TMA IoT Center

16 years of experience

Customers from **10** countries

400+ engineers

20+ products

50+ projects

Why TMA

- End-to-end services: Testing | Deployment | Customer support
- Experienced with latest embedded technology
- Partnership with large embedded tech firm
- Strong foundation, easy to scale
- Flexible project model on choice: ODC | Fixed price | TaaS

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Development Model

Full-cycle IoT Development

Transform your idea into ready solution with our end-to-end software development services

IoT Integrations

Ensuring software platform is compatible with existing infrastructure and legacy equipment

IoT Acceleration

Use our IoT accelerator to manage device connectivity based on predefined scenarios

User App Development

Manage devices' data with native mobile and web applications powered by an intelligent UX

Technologies

Programming	Edge computing, C/C++, Python, Java
OS	Android, RTOS, Yocto, Windows IoT Core, Linux, Raspberry Pi OS
IoT platform	AWS IoT, Google Cloud IoT, Azure IoT Hub, Sierra Wireless Legato/Octave, Thingsboard
Communication	2G/3G/4G/NBIoT/5G, Bluetooth/BLE, Wifi, LoRa/LoRaWAN, Modbus, CAN, LIDAR, SLAM, MQTT, CoAP, LWM2M, AMQP
Hardware	Arduino, ESP, NVIDIA Jetson, Google Coral, Raspberry Pi, Google Coral, Xilinx, Sierra Wireless FX30, STM/ ARM/ AVR/ TI
Devices	Mobile, sensor, GPS, light therapy device, Beacon, electronic plug ARM, Ar7240, RT-Linux, Android

IoT Testing

What we offer?

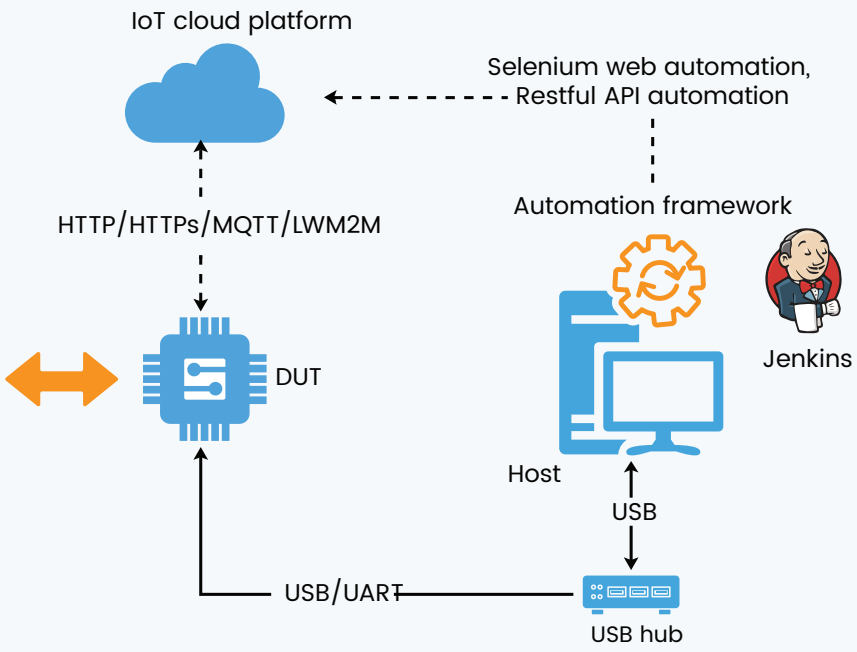
Verification and validation for firmware and applications running on IoT embedded modules (2G/3G/4G/5G cellular, WIFI, Bluetooth, GNSS) with automation level > 70%

Development Model

Agile | Waterfall

- GNSS repeater
- WirelessWired networking Switches/Gateways
- Cellular simulator (LTE, 5G)
- TCP/UDP/FTP/HTTP servers
- Measurement (Oscilloscope, Multimeter)
- Power supply, temperature chamber, shielding box

Tools



IoT embedded device test bench

Black-box test type

- Black-box test type: functional, performance, stress test, end-to-end testing.

Application Testing

- C/C++ API testing

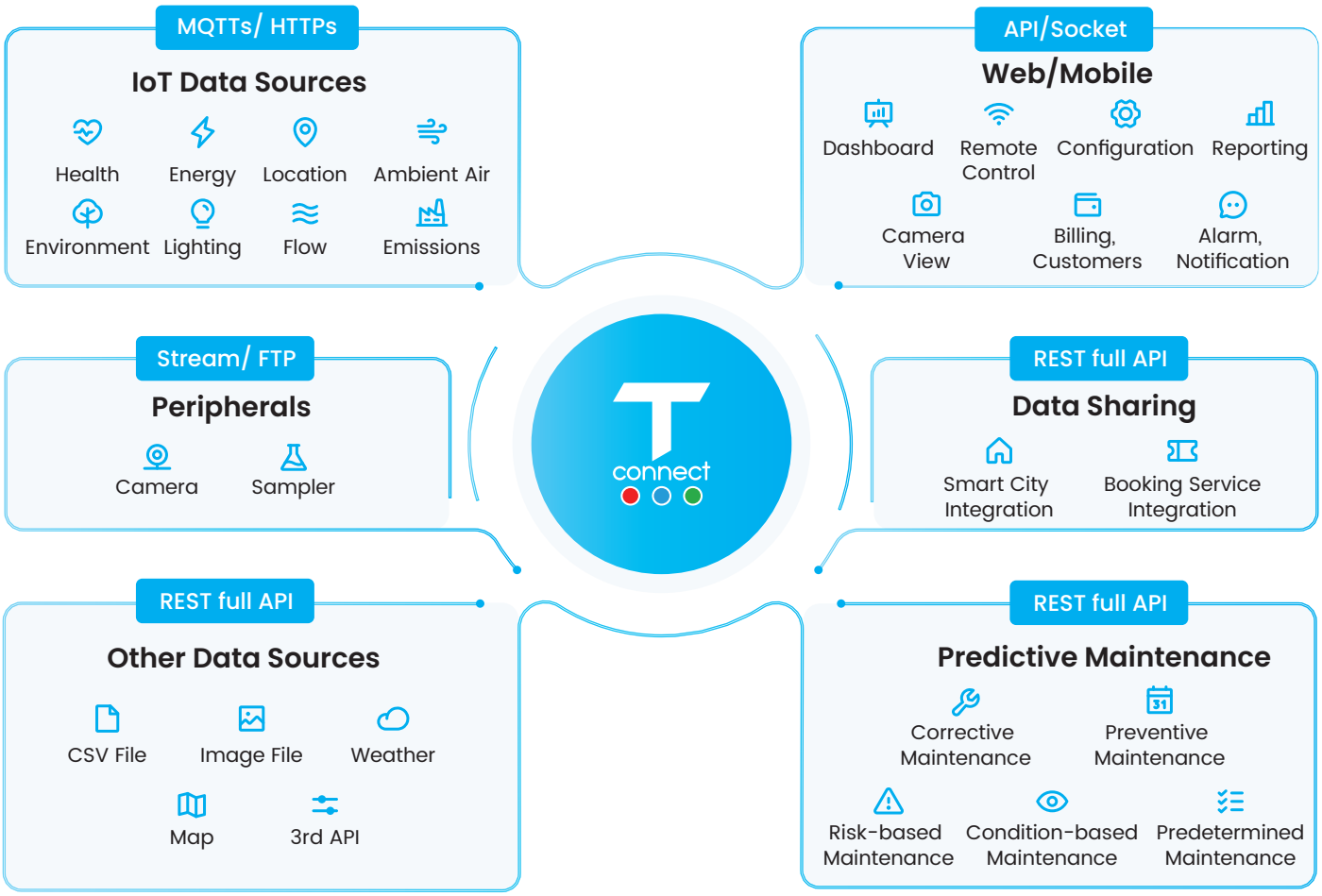
Firmware Testing

- Testing for AT commands based on ITU V.25 ter, 3GPP specifications and manufacturer's specifications.
- IoT cloud interaction testing: device management, firmware-over-the-air (FOTA), software-over-the-air (SOTA).

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T-Connect

T-Connect is an **IoT platform** that helps customers build an IoT project quickly, based on existing hardware, connectivity, and functionalities.



Functions

Equipment management

Data collection, real-time device controlling

Responsive dashboards

Customize the dashboard interface according to the needs of the project

Rule setting

Easily set rules, thresholds and schedules

Integrated cameras

An integrated variety of IP/WIFI cameras

Integrated multiple alarm channels

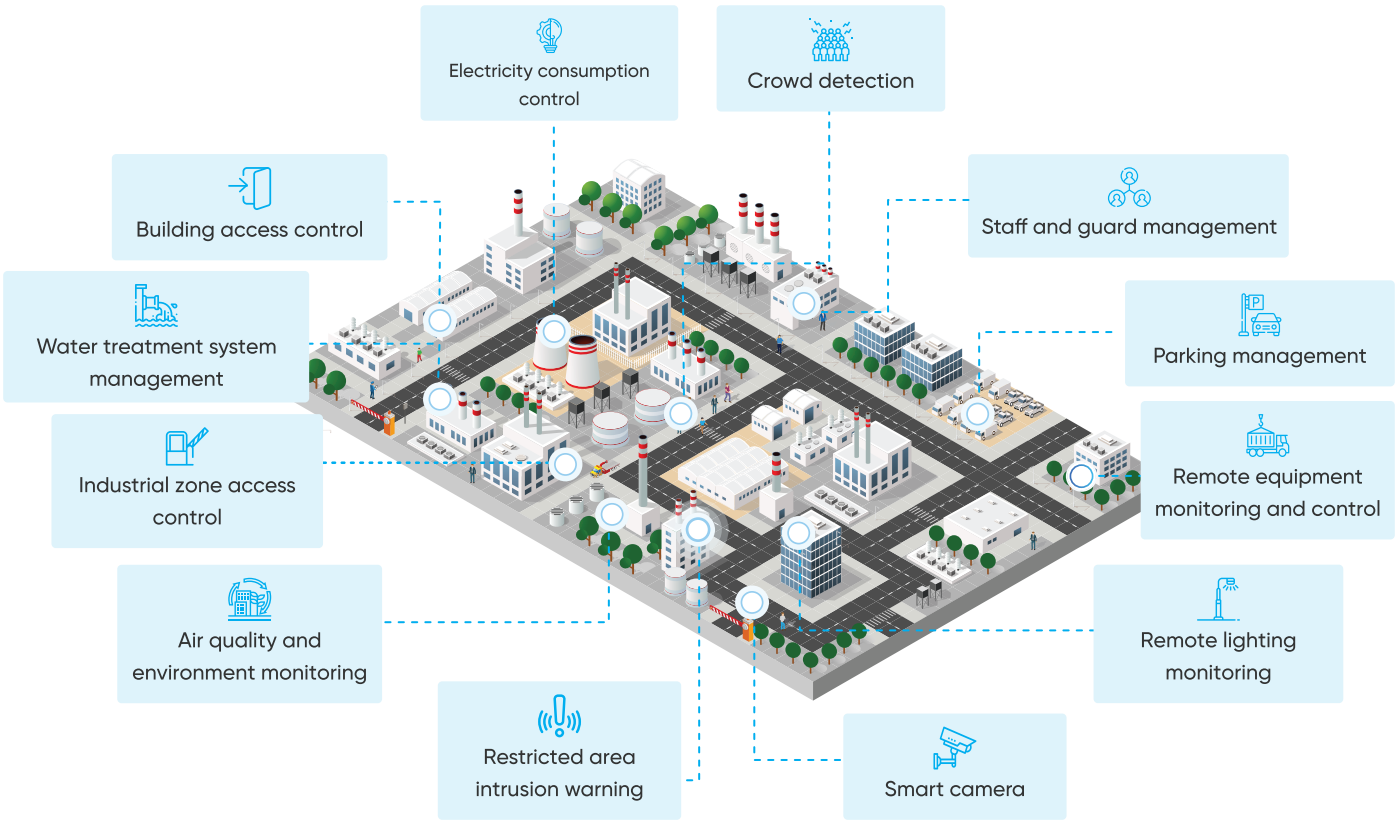
Integrated alerts via SMS, call, Skype, Zalo

Risk forecasting analysis

Analyze data to predict possible risks

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Smart Industrial Park



Machinery and equipment are optimized, automated and remotely controlled to reduce operating costs.

Facial recognition feature, automatic alert system prevent strangers from entering to ensure security and safety.

Container's refrigeration system is remotely controlled to reduce the risk of damaged goods

System automatically sends warnings to timely solve any problem and avoid causing damage to equipment.

Smart Building

Business Building



- Recognize employees, customers, strangers by using FaceID to ensure security and safety of buildings.
- Easily manage the list of employees, deparments, customers and meetings
- Employee timekeeping. Grant access permission. Manage, report the time and history of access.

Resident Building

- Smart lockers support residents when they are not available to receive delivered goods.
- Support multiple building access methods: QR code, FaceID...
- Track access history. Remotely open/close doors. Ensure security and safety of buildings.
- Easily receive notifications from management staff (electricity, water bill...). Enhance the value of buildings.



Case Studies

Embedded IoT Modules & SIMs



Connect to devices & machines of IoT system such as public safety, telematics, mission-critical networking applications; rapidly provide cellular connectivity to Cloud

Heavy Vehicle Management



Manage heavy vehicles via IoT device (Web and App). Collect data. Automatic triggering alarm based on different events. View and locate devices on Google map

Inventory Monitoring



An energy-saving GPS tracker system. Search for assets by using the web or mobile app and get an overview of all locations with the asset map

Mobile Access Controller - Management Centre -



A fleet management system that helps their customers in fleet planning, streamlining operations, and monitoring fleet location

Bus Monitoring System



Monitor the location of buses in real-time, calculate the number of passengers getting on/off the bus, analyze their age and gender

Dryer Machine Optimization



Fully automate and remotely control dryer machine. Real-time data collection. Predict relative amount of water

Emergency Monitoring & Responding System



Allow users to receive instructions, alerts and declare alerts through screens on watches. Utilize BLE technology and the LoRa protocol for communication between the cards, devices, and the gateway to the central system.

Air Conditioner Smart Control System



Remotely control air-conditioner and heat pump via Wi-Fi. In-built smart sensors detect surrounding temperature-humidity levels to create a proper climate for users

Contacts

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