



TECH MAGAZINE

WORLD TECHNOLOGY NEWS

GLOBAL BREAKTHROUGHS.
INNOVATIONS. MARKETS.
PEOPLE. IDEAS SHAPING TOMORROW.

TAIWAN

THE CHIP ISLAND

INSIDE TAIWAN'S SEMICONDUCTOR
LEADERSHIP AND GLOBAL IMPACT



TSMC LEADS THE WORLD

How Taiwan's foundries
power the AI revolution
and global tech



BEYOND SILICON

Advanced packaging,
innovation and the next
wave of chip technology



GEOPOLITICS & SUPPLY CHAINS

Why Taiwan is critical
to the world's technology
and economic security



INVESTMENT OUTLOOK

Opportunities in a resilient
and future-ready
tech ecosystem



WORLD NEWS

Your daily update on global tech
breakthroughs and trends



AI & CHIPS

The next wave
of intelligent
computing



ROBOTICS & AUTOMATION

Smart factories
and the future
of production



DATA CENTRES & CLOUD

Building the digital
backbone of the
AI era



CYBERSECURITY

Protecting the
connected world
from evolving
threats



ENERGY TECH

Powering innovation
with clean and
sustainable
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WORLD NEWS

Your daily update
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THE 2026 SIGNAL

TSMC revenue momentum



NT\$ bn, monthly consolidated revenue

Jan-Jul total: NT\$2.872tn | +37% YoY

WHY TAIWAN MATTERS

Taiwan sits at the center of the advanced semiconductor value chain because it combines leading-edge foundry capacity, advanced packaging, dense supplier networks, engineering talent and a manufacturing culture built around yield and precision. In 2026 the strategic value of this ecosystem is rising again as artificial intelligence pushes demand toward the most advanced process nodes and packaging technologies. TSMC's July revenue reached NT\$467.6 billion, up 44.7% year on year, while revenue for January through July was up 37%. The numbers show how AI-related demand is translating into real manufacturing throughput rather than remaining a purely financial-market story. Taiwan's role is not limited to one company. Foxconn has become a major AI-server manufacturer, MediaTek is pushing into custom data-center AI chips, and a broad network of packaging, substrate, materials and testing companies extends the island's reach across the full electronics system.

FROM FOUNDRY TO INNOVATION PLATFORM

The National Science and Technology Council's Chip-based Industrial Innovation Program is designed to convert semiconductor strength into a wider innovation engine. Its priorities include AI applications, heterogeneous integration, startup development and talent cultivation. The program will showcase new technologies at SEMICON Taiwan 2026 in Taipei in early September. That direction matters commercially. The next competitive frontier is no longer only smaller transistors. It is also advanced packaging, chiplets, high-bandwidth memory, power efficiency, custom accelerators, optical connectivity and software-hardware co-design. Taiwan's advantage is that many of these layers can be developed, tested and scaled inside one tightly connected ecosystem. For global companies, the practical question is therefore not simply 'Can Taiwan make the chip?' It is 'Which part of the AI stack can Taiwan help us commercialize faster?'

FOUNDRY POWER

TSMC remains the anchor of leading-edge manufacturing.

PACKAGING EDGE

AI growth raises the value of advanced packaging and integration.

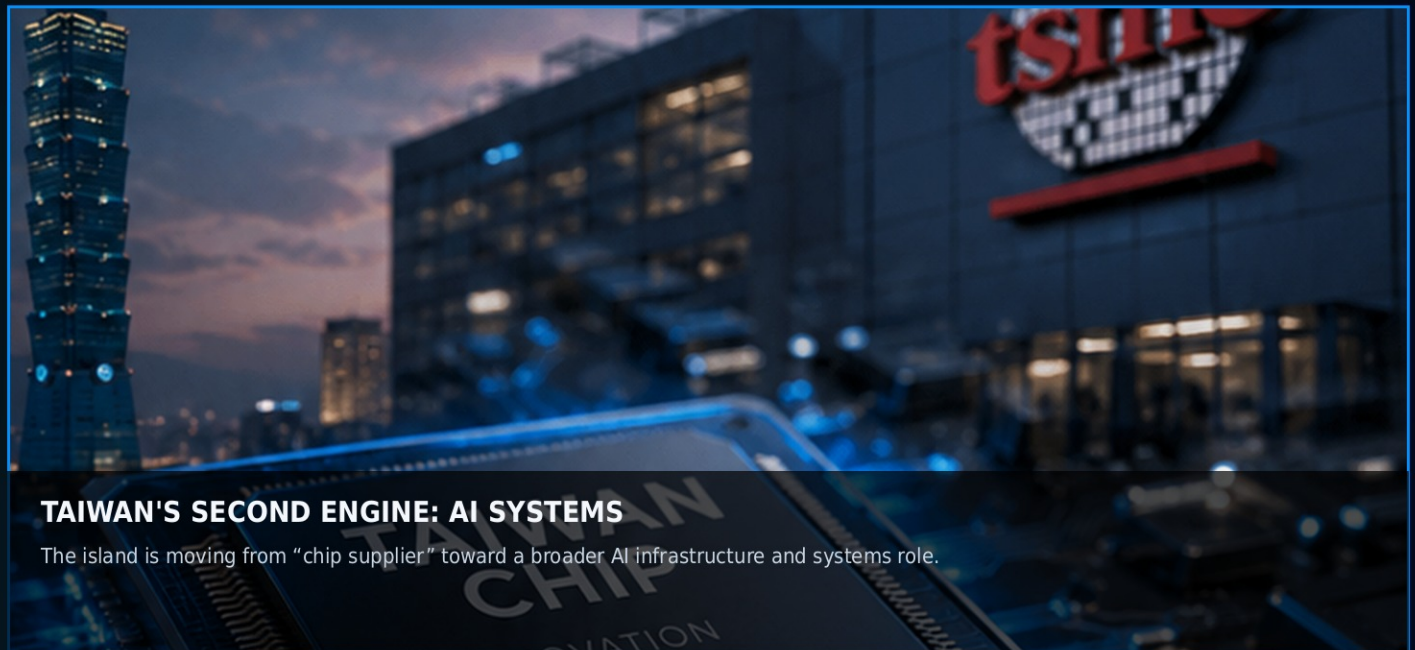
ECOSYSTEM SPEED

Dense suppliers shorten the path from design to volume production.



BEYOND THE FOUNDRY

Servers, custom AI chips, packaging and resilient supply chains



TAIWAN'S SECOND ENGINE: AI SYSTEMS

The island is moving from “chip supplier” toward a broader AI infrastructure and systems role.

FOXCONN: AI SERVERS GO MAINSTREAM

Foxconn's Q2 profit rose 35% as AI demand strengthened. Cloud and networking products represented 51% of quarterly revenue, overtaking consumer electronics as the company's largest category for the first time. The company is preparing for mass production of Nvidia's Vera Rubin AI server racks, while increasing 2026 capital expenditure by about 30%.

MEDIATEK: FROM PHONES TO DATA CENTERS

MediaTek has outlined a \$5 billion financing plan to support long-term expansion, with custom AI chips for data centers becoming a strategic growth engine. The company sees the 2027 AI-chip market at roughly \$80 billion and is targeting a 15-20% share in the segment, while expecting more than \$2 billion of AI-chip revenue in 2026.

CUSTOM SILICON: TSMC AS A GLOBAL PLATFORM

Xiaomi's new Xring O3 processor is being manufactured by TSMC on a 3nm process. Xiaomi is also developing additional AI and autonomous-driving chips with TSMC. The trend is bigger than smartphones: technology companies increasingly want proprietary silicon to control performance, cost, power efficiency and AI features.

GSR ANALYTIX VIEW

Taiwan's competitive advantage is broadening: leading-edge wafers + advanced packaging + AI servers + custom silicon + trusted supply chains



WORLD TECHNOLOGY NEWS

Global breakthroughs, markets and risks shaping the next tech decade



01 CHINA HUMANOID BOOM MEETS A REALITY CHECK

China now dominates humanoid shipments, but commercial adoption still trails the hype. Reuters found heavy subsidy dependence, limited dexterity and a looming consolidation cycle.

WHY IT MATTERS: capital, supply chains and infrastructure are moving together.

02 ROBOT OLYMPICS PUSH EMBODIED AI

Beijing's World Humanoid Robot Games became a public test bed for mobility, balance and industrial tasks, showing rapid progress in physical AI systems.

WHY IT MATTERS: capital, supply chains and infrastructure are moving together.

03 U.S. DISRUPTS CHINA-LINKED CYBER CAMPAIGN

U.S. authorities said they seized infrastructure used in a long-running espionage campaign that targeted agencies including NASA, the Federal Reserve and the Senate.

WHY IT MATTERS: capital, supply chains and infrastructure are moving together.

04 BRAZIL BUILDS A TWO-BLOC AI STRATEGY

Brazil is investing about \$444 million in AI supercomputing, splitting major projects between Chinese and U.S. technology suppliers to preserve strategic flexibility.

WHY IT MATTERS: capital, supply chains and infrastructure are moving together.

05 NVIDIA REMAINS THE AI MARKET'S STRESS TEST

Nvidia's results continue to serve as a proxy for the broader AI infrastructure cycle as markets debate whether massive spending can keep delivering returns.

WHY IT MATTERS: capital, supply chains and infrastructure are moving together.

06 EUROPE'S AI DATA CENTERS MOVE OUTWARD

Developers are shifting new projects away from core cities toward cheaper land and faster power access, making electricity availability a decisive site-selection factor.

WHY IT MATTERS: capital, supply chains and infrastructure are moving together.

07 AI POWER DEMAND CREATES NEW INFRASTRUCTURE

Power suppliers, grid developers and onsite-energy companies are attracting investor attention as data-center demand outpaces conventional connection timelines.

WHY IT MATTERS: capital, supply chains and infrastructure are moving together.

08 CYBERSECURITY MOVES INTO INDUSTRIAL CONTROL

Recent attacks on programmable logic controllers show how AI-assisted hacking and operational technology are converging, raising the stakes for utilities and manufacturers.

WHY IT MATTERS: capital, supply chains and infrastructure are moving together.



THE HUMANOID RACE

China has the hardware lead. Intelligence, reliability and economics are the next battle.



THE NUMBERS BEHIND THE BOOM

95%

China share of ~20,000 global humanoid shipments in 2025

100K+

China's expected humanoid production in 2026

\$230M

Chinese government procurement of humanoids and related systems in H1 2026

1.2M

BofA forecast for annual global humanoid shipments by 2030

FROM SPECTACLE TO PRODUCTIVITY

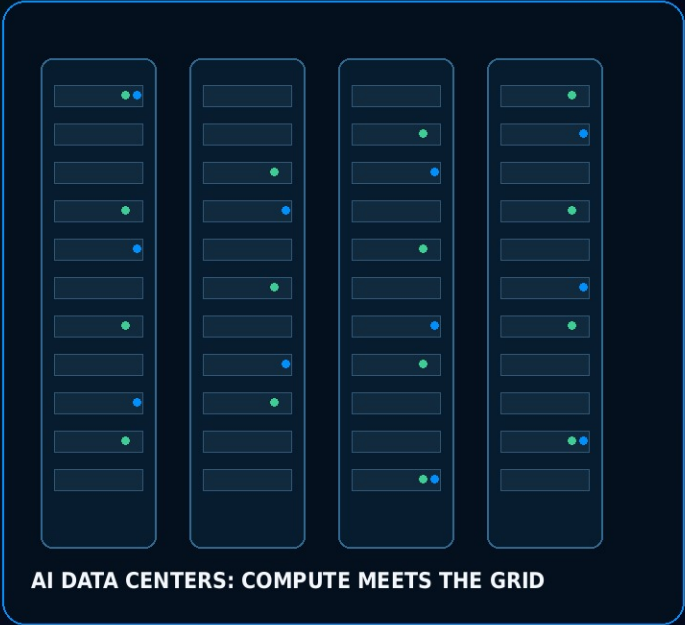
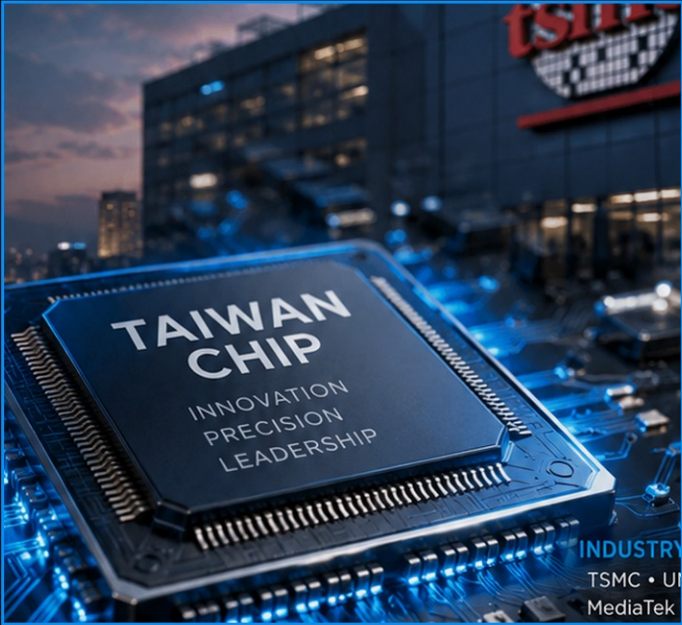
The humanoid-robot market is entering a critical phase. China has built the world's deepest supply chain for motors, actuators, sensors, batteries and low-cost manufacturing, while local governments are pouring money into training centers and demonstration projects. That gives Chinese companies a hardware and scale advantage that resembles the early stages of the country's electric-vehicle and solar industries. But the core challenge is no longer simply building a robot that can walk, dance or run. Industrial customers measure uptime, precision, cycle time and cost. Reuters reporting from Chinese training centers shows that today's humanoids can still be slow, awkward and highly dependent on controlled environments. In many factories, conventional robotic arms remain cheaper, faster and easier to integrate. The next breakthrough will come from embodied AI: vision-language-action models that allow machines to perceive objects, interpret context and translate decisions into physical movement. That requires enormous amounts of real-world training data. The hardware race is therefore becoming a data race.

China's strategic approach is clear: deploy more machines, collect more data, drive down component costs and accept that many companies will fail along the way. Industry participants already expect consolidation from late 2026 into 2027. The survivors could emerge with supply-chain advantages that are difficult for foreign rivals to match. The 2026 World Humanoid Robot Games in Beijing highlighted how quickly mobility and control are improving. A humanoid ran a showcase 100 meters in 8.64 seconds, while more than 2,000 robots competed in sports and simulated industrial tasks. The headline performance matters less than the development environment: each competition creates new datasets, engineering lessons and visibility for investors. GSR view: the near-term commercial winners may not be general-purpose household androids. More realistic opportunities are dangerous, repetitive and structured tasks - logistics, inspection, warehouses, pharmacies, factories and elder-support environments where labor shortages or safety risks justify automation.



CHIPS ARE ONLY HALF THE STORY

The AI race is now a contest for silicon, power, land, cooling and capital.



FOUNDRY CAPACITY BECOMES PRICING POWER

Samsung raised prices on some advanced foundry services by as much as 15% as AI-related demand tightened capacity. TSMC still held more than 70% of global foundry revenue in Q1 2026, but constraints at the market leader are creating openings for rivals.

CUSTOM SILICON SPREADS

Xiaomi's new 3nm processor with TSMC illustrates a wider move toward proprietary chips. Cloud groups, device makers and automakers increasingly want custom silicon to optimize AI performance, energy use and control over product roadmaps.

DATA CENTERS FOLLOW POWER, NOT POSTCODES

In Europe, new AI data-center projects are moving farther from major cities to secure cheaper land and faster power connections. JLL data cited by Reuters shows hyperscale centers planned for 2026-2028 averaging far greater distance from urban hubs than in the previous build cycle.

INFRASTRUCTURE BECOMES AN INVESTMENT THEME

Power supplier Aggreko filed for a U.S. IPO as data-center demand strengthened. Its data-center revenue nearly doubled to \$391 million in the year to early January, showing how the AI boom is creating winners beyond chipmakers and cloud platforms.

THE NEW AI STACK: CHIP DESIGN -> FOUNDRY -> PACKAGING -> SERVER -> POWER -> COOLING -> GRID -> FINANCE

Sources: Reuters - Samsung foundry pricing (19 Aug), Xiaomi custom chips (24 Aug), Europe data centers (19 Aug), Aggreko IPO (24 Aug).



THE ATTACK SURFACE IS EXPANDING

AI, industrial control systems and state-linked cyber operations are converging.



CYBER WATCH

Government networks

U.S. authorities said they disrupted a China-linked campaign that broke into or attempted to compromise highly sensitive agencies, including the Justice Department, NASA, the Federal Reserve and the Senate.

Industrial systems

A separate breach at a U.S. water-sector technology supplier highlighted how stolen engineering data, exposed controllers and AI-assisted exploitation can raise risks far beyond ordinary corporate IT.

FROM IT SECURITY TO OPERATIONAL RESILIENCE

Cybersecurity is moving deeper into the physical economy. For years, the default security model focused on laptops, servers, email and corporate networks. The next battleground includes programmable logic controllers, industrial gateways, connected sensors, building systems and equipment used by utilities, factories and transport operators. This changes the risk calculation. A successful attack on operational technology can interrupt production, damage equipment or compromise public infrastructure. The cost is therefore measured not only in stolen data but also in downtime, safety and continuity of service. AI adds another layer. Defenders can use machine learning to detect anomalies faster and automate response. Attackers can use the same tools to scan systems, write scripts, tailor phishing campaigns and accelerate exploitation. The advantage increasingly goes to organizations that integrate cyber controls into product design and industrial operations from the start.

The August 2026 U.S. disruption of QScan and QTRouter infrastructure shows how state-linked cyber campaigns can persist for years while targeting governments, finance, research and critical technology. At the same time, ransomware and opportunistic intrusions remain a major commercial threat. For suppliers, cybersecurity is becoming a sales qualification issue. Buyers of automation systems, cloud platforms, industrial software and connected equipment increasingly expect evidence on patching, identity, encryption, secure remote access, incident response and software supply-chain controls. GSR view: cyber resilience is moving from the IT department into procurement, engineering and board-level risk management. Companies that can prove secure-by-design architecture, regional support and rapid recovery capability will gain an advantage in regulated and infrastructure-heavy markets.

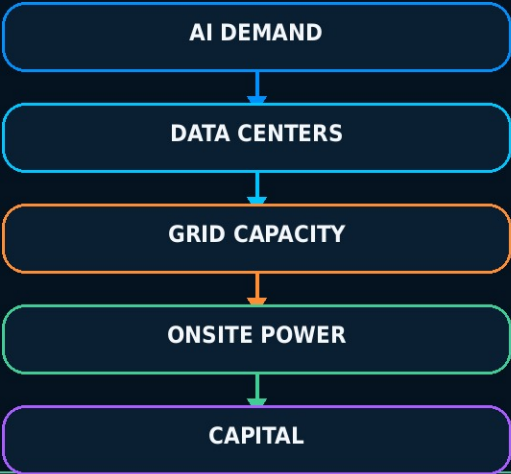


POWER IS THE NEW BOTTLENECK

AI infrastructure is forcing technology strategy and energy strategy to merge.



THE COMPUTE-POWER LOOP



THE INFRASTRUCTURE CONSEQUENCES OF AI

The AI investment cycle is exposing a constraint that software companies cannot solve with code: electricity. U.S. power consumption is expected to reach new records in both 2026 and 2027, with AI and cryptocurrency data centers among the main drivers of rising commercial demand. Grid congestion is also becoming more expensive. In the PJM market, transmission-constraint costs reached about \$6 billion in the first half of 2026, up sharply from a year earlier. For data-center developers, power availability is becoming more important than proximity to traditional technology hubs. In Europe, new AI facilities are increasingly moving into secondary and tertiary locations where developers can secure land and grid connections faster. The result is a new geography of digital infrastructure: compute clusters follow substations, fiber routes, cooling resources and generation capacity.

Companies are responding with a wider mix of solutions. Onsite power, microgrids, battery storage, gas generation, nuclear partnerships and renewable contracts are all moving closer to mainstream data-center strategy. Capstone Energy+ says customers are asking for larger behind-the-meter systems because utility connection delays threaten expansion plans. Aggreko's IPO filing shows that investors are also recognizing temporary and distributed power as part of the AI infrastructure stack. The opportunity is broad. Grid equipment, transformers, switchgear, cooling, UPS systems, batteries, energy-management software, demand response, low-carbon generation and transmission all sit downstream of AI demand. For industrial suppliers, the 'AI boom' may be as much an electrical-equipment story as a semiconductor story.

WATCHLIST: TRANSFORMERS • SWITCHGEAR • COOLING • BATTERIES • MICROGRIDS • NUCLEAR • RENEWABLES • GRID SOFTWARE