

Inventec 5G



Inventec 5G Private Network Solution

Open, Smart, Agile

Highlights

- AIoT & Digital twins
- Decision-making by machine intelligence
- End-to-end 5G smart factory solutions
- O-RAN DU/CU/RU N78/N79
- Intelligent Edge Cloud Architecture
- AIAOI, AGV, Remote collaboration
- Multi-access Edge Computing
- Cloud computing



Imagine, you can deploy a private network ranging 2 KM with objects connected and collaborated through reliable and secure private channels and massive amounts of data are aggregated and analyzed in real time. Furthermore, autonomous decision-making is fulfilled by machine intelligence and virtual-physical integration is achieved by Digital Twins. This is the future that 5G technologies promise to be and the future is here now!

Integrate 5G + edge AI + IoT for Smart Factory Solutions

Inventec integrates its legendary data center hardware strengths and world-leading cloud-native 5G software stack as complete infrastructure solutions. These solutions build a strong foundation for 5G private networks and enable smart industrial applications with edge AI and IoT collaborated to fully realize 5G benefits: enhanced mobile broadband, ultra-reliable low-latency communication, and massive machine type communication.

In order to give full play to real-time decision-making via machine intelligence, Inventec provides a Multi-access Edge Computing (MEC) architecture for private 5G networks, aimed to deploy real-time inferencing on the edge to provide low-latency services. As training requires more powerful hardware, it can utilize on-premises data center or Azure Cloud Services for long-term analysis, statistics, and training.

About Inventec

Since its founding in 1975, Inventec has grown from an early manufacturer of computers and telephones to a leading design manufacturer of notebooks, servers, and wireless communication products. With the advent of the 5G generation, Inventec is expanding its capabilities in 5G private network system integration and architecture, transforming its world-class manufacturing facilities into 5G smart factories.

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[Learn more of Inventec 5G Smart Factory](#)

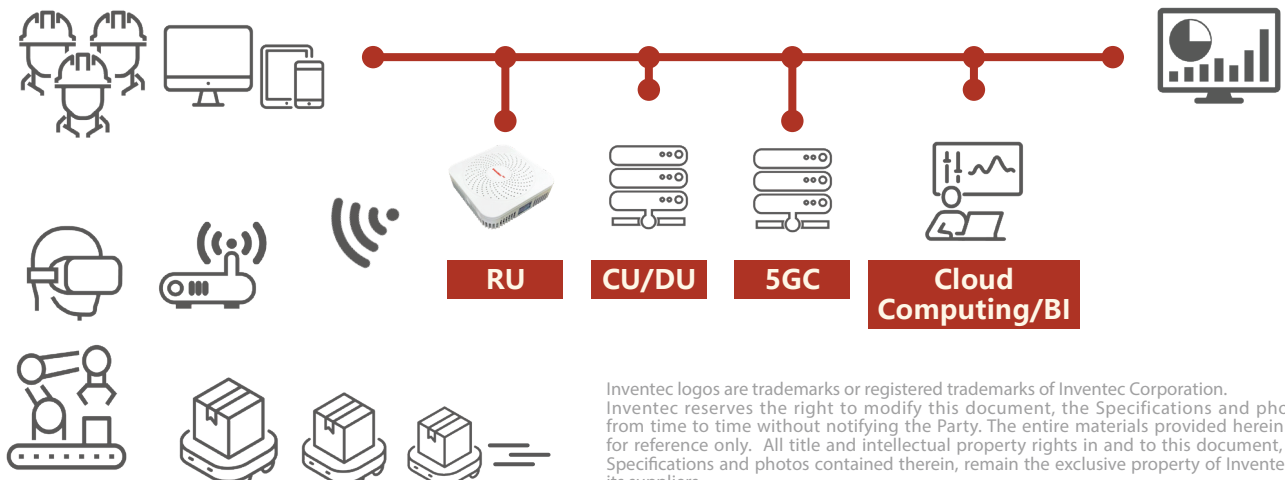


Inventec incorporates smart factory solutions on top of its end-to-end 5G + edge AIoT infrastructure offering, including AIAOI, remote collaboration, image recognition, AGV, and digital twins. To pioneer smart factory revolution, Inventec has applied the solutions to its own production lines to validate these solutions, tune the performance to match real-world practice and package them for smart factory applications.

Provide Best-practice Consulting Based on Own Proven Experiences

Inventec is the world's largest server manufacturer with multiple factories spread in several continents, our desire for smart manufacturing has never been such strong as now for more automated processes to greatly increase efficiency and lower cost. After our own deployment of the integrated smart factory solutions with close monitoring, in-depth analysis, and precise performance tuning, we have achieved tremendous results :

- Increase first pass yield by 27.5%
- Improve production efficiency by 18%
- Elevate efficiency of inspection operations by 20%
- Shorten learning curve by 30%
- Reduce costs for debugging by 32%
- Save manpower for double confirmation by 50%



O-Rack | O-RAN based All-in-one Rack

Item	Description	
Rack	Chassis Dimension	(W) 580mm x (D) 1000mm x (H) 800mm
	Power Supply	Dual Max. 2000 W 100~250V/20A
Core	PDU session	200 (Supporting up to 200 UE)
	Data Bandwidth	25Gbps
RAN	Antenna	4T4R Indoor and Outdoor RU (supporting up to 32 RU per BBU)
	Band	N78, N79
	RF Coverage	250mW for 30m Coverage
	Modulation	DL 256QAM, UL 64QAM
	Maximum MIMO	SU-MIMO 4x4
	Max Output Power	24dBm/channel
	Active Users per Cell	200
Latency	20~60ms	
Performance	DL: 800 Mbps, UL: 200 Mbps (1 UE) *Subject to conditions	

We pave the way for customer's smart factory journey by sharing our own proven experiences to create a variety of configurations for different requirements and service levels of various fields, thus, minimizing customer's time-to-production and maximizing ROI.

Inventec strives to improve, develop, and evolve along the smart factory journey. We aim to be a trustworthy partner for manufacturing industry to undergo a 5G-enabled digital transformation.