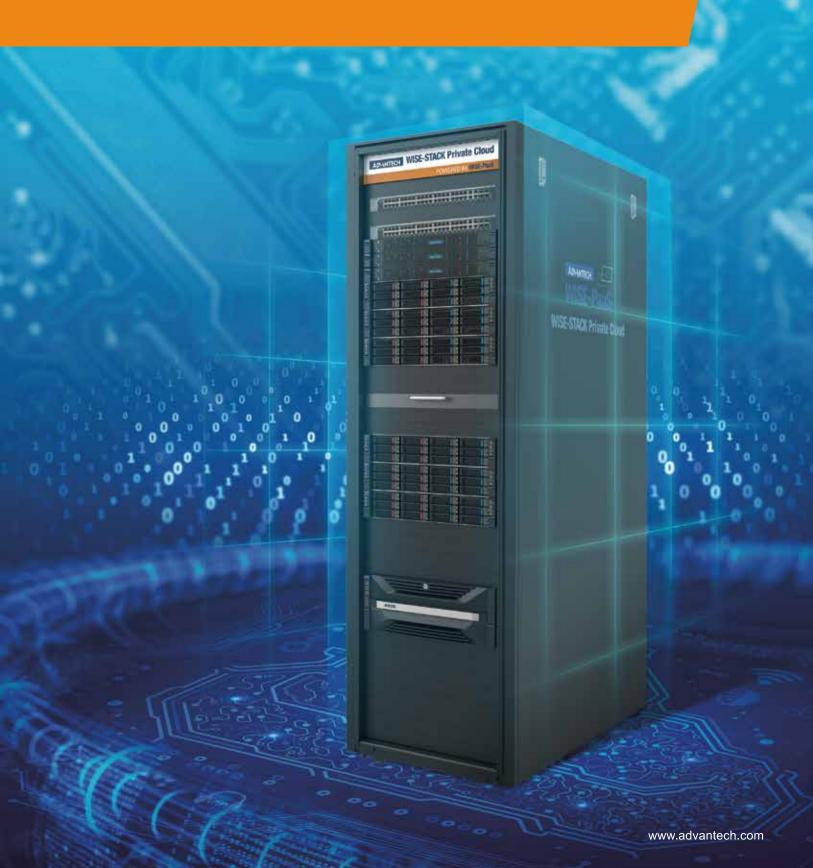
ADVANTECH

WISE-STACK Private Cloud

Enjoy the Experience of a Public Cloud, with the Confidentiality of a Private Cloud



ADVANTECH WISE-STACK Private Cloud Solution

WISE-PaaS On-Premise Deployment

WISE-STACK is Advantech's private cloud offering with an on-premise deployment method. The fully integrated system offers the complete cloud experience and development toolset. End-to-end security features and a user defined access pathway ensures security and privacy of data and AI models. WISE-STACK is designed and tested to host AIoT applications with high availability, elastic expansion, and high data throughput characteristics. All WISE-PaaS services offer seamless integration with Advantech edge devices. Companies can easily complete their IoT initiatives by combining Advantech's edge computing products with WISE-STACK.



Continuous Operation

Multi-tenancy Support

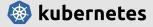
Enable IoT Solution

Easy Expansion

Cost Effective









Microservices

Container

Hardware Resource Management



WISE-STACK Configuration

Controller Node: Controls operation and coordination of services to achieve load balancing and high data throughput. Three controller nodes guarantee high availability for operational continuity, even when a server goes down. Users can perform hot-swap maintenance and ensure the performance of their private cloud.

HCI Node: Hyper-converged node provides high computation power and storage space. The number of HCI nodes is suject to the scale of IoT service.

Analytic Node: WISE-PaaS architecture incorporates Kubernetes - utilizing the power of graphic cards - to shorten the training period for deep learning.



	WISE-STACK 200 Standard	WISE-STACK 300 Advanced	WISE-STACK 600 Professional
	On-premises Data Platform	CPU-based Al with 3D Visualization	GPU Resource Management
Operation Management	•	•	•
2D & 3D Dashboards	2D	•	•
Equipment & Device Management	•	•	•
CPU Based Al Framework Service		•	•
Al Framework Service with GPU Resource Management			•
SKY-8101		(3) Controller Nodes	(3) Controller Nodes
SKY-7221	(3) HCI Nodes	(3) HCI Nodes	(6) HCl Nodes
SKY-6400			(1) Analytic Node



Visualization

WISE-PaaS/SaaS Composer WISE-PaaS/Dashboard

Low-code dashboards with various panels and 2D/3D rendering

Asset Performance Mgmt.

WISE-PaaS/APM

Cross-site asset management to accelerate solution building

Al Framework Service

WISE-PaaS/AFS

Al models training, deployment and life cycle management.











Edge Connectivity

WISE-PaaS/WISE.M+ WebAccess/SCADA WISE-PaaS/ DeviceOn WISE-PaaS/ VideoSense WISE-PaaS/LwM2M

Industrial data acquisition and edge devices remote management/ monitoring

EDGE X FOUNDRY

IoT Hub Services



Reliable message publish/ subscribe functions from streaming data gateway

Database Services













Complete data infrastructure for SQL, NoSQL, and time series data structures

WISE-STACK 300 Ordering Information

	WISE-STACK Advanced Set							
	Item		Item	Unit	Detailed item	Specification of each node		
					Chasis	2U rackmount with 4 hot-swap SAS/SATA slots		
					CPU	10 cores at 2.2Ghz and 13.75M cache		
			Contro ll er	3	RAM	64G DDR4 ram at 2666MHz		
			Node		Storage for OS	512GB SSD (SATAIII and MLC)		
					Storage for Log	4TB at 7KRPM (SATA III)		
		Hardware			Network adaptor	10GbE SFP+ *4		
		Tarawaro			Chasis	2U rackmount with 12 hot-swap		
					CPU	10 cores at 2.2Ghz and 13.75M cache		
					RAM	256G DDR4 ram at 2666MHz		
			HCI Node	3	Storage for OS	960GB SSD (SATAIII and MLC)		
					Storage for Cache	960GB SSD (SATAIII and MLC)		
					Storage for user data/application (Ceph)	32TB at 7KRPM (SATAIII)		
					Network adaptor	10GbE SFP+ *4		
	WISE- STACK-300		Item	Unit	Detailed item	Explanation		
	31A0K-300				OpenStack (by BigStack)	Hardware management		
					Kubernetes	Computing resource management and container orchaestration		
					loT Hub (RabbitMQ)	MQTT/AMQP protocol message queue		
					InfluxDB	Time series database		
					MongoDB	NoSQL database		
					PostgreSQL	SQL database		
		PaaS	WISE-PaaS		WISE-STACK health monitoring dashboard	WISE-STACK infrastructure and operation monitoring dashboard		
			Services	1	Single-sign-on service	Standard and cross-application sign in mechanism		
					WISE-PaaS/Dashboard & WISE-PaaS/SaaS Composer	Visualization tool		
					Management portal	Ul for application space, user account, and application deployment management		
					Metering tool	Meter WISE-PaaS/EnSaaS resource usage of each tenant account		
					Technical documentation	Documentation for WISE-PaaS/EnSaaS		
					WISE-PaaS/APM	Edge device data collection, monitoring, and management configuration tool		
					WISE-PaaS/AFS (CPU-based)	Al Framework Service for Al development		
	Optional Purchases							
		Ur		Un		Unit	Detailed item	Specification
					Chasis	2U rackmount with 12 hot-swap		
					CPU	10 cores at 2.2Ghz and 13.75M cache		
	HCI Node for	WISE-STAC	CK-HC10		RAM	256G DDR4 ram at 2666MHz		
	Expansion) WIGE-STACK-HOTO		1	Storage for OS	960GB SSD (SATAIII and MLC)		
					Storage for Cache	960GB SSD (SATAIII and MLC)		
					Storage for user data/application (Ceph)	32TB at 7KRPM (SATAIII)		
					Network adaptor	10GbE SFP+ *4		
	Analytic	WISE-STACK-AN10-1			Chasis	4U rackmount supporting 4 PCle x16 double-deck FH/FL card, or 8 PCle single-deck FH/FL card		
				1	CPU	24 cores at 2.1GHz and 16.5M cache		
					RAM	192G DDR4 ram at 2666MHz		
	Node				Storage for OS	128GB SSD (SATAIII and MLC)		
					Storage for Log	2TB at 7KRPM (SATAIII)		
					Network adaptor	2-port 10GBase-T NIC w Intel X550		
					GPU	4 NVIDIA Tesla P40 cards (8GB PCle) [Option to change to P100 or V100 cards]		

WISE-STACK 600 Ordering Information

				WISE-STACK Professional	Set
		Item	Unit	Detailed item	Specification of each node
				Chasis	2U rackmount with 4 hot-swap SAS/SATA slots
				CPU	10 cores at 2.2Ghz and 13.75M cache
		Controller		RAM	64G DDR4 ram at 2666MHz
		Node	3	Storage for OS	512GB SSD (SATAIII and MLC)
				Storage for Log	4TB at 7KRPM (SATAII)
				Network adaptor	10GbE SFP+ *4
				Chasis	2U rackmount with 12 hot-swap
					'
				CPU	10 cores at 2.2Ghz and 13.75M cache
		HOLN		RAM	256G DDR4 ram at 2666MHz
	Hardware	HCI Node	6	Storage for OS 960GB SSD (SATAIII and MLC)	
				Storage for Cache 960GB SSD (SATAIII and MLC)	
				Storage for user data/application (Ceph)	32TB at 7KRPM (SATAIII)
				Network adaptor	10GbE SFP+ *4
				Chasis	4U rackmount supporting 4 PCle x16 double-deck FH/FL card, or 8 PCle single-deck FH/FL card
				CPU	24 cores at 2.1GHz and 16.5M cache
		Analytic		RAM	192G DDR4 ram at 2666MHz
WISE-		Node	1	Storage for OS	128GB SSD (SATAIII and MLC)
STACK-600				Storage for Log	2TB at 7KRPM (SATAIII)
				Network adaptor	2-port 10GBase-T NIC w Intel X550
				GPU	4 NVIDIA Tesla P40 cards (8GB PCle) [Option to change to P100 or V100 cards)
		Item	Unit	Detailed item	Explanation
				OpenStack (by BigStack)	Hardware management
				Kubernetes	Computing resource management and container orchaestration
				IoT Hub (RabbitMQ)	MQTT/AMQP protocol message queue
				InfluxDB	Time series database
				MongoDB	NoSQL database
				PostgreSQL	SQL database
				WISE-STACK health monitoring dashboard	WISE-STACK infrastructure and operation monitoring dashboard
PaaS	PaaS	WISE-PaaS	1		
	Services	'	Single-sign-on service WISE-PaaS/Dashboard & WISE-PaaS/SaaS Composer	Standard and cross-application sign in mechanism Visualization tool	
				'	
				Management portal	Ul for application space, user account, and application deployment management
				Metering tool	Meter WISE-PaaS/EnSaaS resource usage of each tenant account
				Technical documentation	Documentation for WISE-PaaS/EnSaaS
				WISE-PaaS/APM	Edge device data collection, monitoring, and management configuration tool
				WISE-PaaS/AFS	Al Framework Service with GPU resource management for Al development
				Optional Purchases	
			Unit	Detailed item	Specification
				Chasis	2U rackmount with 12 hot-swap
				CPU	10 cores at 2.2Ghz and 13.75M cache
HCI Node for	MIOE OTA	01/ 11040		RAM	256G DDR4 ram at 2666MHz
Expansion	W I SE-STA	UK-HUTU	1	Storage for OS	960GB SSD (SATAIII and MLC)
				Storage for Cache	960GB SSD (SATAIII and MLC)
				Storage for user data/application (Ceph)	32TB at 7KRPM (SATAIII)
				Network adaptor	10GbE SFP+ *4
	WISE-STACK-AN10-1			Chasis	4U rackmount supporting 4 PCle x16 double-deck FH/FL card, or 8 PCle single-deck FH/FL card
			1	CPU	24 cores at 2.1GHz and 16.5M cache
				RAM	192G DDR4 ram at 2666MHz
Analytic Node				Storage for OS	128GB SSD (SATAI II and MLC)
Nouc					
				Storage for Log	2 part 10 CPage T NIC w Intel VEED
				Network adaptor	2-port 10GBase-T NIC w Intel X550
				GPU	4 NVIDIA Tesla P40 cards (8GB PCIe) [Option to change to P100 or V100 cards]



WISE-PaaS/EnSaaS



WISE-PaaS/WISE.M+ WISE-PaaS/ EdgeLink

WISE-PaaS/ DeviceOn

WISE-PaaS/VideoSense

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