

SMART MANUFACTURING



SMART MANUFACTURING 2024

AIS BUSINESS

AIS BUSINESS is the enterprise arm of Advanced Info Service (AIS).

AIS Business aims to level up the operations to a new business standard and become the "Cognitive Tech-Co", providing a comprehensive Digital Infrastructure and Digital Platform for businesses in various industries, from large enterprises to SMEs, working side by side with customers as the trusted smart digital partner to enable and accelerate value-for-money digital transformation.



SERVES THAILAND'S DIGITAL ECONOMY

BY ACCELERATING DIGITAL TRANSFORMATION FOR THAI BUSINESSES WITH A COMPREHENSIVE SUITE OF DIGITAL TECHNOLOGIES AND SERVICES DELIVERED BY HIGHLY COMPETENT AND TRUSTED PROFESSIONALS



COMPREHENSIVE
PRODUCTS & SERVICES

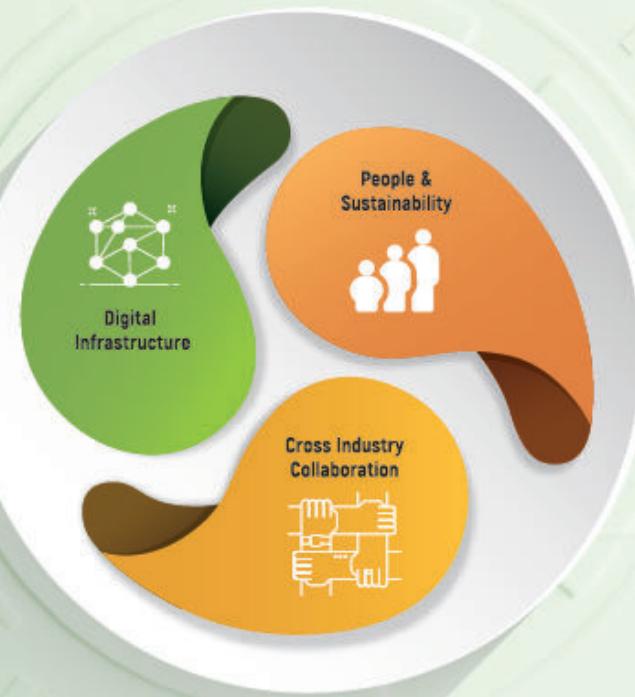
BEST CUSTOMER
EXPERIENCE

TRUSTED
PROFESSIONALS



ECOSYSTEM &
PARTNERSHIP

ECOSYSTEM ECONOMY



ເຕີບໂຕ ອຸ່ນໃຈ
ໄປດ້ວຍກັນ

**COLLABORATING WITH PARTNERS AND
BUILDING AN ECOSYSTEM TO ACCELERATE THAILAND'S
DIGITAL TRANSFORMATION**



PARTNERSHIP AND ECOSYSTEM

AIS Business is ready to be a business partner in finding opportunities and co-developing digital transformation solutions by selecting the right technology, connecting trials and providing the concept, evaluation of results,

and searching for a business model that can be expanded through practical applications. Create the **ECOSYSTEM ECONOMY** strategy which comprises digital intelligence Infrastructure, cross-industry collaboration, human capital & sustainability.

SUSTAINABLE ECOSYSTEM AND PARTNERSHIP

DIGITAL TECHNOLOGY

- 5G
- Business Network
- IoT
- Cloud and Data Center
- Cyber Security
- Data Analytics
- Digital Marketing

INDUSTRY EXPERT

- Smart Manufacturing
- Smart Transportation & Logistics
- Smart City, Property & Building
- Smart Retail, Smart Wholesale
- Smart Financial & Banking
- Smart Government
- Smart SME



INDUSTRY EXPERT & TECHNOLOGY PARTNERS

COLLABORATION WITH GOVERNMENT AND ASSOCIATIONS



The AIS 5G NEXTGen Center and Laboratory at Thailand Digital Valley (EECd) with depa



First member with Sustainable Manufacturing Center (SMC) to support 5G testing zone at EEC



COLLABORATION WITH INDUSTRIAL ESTATE AND OT PARTNERS

INDUSTRIAL ESTATE



SMART MANUFACTURING TECHNOLOGY PARTNERS AND SI



CUSTOMER VISIT PROGRAM

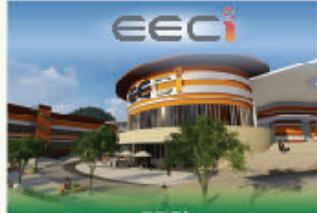
Exclusive group visit to explore the 5G smart manufacturing use cases and the security and safety of cloud infrastructure



AIS Data Center



A-Z Center



EECi



SIMTec



SOMBOON 5G SMART MANUFACTURING

COMING SOON

AIS 5G NEXTGen Center – Thailand Digital Valley



Experience the AIS Cutting-Edge 5G Technology for Business, a Living Lab & Testbed Sandbox for 5G Innovations

AIS 5G - ARV Project at Wangchan Valley



WANGCHAN VALLEY 5G Testbed

Innovation Development Hub for Thai Business

5G SA (Standalone)

- Workload Isolation
- Ultra Low Latency

Private Network

- Highly Secure
- Customization

EDGE & CLOUD

- Edge MPC (Machine Management)
- Application Marketplace

PARAGON PLATFORM

- Edge MPC (Machine Management)
- Application Marketplace

VERTICAL SOLUTIONS

**SPECIALIZED SOLUTIONS
FOR INDUSTRY VERTICALS
AND BUSINESSES**



DIGITAL INDUSTRY EVOLUTION

Enhance the efficiency of industry verticals and businesses with a variety of solutions and technologies that AIS Business has carefully joined with expert partners, co-developed, and designed to fulfill their differentiation needs.

MANUFACTURING



TRANSPORTATION
& LOGISTICS



PROPERTY & RETAIL



VERTICAL SOLUTIONS

INDUSTRY EXPERT AND TECHNOLOGY PARTNERS

INTELLIGENT DIGITAL INFRASTRUCTURE AND PLATFORM FOR BUSINESSES



ACCELERATE NEW CAPABILITIES OF IOT WITH THE BEST 5G INFRASTRUCTURE

Empowering your business capability with the IoT technology on the AIS 5G first-class network, creating your effective and efficient business innovation, or enhancing your existing one with a powerful enabling technology, raising the growth of opportunity for your business.

5G & IOT ECOSYSTEM



5G & IoT Ecosystem

5G & IoT COMPLETE ECOSYSTEM FOR BUSINESS



HARDWARE



IoT Development

4G Board / DEVO Series



CONNECTIVITY



5G Infrastructure

- Private Network
- Network Slicing
- FWA (Fixed Wireless Access)
- MEC (Multi Access Edge Computing)



PLATFORM



One-Stop Platform to Manage 5G, Edge Compute and Cloud



IoT Connectivity Platform

- Subscription and Package Management
- IoT Product Life Cycle Management



IoT Application Platform

- IoT Device Management
- Data Visualization
- Open Platform with Open API



SOLUTIONS



Manufacturing



Transportation & Logistics



Property & Retail



Public Sector



Agriculture

INTELLIGENT NETWORK

THE NO.1 NETWORK PROVIDER

with the widespread network coverage in Thailand for both domestic and international from AIS Business and 3BB

Most IIG Bandwidth

>8.84 Tbps

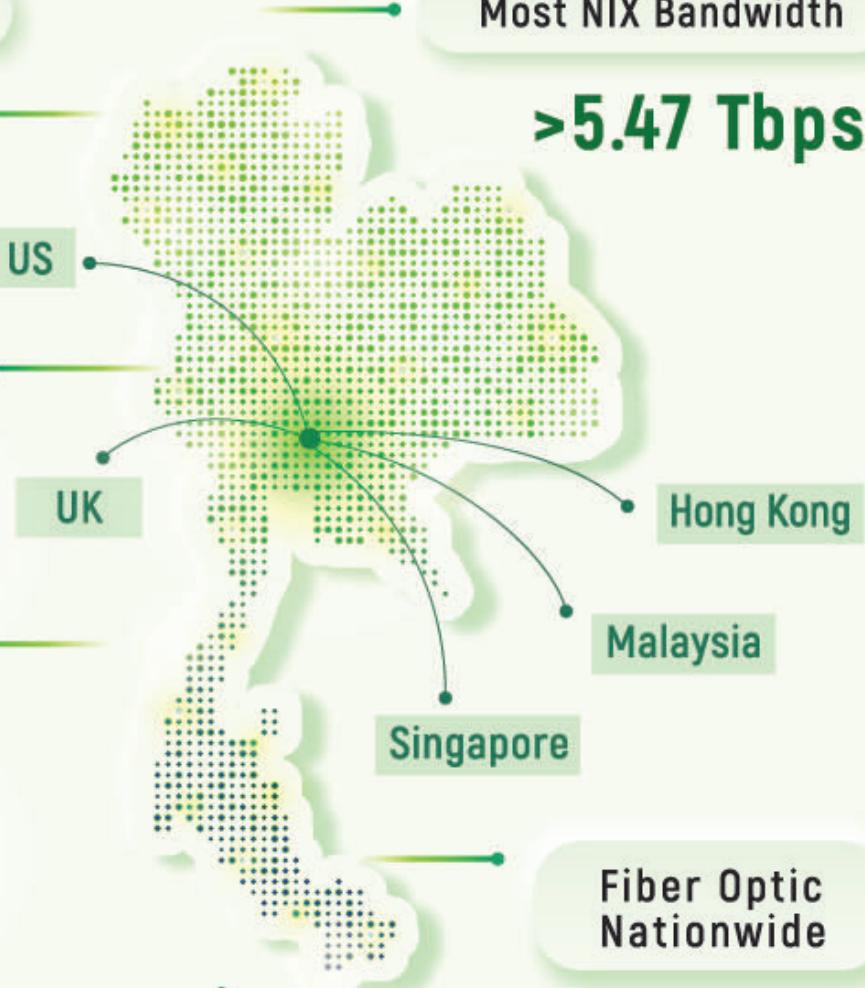
Most NIX Bandwidth

>5.47 Tbps

**MORE THAN
20,000 BUSINESS
CONNECTIVITIES**
Mobile Operator with

44.6

**MILLION
SUBSCRIBERS**



- Domestic/International Data Circuit PoPs at Singapore, Hong Kong, Malaysia, UK and US with Gateways to all neighbor countries
-  Microsoft Edge Node on AIS Network Partnership for Microsoft Cloud Services

AS OF Q4-2023

5G NETWORK

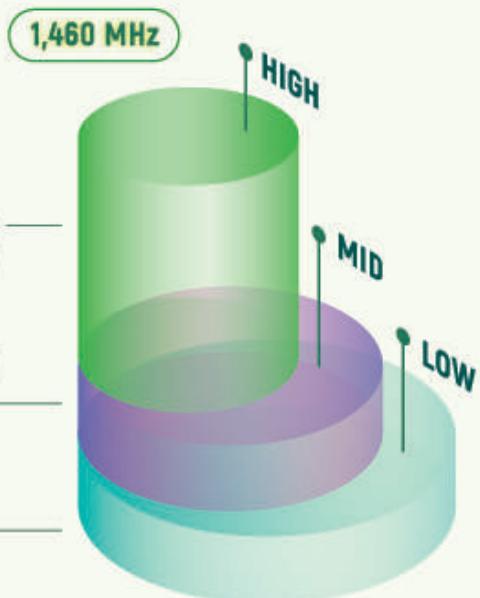
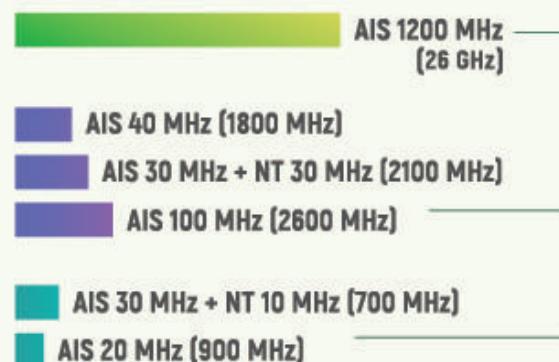
AIS 5G NETWORK THE NO.1 NETWORK IN THAILAND

**THE MOST BANDWIDTH
FOR THE BEST INDUSTRY 4.0**

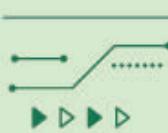
HIGH BAND
26 GHz

MID BAND
1800, 2100, 2600
MHz

LOW BAND
700, 900 MHz



THE NEW DIGITAL INFRASTRUCTURE FOR THAI BUSINESSES



**THE COMMERCIAL 5G
NETWORK PLATFORM FOR
BUSINESS**

- SA/NSA Dual Network
- Network Slicing
- Multi-access EDGE Computing
- Private Network
- AIS Paragon Platform
- Ecosystem & Partnership



>96% EEC Area

**THE LARGEST
Coverage in BKK**

> 99%

Nearly 90%
5G Nationwide Population coverage

**NOW IN 77
PROVINCES**

AS OF 04-2023

AIS 5G INFRASTRUCTURE FOR THAI BUSINESSES

NETWORK SLICING



GUARANTEE
NETWORK QUALITY
FOR YOUR SERVICE

PROVIDE HIGH
SECURITY FOR VITAL
INFORMATION

PRIVATE NETWORK



MEC



MOVE COMPUTING
POWER CLOSER FOR
CRITICAL SERVICE

MANAGE 5G,
EDGE COMPUTE AND
CLOUD AT ONE-STOP

PARAGON PLATFORM



5G NETWORK SLICING

ENABLES VIRTUAL END-TO-END NETWORKS TAILORED TO APPLICATION REQUIREMENTS

The innovation opportunity in 5G era, enables a predefined, differing level of services for different enterprise verticals unlocking the capability to customize operations.

4G NETWORK

do not enable the range of services that the future requires.



5G will not only faster, but it will also be more **FLEXIBLE**

MOBILE BROADBAND



MASSIVE TO MACHINE



RELIABLE LOW LATENCY



5G NETWORK



eMBB Slicing

mMTC Slicing

uRLLC Slicing

Communication
Entertainment
Internet

Retail
Shipping
Manufacturing

Automotive
Medical
Infrastructure

• PRIVACY •

Local network, private resources, interdependently managed

• SECURITY •

Cellular grade security, sensitive data stays on-premise

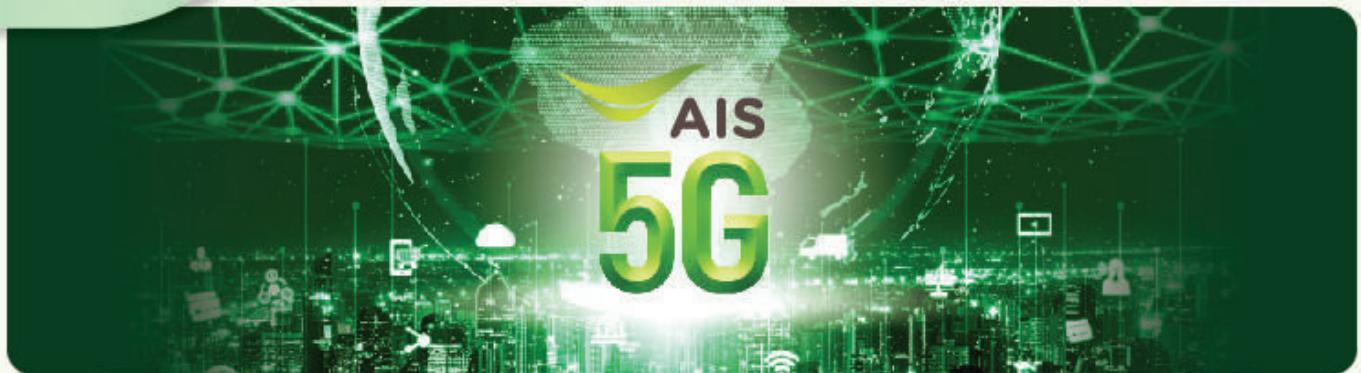
• OPTIMIZED •

Tailored performance for enterprise specific applications, e.g., low latency, QoS, network slicing

AIS 5G PRIVATE NETWORK



PRIVATE NETWORK



COVERAGE, CAPACITY, AND MOBILITY

Outdoor/indoor, high data speeds, seamless handovers, interference free

RELIABILITY AND SEAMLESS INTEGRATION

Industrial grade reliability, latency and seamless integrate to existing IT network

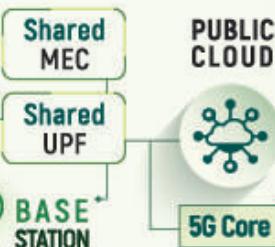
EFFECTIVE DATA PROCESSING

Massive data transferring and local processing with MEC

SECURITY AND COMPLIANCE

Data localization, mobile grade security

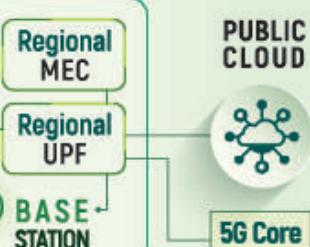
3 TYPES OF 5G PRIVATE NETWORK



PRIVATE NETWORK TYPE 1

Virtual Private Network
(Standard Grade)

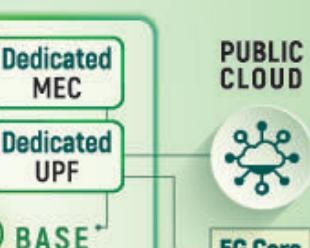
ZONING



PRIVATE NETWORK TYPE 2

Zoning Virtual Private Network
(Premium Grade)

DEDICATED



PRIVATE NETWORK TYPE 3

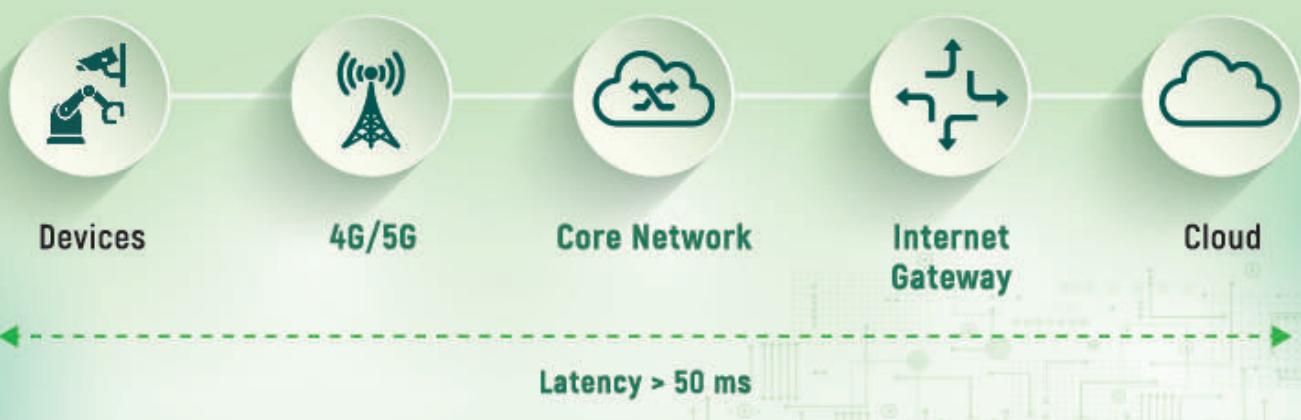
Dedicated Private Network
(Exclusive Grade)

5G MEC

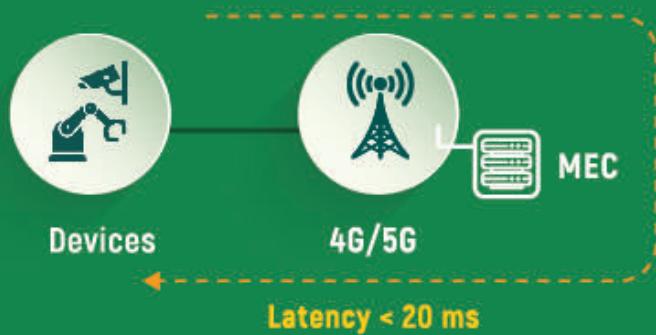


Multi-access Edge Computing (MEC) enables cloud computing capabilities at the edge of the mobile network, which reduces the physical distance of communications. It is highly suitable for applications requiring low latency, real-time analytics, and high-volume data transfers.

Traditional Application with Cloud Computing



Low-Latency Application with MEC



Low-Latency Applications

Critical Applications that need real time data processing and immediate response.



AR/VR



Connected Car



Industrial Automation



Game



Emergency Service



Media & Entertainment

PARAGON PLATFORM

ONE-STOP PLATFORM
TO MANAGE 5G, EDGE COMPUTE
AND CLOUD FOR YOUR DIGITAL
TRANSFORMATION



FAST & EASY

Shorter Deployment Time from 4-6 Months to Days of Weeks

- Node Creation & App Deployment in real-time
- Deploy your 5G Applications to regional footprint at once
- Pick & Choose available applications from marketplace



MANAGE AT ONE-STOP

Lower Latency from Second to Millisecond, Multiple Choices of Edge & Cloud

- Integrating Edge Computing with a Hybrid Cloud
- Multi Edge Computing Location in Thailand



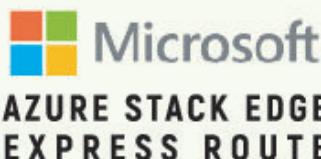
READY FOR SCALE-UP

Save Investment Cost for 20 – 50%

- No Hardware Investment
- Simply Start with Small Scale

MANY APPLICATIONS ARE DEVELOPED ON THE AIS PARAGON PLATFORM

ENHANCE CLOUD INTEGRATION



DIGITAL TWIN VISUALIZATION



IoT DATA PLATFORM



SMART AGV



AI VIDEO ANALYTICS



VR TRAINING



AUTONOMOUS VEHICLE

IoT & SOLUTIONS

SMART MANUFACTURING



AIS 5G MANUFACTURING PLATFORM

The platform runs the 5G PARAGON platform, helping overcome manufacturing challenges and deal with production line issues in real time. Measure efficiency and monitor the operation of machinery to reduce management costs and promote a competitive edge.



WASTEWATER MANAGEMENT

Factory wastewater management involves the collection, treatment and responsible disposal of industrial wastewater to prevent environmental pollution and ensure regulatory compliance



AIR QUALITY MANAGEMENT

Measures and monitors and gets more precise air quality data in real-time using an IoT device connected to a 5G network, enabling more efficiency and accuracy in determining how to improve environmental quality.



SMART AI CAMERA FOR SMART MANUFACTURING

A technologically advanced surveillance and monitoring device equipped with artificial intelligence capabilities. It is designed to enhance efficiency, safety and productivity of a manufacturing facility by incorporating with personal intrusion, prohibit behavior e.g. no mask, no helmet or smoking, face recognition and many more features for more efficient and automated.



INTEGRATED CARBON & ENERGY MANAGEMENT PLATFORM

Reduce energy costs and carbon emissions by optimizing energy consumption and enabling real-time data and predictive analytics for decision-making via IoT devices that are connected to the 5G network.



SMART WAREHOUSE

Connected 5G with IoT devices and data processing via AI/ML enables real-time data, which will help in forecasting and planning on how to utilize the assets, resulting in reduced cost, improved on-time delivery, and reduced resource spending.



SMART TRANSPORTATION & LOGISTICS



TRANSPORTATION MANAGEMENT SYSTEM (TMS)

A comprehensive software solution designed to optimize and streamline the management of transportation-related operations within a company or organization. TMS software provides tools and platform to efficiently plan, execute, and monitor various aspect of transportation and logistics



SMART TRACKING PLUS

Track the vehicle with the GPS system installed connect via 3G/4G/5G network, and easy to access the information via the web application Standard and Certified by DLT



AUTOMATED SORTING SYSTEM

An automatic sorting system help enhance accuracy and speed in product sorting management, resulting in 3 – 4 times efficiency increasing. It operates flexibly, accommodating a variety of tasks, and helps reduce labor shortages in warehouse and logistic.



SMART ASSET MANAGEMENT

Monitor and track asset movement with custom designed equipment. Connects via 3G/4G/5G with the option to integrate temperature sensors for cold chain logistics



MOBILE DVR TRACKING

Track event that occur on the vehicle with a recording camera (DVR) with GPS tracking, data connection via 3G/4G/5G, easy to access anytime, anywhere and certified by DLT.



AUTOMATED PICKING & HANDLING SYSTEM

An automated system for picking and transporting goods and materials, which can be controlled through a platform, wirelessly connected via 4G or 5G. It helps reducing steps in warehouse operation and minimizing operation time. It is suitable for distribution center and factories with diverse range of products. The system can adapt its operation to accommodate warehouses with varying heights or deep shelving



USE CASES



SMART ENERGY MANAGEMENT

The 5G Manufacturing Platform has been implemented within the factory to facilitate the monitoring of energy consumption across its facilities. This solution has been seamlessly integrated with a 5G Private Network, enabling the real-time connection of data from the factory's power meters.



SMART AUTONOMOUS VEHICLE SYSTEM

Intelligent dispatching & real time connection to autonomous EV trucks with pure electric drive, zero pollution & zero emission help saving energy by 20% comparing with human drive.



SMART PROPERTY AND RETAIL SOLUTION

Customized solutions that enhance opportunities for conducting retail businesses by improving the customer experience, ensuring safety and convenience, and improving tenant satisfaction.



SMART PROPERTY SOLUTION

Integrated 5G, Wi-Fi, and network solutions in conjunction with marketing platforms create carefully crafted solutions to support building systems and activities, ensuring safety and convenience, and improving tenant and customer satisfaction.



SMART 5G AI AUTONOMOUS DRONE SYSTEM

5G and network slicing speed up data transmission and reduce latency, supporting for remote use for autonomously along predetermined flight paths and times. Drone system can monitor for unusual activity and send alert back to the control center in real time.



SMART WAREHOUSE AUTOMATION SOLUTION

3D Vision-Robotic ARM , AS/RS- Warehouse and Unmanned AGV help to improve the space utilization by 60% & reduce the OPEX cost by 30%.



SMART AUTONOMOUS LOGISTICS

Advanced Container Terminal - Autonomous EV Truck has been applied in Hutchison Port Thailand Terminal D aiming to produce safer and more efficient terminal operations. 5G has been utilized for real time communication between Autonomous EV Truck and the command platform for route planning and incident notification.



INFRASTRUCTURE FOR SMART BUILDING

Intelligent infrastructure that helps elevate seamless connectivity to improve functionality, efficiency, comfort, and security of property and building facilities

SUSTAINABLE BUSINESS



TECHNOLOGIES ARE ESSENTIAL FOR BUSINESSES
TO ADAPT FOR SHIFTING PARADIGMS,
FROM ONLY MAKE PROFITABILITY TO PROFITABILITY.



AIS BUSINESS

“ Your Trusted Smart Digital Partner ”



www.ais.th/business



AIS BUSINESS

1149 | AIS BUSINESS CALL CENTER

1740 | AIS ICT SERVICE DESK



SMART MANUFACTURING 2024