深思科技
DEEP THINKING TECHNOLOGY

DTT IoT

ABOUT US

DTT (Deep Thinking Technology Pte Ltd.), founded in 2018, is dedicated to providing intelligent information technology services for infrastructure construction, maintenance and operation management.

Our technology service offerings including Facility Intelligence System, loT, Intelligent Construction Engineering Quality Management System, Business Intelligence, and integrated custom solutions cover several industries and across Asia Pacific area.

Integrating leading-edge information technologies such as Cloud Computing, Big data, loT, AI, etc., and driven by a desire for efficiency, innovation and together with a highly Customer Centric Service philosophy, we continue to remain focused on building up an “Automated, Standardized, Reliable, and Intelligent” facility management mode for our clients, advancing to maximize financial visibility and profitability, turn data into opportunity and drive better business decisions across the organizations and growing value for all our stakeholders in the future.

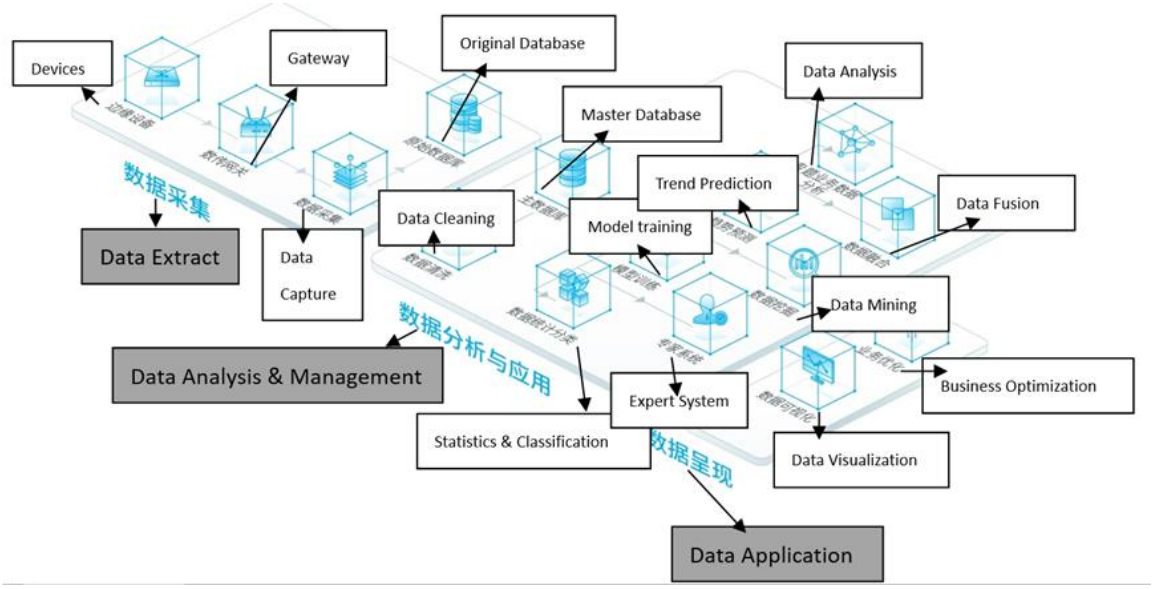
Cloud Computing, Big data, IoT, AI, etc., we focus on new technology and keep on innovation.

Agile development and rapid iteration, we upgrade the system quickly at needs.

With a highly Customer Centric Service philosophy, we serve customers at any time you need.

lOT INTRODUCTION

Swiftly and securely connect to millions of devices/sensors, DTT lOT helps to extract data, analyse and transform data into meaningful insights, which can optimize business operation and drive better decision-making.



Capture and Normalize Data to make it Usable

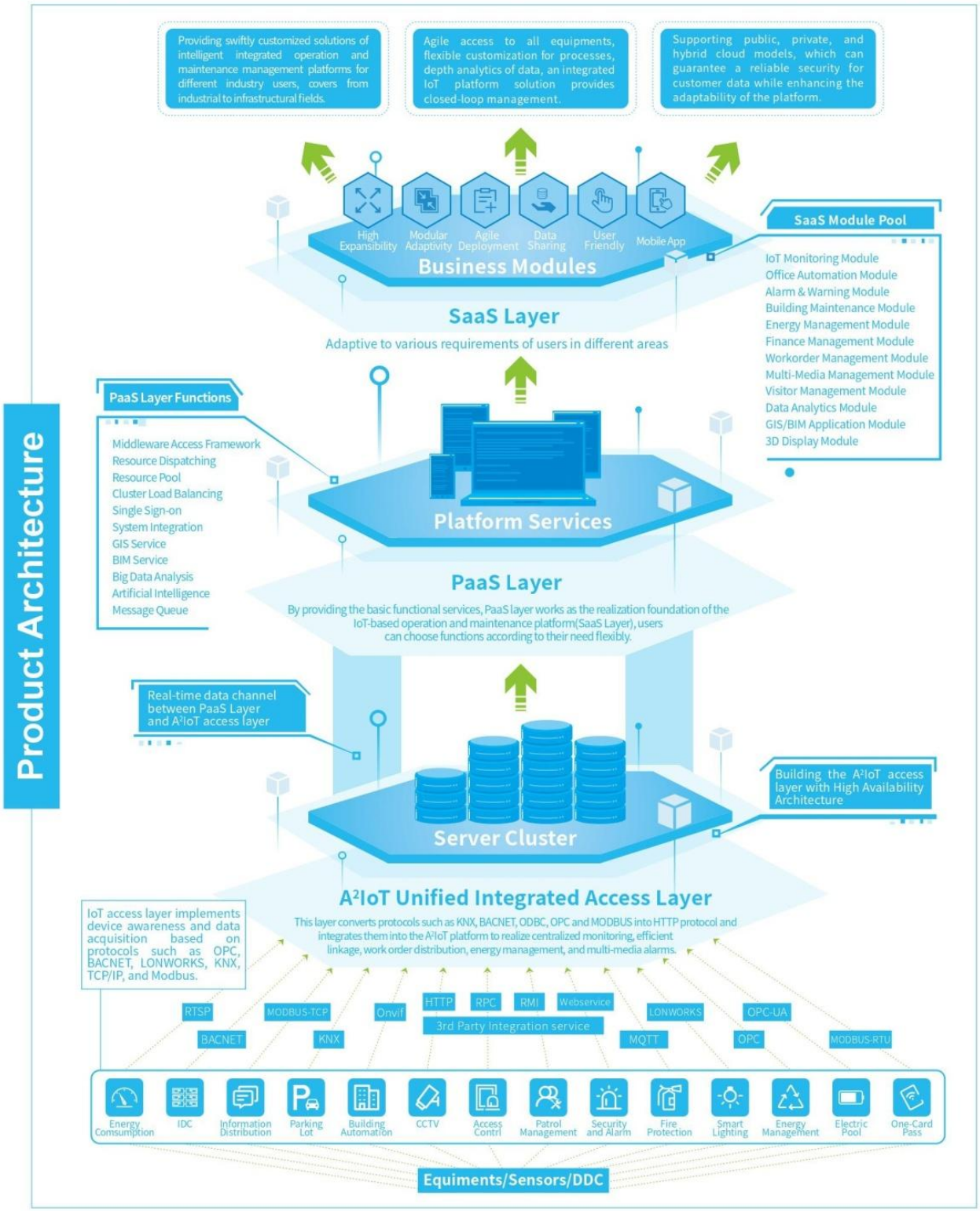
Securely connect, compute on edge and fog nodes in distributed network, visualize lot data to better plan and increase productivity.

Unlock the Power of IoT Data

Identify valuable data insights related to device behavior and get maximum value for your business.

Optimize Business Operations and Resource Utility

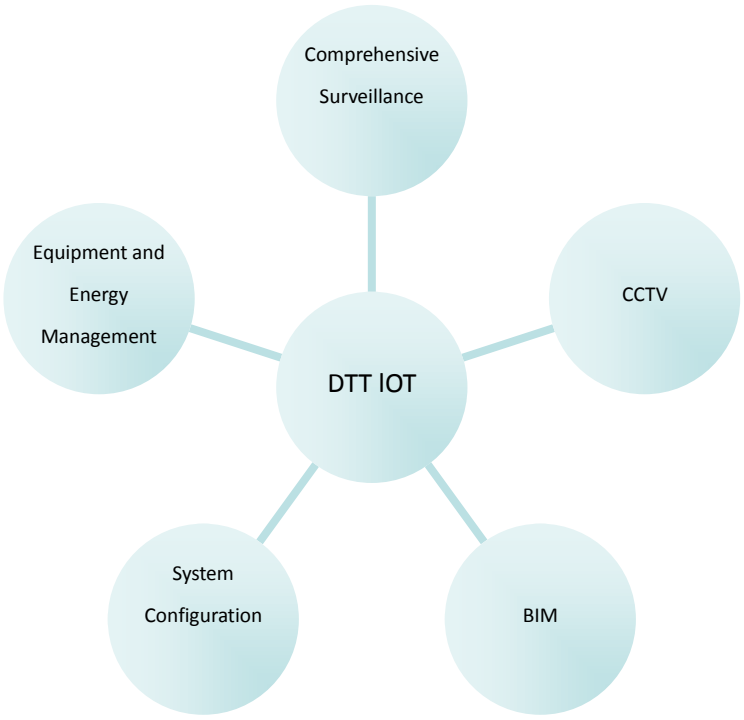
Cut operational cost by understanding lot devices and do operations more effectively and efficiently.


Product Architecture
Providing swiftly customized solutions of intelligent integrated operation and maintenance management platforms for different industry users, covers from industrial to infrastructural fields.
Agile access to all equipments, flexible customization for processes, depth analytics of data, an integrated IoT platform solution provides closed-loop management.
Supporting public, private, and hybrid cloud models, which can guarantee a reliable security for customer data while enhancing the adaptability of the platform.
High Expansibility
Modular Adaptivity
Agile Deployment
Data Sharing
User Friendly
Mobile App
Business Modules
SaaS Layer
Adaptive to various requirements of users in different areas
SaaS Module Pool
IoT Monitoring Module
Office Automation Module
Alarm & Warning Module
Building Maintenance Module
Energy Management Module
Finance Management Module
Workorder Management Module
Multi-Media Management Module
Visitor Management Module
Data Analytics Module
GIS/BIM Application Module
3D Display Module
PaaS Layer Functions
Middleware Access Framework
Resource Dispatching
Resource Pool
Cluster Load Balancing
Single Sign-on
System Integration
GIS Service
BIM Service
Big Data Analysis
Artificial Intelligence
Message Queue
Platform Services
PaaS Layer
By providing the basic functional services, PaaS layer works as the realization foundation of the IoT-based operation and maintenance platform(SaaS Layer), users can choose functions according to their need flexibly.
Real-time data channel between PaaS Layer and A²IoT access layer
Building the A²IoT access layer with High Availability Architecture
Server Cluster
A²IoT Unified Integrated Access Layer
This layer converts protocols such as KNX, BACNET, ODBC, OPC and MODBUS into HTTP protocol and integrates them into the A²IoT platform to realize centralized monitoring, efficient linkage, work order distribution, energy management, and multi-media alarms.
IoT access layer implements device awareness and data acquisition based on protocols such as OPC, BACNET, LONWORKS, KNX, TCP/IP, and Modbus.
RTSP
MODBUS-TCP
Onvif
HTTP
RPC
RMI
Webservice
LONWORKS
OPC-UA
BACNET
KNX
3rd Party Integration service
MQTT
OPC
MODBUS-RTU
Energy Comsumption
IDC
Information Distribution
Parking Lot
Building Automation
CCTV
Access Contrl
Patrol Management
Security and Alarm
Fire Protection
Smart Lighting
Energy Management
Electric Pool
One-Card Pass
Equiments/Sensors/DDC

KEY FEATURES

Web-based system	User-friendly UI	Scalable
Support multiple protocol types, no matter standard or non-standard	Swiftly and securely connect to devices/sensors, and real time monitoring	Efficiently tracking device failures and send alert notification
Data collection and intelligence analysis	Multiple data visualization form including list, dashboard, graphic charts, etc.	Support integrated with BIM, GIS, and 3rd party application

CORE MODULES



1. Comprehensive Surveillance

Monitor the overall operation status of equipment/devices, make statistics about the electricity consumption, the consumption of heat and cold metering, indoor/outdoor temperature and humidity, PM2.5 concentration in real time. Users can quickly grasp the overall situation by the system.

Key Features:

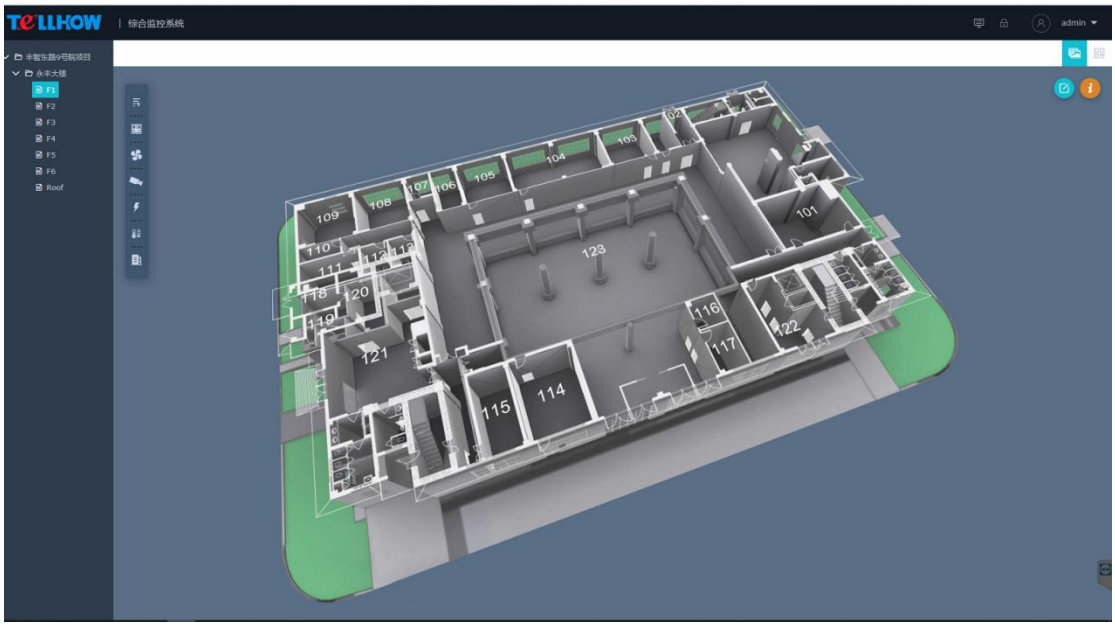
- ✧ Analysis and calculate power consumption per unit area
- ✧ Monitor equipments/devices operating status, supporting search by equipments/devices types, supporting display by colors, and by floors
- ✧ Real time monitoring and update data about indoor/outdoor temperature, humidity, and pm2.5, displaying by graphic charts
- ✧ Support a series of interactive charts that display real-time statistics from sensors, calculate statistics like average value, maximum, minimum, etc. and data developing trend
- ✧ Support data compared in the same period
- ✧ Search and view power/cold/heat consumption history data by defined dates, supporting display by graphic charts

2. Equipment and Energy Management

Real-time monitoring of the equipments and energy consumption, control equipments remotely, alert for abnormal situation, it can help maintenance operators easily and timely detect and solve the problems and ensure the normal operation on site. And 3D display view page is easier to locate the equipments.

Key Features:

- ✧ Real time monitor of energy consumption, including power consumption, PM2.5, temperature, humidity and equipments status
- ✧ Calculate and analysis of energy consumption for each floor/unit of current month, including total power consumption value & ratio, power consumption value & ratio of different types of equipments, temperature/humidity/PM2.5 average value & status
- ✧ Can search history data of power consumption/temperature/humidity/pm2.5 by defined dates, supporting display trends as graphic charts
- ✧ Can add/edit equipment/device, and customize the location on the floor plan
- ✧ Remotely set the equipment/device on/off, set control mode and threshold
- ✧ Can search and view the operation log of equipment/device
- ✧ Can switch display viewing mode: dashboard / 3D floor plan

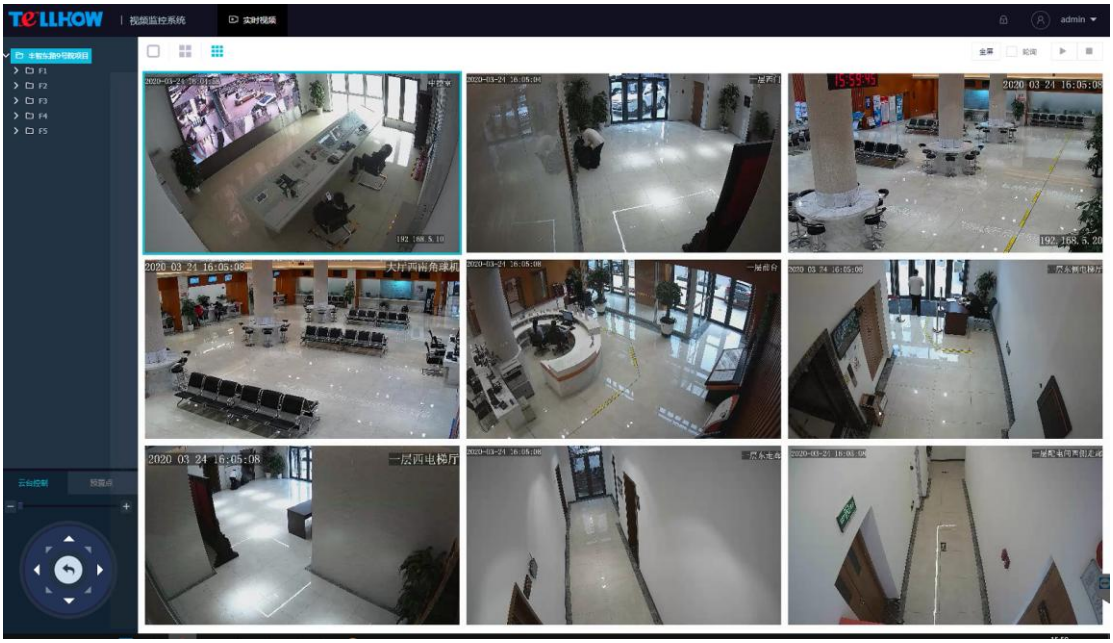


3. CCTV

Connect to cameras, real-time and all-round image monitoring, it helps to keep watch over security situation on site. Multiple view modes and display form make users easy-to-use and switch monitor screen quickly by demands.

Key Features:

- ✧ Real time monitoring
- ✧ Support multiple display mode: positioning display/multi-view display/patrolling display/full screen display
- ✧ Supporting 1*1/2*2/3*3 view modes
- ✧ Can set start/end of patrolling mode by demands
- ✧ Pan-Tilt control: zoom in/out, can adjust camera shooting by direction button
- ✧ Support set and save multiple custom PTZ shooting angle as preset points



4. BIM

DTT IOT provides an interface that integrates with Building Information Models (“BIM”) to provide 3D visualization capabilities. It can connect to equipments/sensors and store, manage, calculate, analyze, and display data in BIM, so that users can acquire and view various data information which related to the location in BIM. Multi-view display and roaming with first-person view functions make it intuitive and easy to locate.

Key Features:

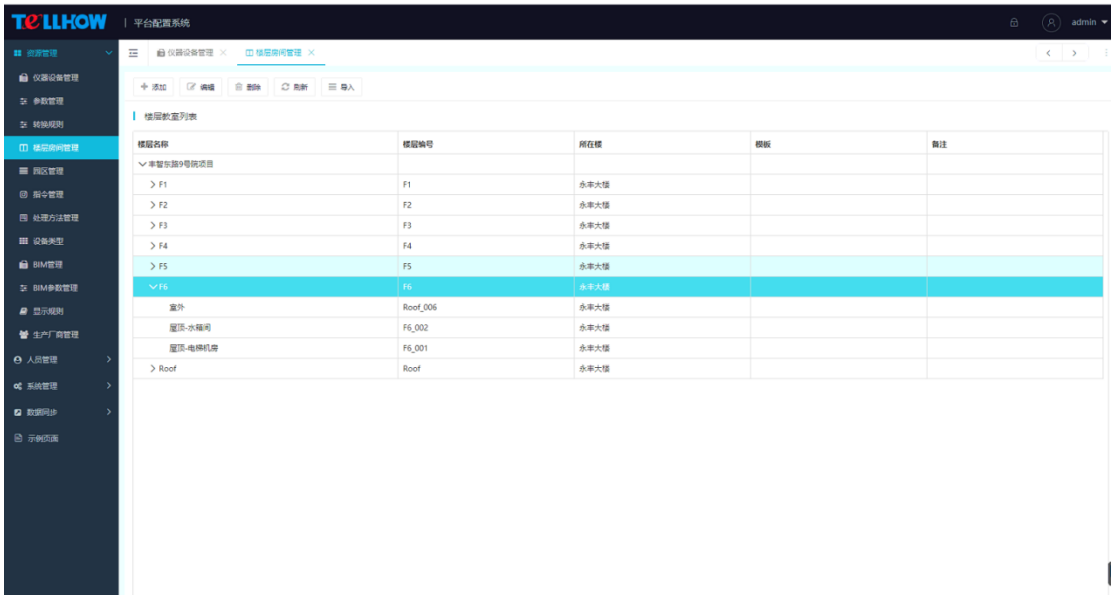
- ✧ Project information viewing in BIM model
- ✧ Connect to equipments/sensors to view real-time monitor data, including indoor/outdoor temperature, humidity, pm2.5, etc.
- ✧ Easy to switch to view data information for building/floor/unit
- ✧ Easy to locate equipments/sensors in BIM

5. System Configuration

System configuration used for system setting and data management. It can also support operation for menu configuration, data dictionary definition and system log.

Key Features:

- ✧ System setting for equipment/device, parameter, conversion rules, building/floor/unit, equipment type, BIM, etc.
- ✧ Add/edit/delete information and parameter
- ✧ Support bulk import
- ✧ Can search by different conditions



Think deep. Do well.

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