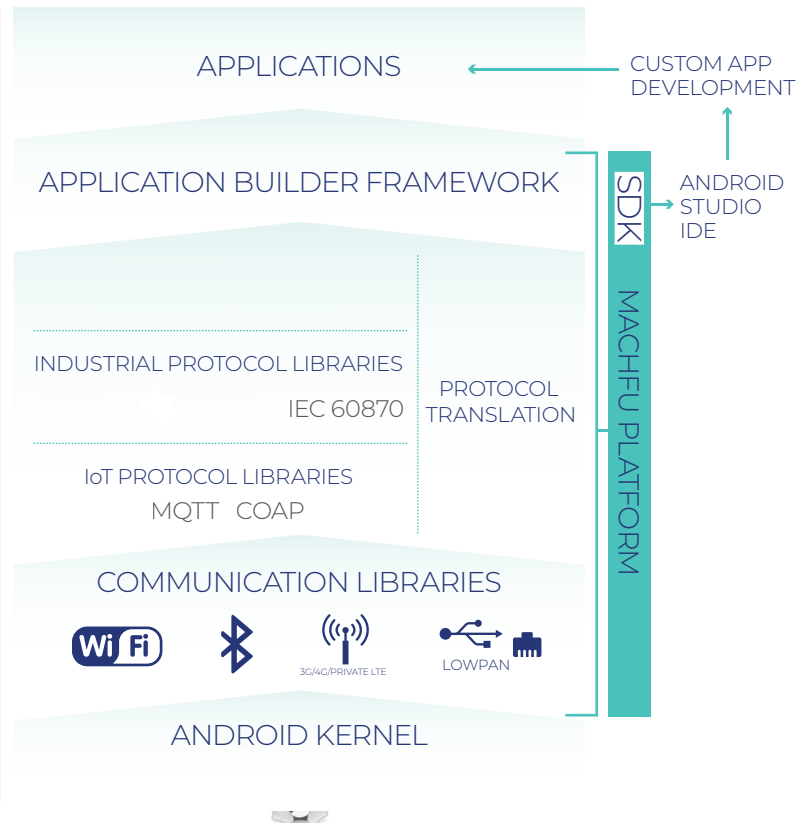
- **Seamless transition to IIoT:** Configurable platform that simultaneously supports legacy and cloud-based head-end systems
- **Edge Intelligence:** Enable automation by running apps and algorithms at the edge.
- **Advanced Networking:** VLAN, VPNs, stateful firewall, port forwarding and ethernet bridging
- **Advanced Security:** Multi-dimensional security features for network connectivity, users, devices and applications
- **Power Management:** Low power design, granular resource control and a rich set of peripherals with minimal power draw
- **Built-in protocol translation:** Built-in libraries simplify exchange of data between different industrial systems and cloud-based hubs
- **Faster ROI:** Unique application framework consolidates functionality of multiple physical devices, reducing cost and increasing productivity

Key Features

- Wired and Wireless interfaces simplify system integration
- Advanced Networking including VPNs, dynamic firewall, routing, VLAN, and tunneling enabling industrial devices to connect to existing industrial applications
- Advanced GPS/GNSS enables Geolocated applications
- Endpoint wireless interfaces that enable connecting to proprietary and standards based field area networks creating a unified end-to-end system
- Commonly used library of industrial protocols enables mapping industrial devices to cloud based systems
- Secure embedded application framework enables running multiple apps on a single hardware platform



BUILT-IN ENTERPRISE GRADE SECURITY



Machfu Gateway Technical Specifications

Cellular North America Certified Carriers	4G LTE with 3G Fallback AT&T, Verizon (USA) Rogers (Canada)
WiFi	IEEE 802.11 b/g/n SISO WPA2-PSK Security
Bluetooth	Bluetooth + Bluetooth Low Energy (BLE) 4.0
GPS	GPS, GLONASS
Networking	Configurable network interfaces with integrated multi-zone firewall
Security	VPN: IPSec, IKEv2, NAT Traversal, SSL, OpenVPN, TLS, PPTP, L2TP (256-bit AES) Secure firmware, digitally signed software
LEDs	3x, Power, Heartbeat, Aux
Power	Input voltage: 9 to 60V DC, Typ 2W, Max 4W

Supported Protocols

Industrial Protocols	DNP3 Master/Outstation, Modbus Master/Slave, IEC 60870, Support for proprietary protocols
IoT Protocols	MQTT, CoAP, HTTPS, RESTful API, JSON, SparkPlug B

Connectors

Ethernet	2x 10/100Mbps
USB	1x USB 2.0 Type A
Serial	1x RS-232 DB9
Digital I/O	1x Contact Closure input
RF Connectors (External Antennas)	SMA

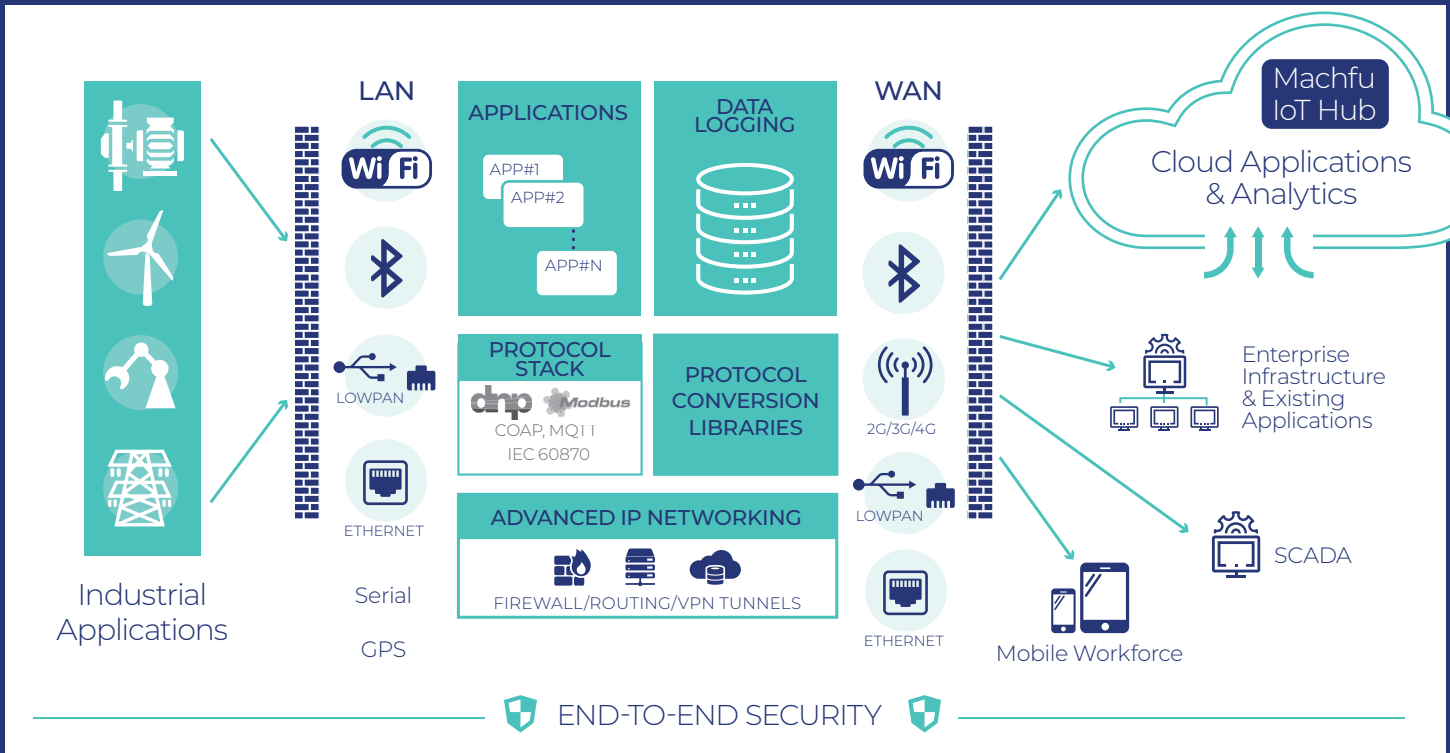
Physical Description

Dimensions (LxWxH)	7.5" x 3.4" x 1.6"
Weight	1.1lbs
IP Rating	IP54, weatherproof enclosure

Environmental

Operating Temperature	-40°C to +80°C (-22°F to +176°F)
Storage Temperature	-40°C to +80°C (-22°F to +176°F)
Humidity	5-90%, non-condensing
Certifications	FCC, IC PTCRB UL60951-1 Hazardous locations: ANSI/ISA 12.12.01, CAN/CSA C22.2 No. 213 Class I, Division 2 (with appropriate enclosure)
Device Management	Local and Remote
Warranty	1 year standard, 5 years extended

Machfu Gateway



We offer end-to-end collection, monitoring and control service that lets you visualize data, statistics, performance and set thresholds. In addition, the data can be easily consumed by other operational dashboards and HMI software. Furthermore, the service includes device management at scale, for updates, upgrades and security patches. Machfu can help your customized application development needs. We also provide consulting services for your project-specific developments. You will be able to leverage 150+ years of engineering expertise for the development of your customized application solutions. Please call or email us: [✉ sdk@machfu.com](mailto:sdk@machfu.com) [☎ 301-540-5372 ext 1100](tel:301-540-5372)

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