

Winning with Digital Intelligence: From Terminal Production to Integrated Development of Logistics Services & Port Economies

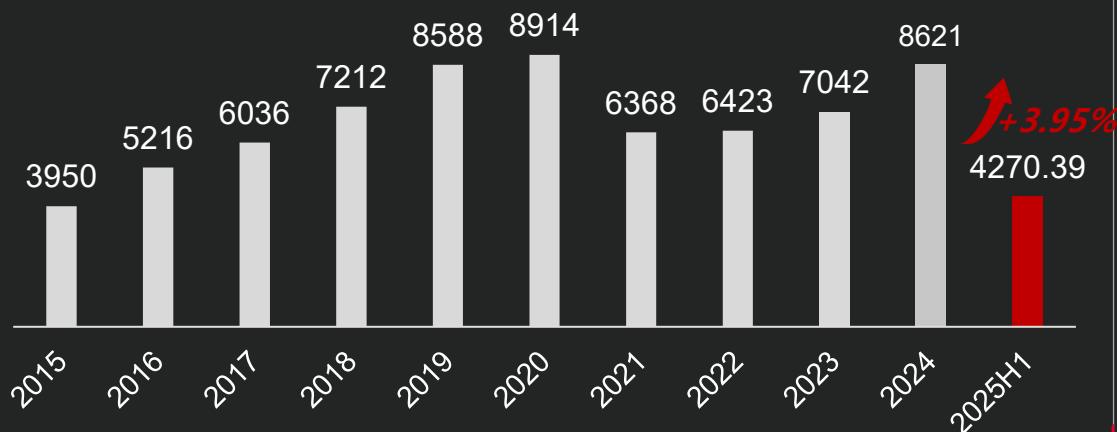
Huawei Smart Port BU
President, Haiyong Chen

2025.11.10

Huawei: Solid Operations, Heavy Investment, Immense Accumulation

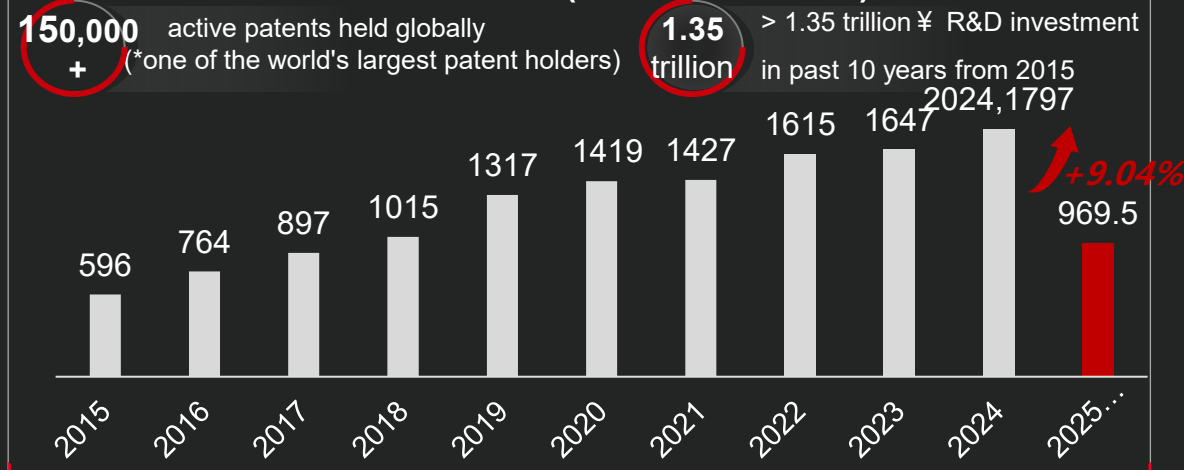
Robust business performance in line with forecast

Sales Revenue (unit: 100 M CNY)



Increasingly heavy R&D investment to drive innovation

R&D Investment (unit: 100 M CNY)



208,000

Employees

170+

countries & regions

9

The most Innovative Companies in 2024

59

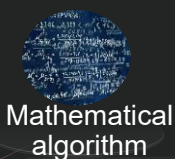
Best Global Brands

54.1%

of employees working in R&D

22.7%

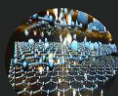
R&D expense ratio in 2025H1



Mathematical algorithm



Chip design



Basic software



Materials science



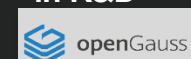
NPU



CPU

Open Harmony

Terminal OS



Database



OS



AI framework

Focus, persevere, breakthrough:
Behind our leading products are foundational research and technological innovation

Smart Port BU: From Terminal Production to Integrated Development of Logistics Services and Port Economies

Trends

Benefits Improvement

Port vs. Multi-ports
Production Collaboration

Efficiency Improvement

Manual vs. Automated
Terminal Intelligent Operations

Safety

Past Response vs. Pre-active Handling
Risk Monitor and Awareness

Service Transformation

Stevedoring vs. Integrated Logistics
Service, Improve Experience

Terminal Smart Production



Smart planning

Autonomous driving

Crane remote control

Port Smart Operation & Management



Smart tally

Smart gate

Intelligent security

Collaboration Between Logistics Services & Port Economies



Operation and production collaboration

Office AI agent

Integrated logistics

Benefits

Smart Productions

Automatic terminal, Improve operation **20%**

Smart Operations

Real-time awareness, performance **5%**

Smart Security

Zero missed alarms of security incidents

Integrated Logistics Services

One-Stop, One-Sheet logistics

② Huawei Cloud + AI for Ports

Berth plan

Stowage plan

Autonomous driving path planning algorithm

Container damage recognition

Container seal recognition

...

Prediction model

NLP model

CV model

Big data platform (Data lake, Data governance, etc.)

AI training platform (inference, training, etc.)



Compute



Storage



DCN

① Huawei 5G/5G-A Network for Ports

5G/5G-A

5G



Workers



Cranes



Yards



Vehicles



Vessels

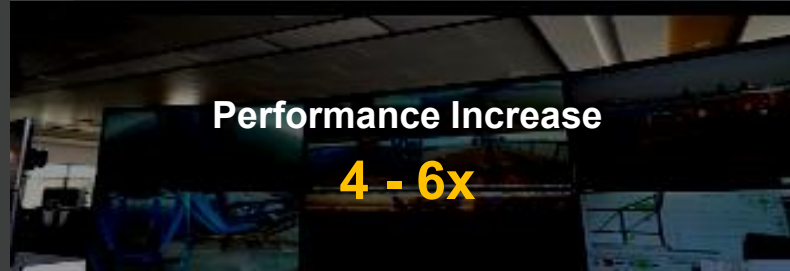


Cargo

5G/F5G : Essential to Improve Autonomous Terminal Operation



Remote Control



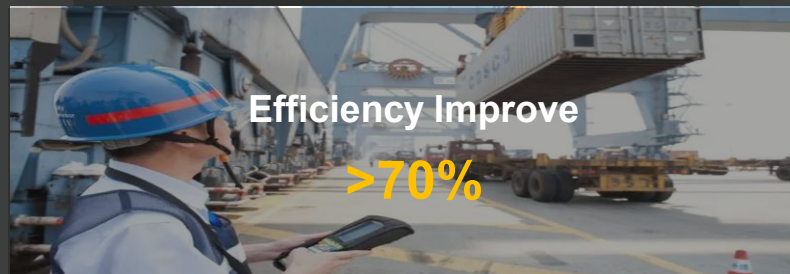
- Switch and control the QC/RTG Smoothly
- Easy & Remote maintenance
- S** Port, G** Port, T** Port.

Horizontal Transportation



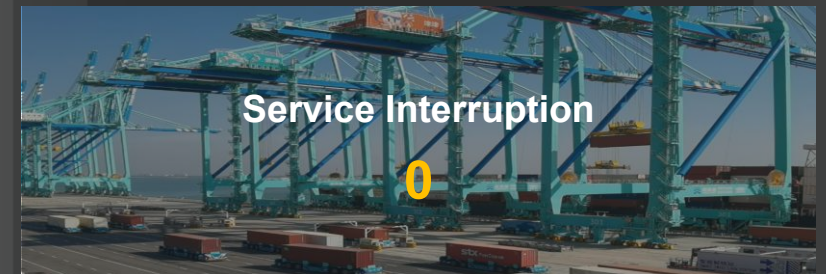
- No accident risk
- Autonomous Operation in 24 hours
- T** Port, C** Shipping

Remote Smart Tally



- Online working without boarding
- Automatic data recording during tally process
- Y** Port

Production Network Backup



- Ensure the continues production without any interruption
- N ** Port, C** Port

Cloud + AI: Unified Cloud Platform with AI, Enable Port Smart Upgrade

Huawei Cloud+AI

Enable AI, Enable Security,
Enable Data, Enable
Development

Production and Operation Collaboration



- Accurate root cause analysis and intelligent decision-making assistance
- T** Port, J** Port, S** Port

Production Security with AI



- AI identification, Easy Customization
- Abnormal events identified
- T** Port, S*** Port

Data Governance



- Data sharing reduces information isolated island
- Data convergence accelerate application innovation
- T** Port, C** Port, S** Port.

Smart Planning



- Expert planning experience inherit with AI
- AI-driven Systematic plan across full workflow
- T** Port, S*** Port

Huawei Global Footprint In Ports: 30+ Countries, 100+Ports , 200+ Projects

Key to Digital-Intelligence Transformation:

Strategy as the Core, Data as the Foundation, Intelligence as the Compass, Talent as the Future

Area	Country	Project	Solution
Asia Pacific	China	HuangHua Port	Smart Planning, Could data center
		TianJin Port	Digital Transformation Consulting ,Could data center, Smart Horizontal transportation, Smart Planning, Production Security Solution
		ShangDong Port Group	Digital Transformation Consulting,, 5G, Smart Planning, Data Center, Cloud-Network integration
		ShangHai Yangshan Port	5G/F5G, IP
		NingBo Zhoushan Port	5G/F5G, Could data Center
		GuangZhou Port	Digital Transformation Consulting , Automation Terminal Operation Network, Could data Center
		Shenzhen Mawan Port	Digital Transformation Consulting , Automation Terminal Operation Network
	Thailand	Laem Chabang Port	5G, CCTV
	Singapore	PSA	DWDM, WIFI6, CCTV
	Sri Lanka	Colombo Port	CCTV
Middle East	UAE	ABU DHABI Port	IP
Europe	Netherland	ECT	5G, IP
	Spain	Algeciras Port	LTE
Africa	Egypt	Sokhna	F5G, Smart Horizontal transportation
		Piraeus Port	Security AI model
	South Africa	Durban Port	WIFI6, LTE
	Senegal	Dakar Port	Smart Gate
Latin America	Peru	Chancay Port	eLTE/5G, F5G, Smart Horizontal transportation
	Panama	Hutchison Port	WIFI6

Thanks!

