

# ARK-5260

## Intel® Atom™ D510 Fanless Embedded Box PC with Dual PCI/PCIe Expansion and Dual Mobile HDDs



### Features

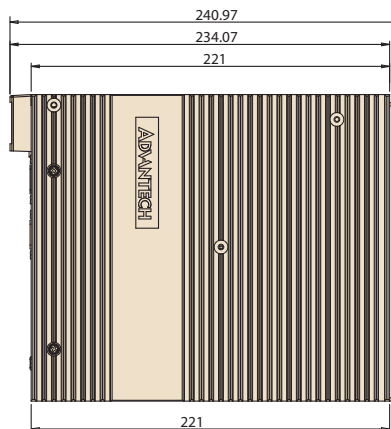
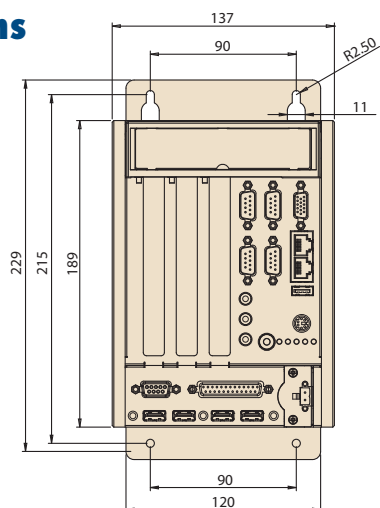
- Sealed construction with fanless operation, supports Intel® Atom® D510 up to 1.66 GHz
- Supports 2 Giga LAN and 5 USB 2.0 ports
- Supports 4 RS-232/422/485 with Auto-flow control
- Built-in 1 x PCIe, and 2 x PCI expansion slots
- Rubber anti-vibration card-holder for PC expansion boards
- Supports wide power range of 12~ 24V DC input
- Supports SUSIAccess and Embedded Software APIs
- IP40



### Specifications

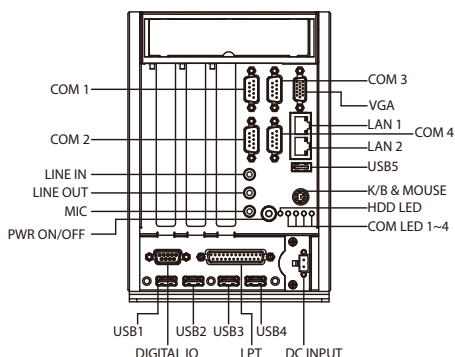
Processor System	CPU	Intel Atom D510
	Max. Speed	1.66 GHz
	System Chipset	Intel ICH8-M
	BIOS	AMI 16 Mbit SPI BIOS
Memory	Technology	Single channel DDR2 667 MHz
	Max. Capacity	2 GB
	Socket	1 x 200-pin SO-DIMM
Graphics	Chipset	Embedded Gen3.5+ GFX Core technology, Direct X 9/Pixel Shader 2.0 compliant
	VRAM	Shared 224 MB
	Interface	VGA: up to 2048 x 1536
Ethernet	LAN1	10/100/1000 Mbps GigaLAN Controller, Intel 82567V, supports Wake on LAN
	LAN2	10/100/1000 Mbps GigaLAN Controller, Intel 82583V, supports Wake on LAN
Audio	Interface	Line-in, Line-out, Mic-in
IO Interface	Serial Ports	4 x RS-232/422/485 port, support Auto-flow control
	USB Interface	5 x USB ports, USB 2.0 compliant
	Keyboard/Mouse	1 x PS/2 port, supports PS/2 mouse and keyboard
	Parallel Port	Supports D-sub 25-pin connector
	Digital I/O	Supports 8-bit digital IO
Other	Watchdog timer	255-level timer interval, setup by software
	COM LED	4 COM LED lighting
Storage	HDD	Supports two drive bays space for SATA 2.5" HDD (9.5 mm height only)
	SSD	Supports one internal CompactFlash socket for type I/II CompactFlash disk
Expansion	PCI/PCIe Slot	2 PCI Slot, and 1 PCIe x1 Slot
		Supports maximum 15W power for expansion Supports maximum dimension of 99 mm (width) x 186 mm (length) for expansion PC board
Software Support	Microsoft Windows	Windows 7, XP Embedded, WinCE 6.0
Power Requirement	Power Type	ATX
	Power Input Voltage	12 V <sub>DC</sub> ~ 24 V <sub>DC</sub>
	Minimum Power Input	12 V @ 5 A ~ 24 V @ 2.5 A
	Power Adapter	AC-to-DC, 65 W DC19 V/3.4 A
Power Consumption	Typical	20 W (with Intel Atom D510 1.66 GHz and w/o expansion)
	Max.	23 W (with Intel Atom D510 1.66 GHz and w/o expansion)
Mechanical	Construction	Aluminum housing
	Mounting	Desk/wall-mounting
	Dimensions (W x H x D)	137 x 189 x 221 mm (5.39" x 7.44" x 8.70")
	Weight	4.2 kg (9.24 lbs)
Environment	Operating Temperature	With extended temperature peripherals 2.5-inch HDD without PC expansion Boards: 0 ~ 45° C with 0.7m/sec air flow
		With extended temperature peripherals CompactFlash disk without PC expansion Boards: 0 ~ 55° C with 0.7m/sec air flow
	Storage Temperature	- 40 ~ 85° C (-40 ~185° F)
	Relative Humidity	95% @ 40° C (non-condensing)
	Vibration Loading During Operation	With 2.5-inch HDD: 1 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 Oct./min, 1 hr/axis
		With CompactFlash disk: 5 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 Oct./min, 1 hr/axis
	Shock During Operation	With 2.5-inch HDD: 20 G, IEC 60068-2-27, half sine, 11 ms duration
With CompactFlash disk only: 50 G, IEC 60068-2-27, half sine, 11 ms duration		
EMC	CE/FCC, CCC, BSMI	
Safety Certifications	CCC, BSMI	

## Dimensions

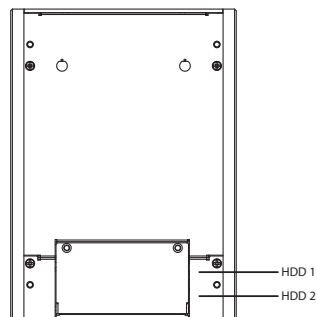


Unit: mm (inch)

## Front Panel External I/O Mechanical Layout/Drawing



## Rear Panel External I/O Mechanical Layout/Drawing



## Packing List

Part Number	Description
-	1 x ARK-5260 Unit
-	1 x Driver/Utility CD/Manual
-	1 x User Manual (Simplified Chinese)
1960049826N001	1 x Mounting bracket upper
1960049827N001	1 x Mounting bracket lower
1990000505	3 x Shock proof rubber

## Optional Items

Part Number	Description
1757003659	AC-to-DC Adapter, DC19 V/3.42A 65 W, with phoenix power plug
1700001947	Power cable 2-pin 180 cm, USA for ARK-338X
1700001948	Power cable 2-pin 180 cm, Europe for ARK-338X
1700001949	Power cable 2-pin 180 cm, UK for ARK-338X
1757000537	AC-to-DC Adapter 4-Pin DC 19V/6.32A, 120 W

## Ordering Information

Part Number	Description
ARK-5260F-D5A1E	Intel Atom D510 1.66GHz with 2-pin phoenix connector, VGA, 2x GbE, 5 x USB ports, 4 x COM ports, audio, 2xPCI and PCIe expansion slots
ARK-5260A-D5A1E	Intel Atom D510 1.66GHz with M12 4-pin connector, VGA, 2x GbE, 5 x USB ports, 4 x COM ports, audio, 2xPCI and PCIe expansion slots

## Embedded OS

Part Number	Description
2070010215	Windows XP Embedded WES2009 for ARK-5260, English version (610 MB)
2070010216	Windows XP Embedded WES2009 for ARK-5260, 24-in-1 languages version (610 MB)
2070010257	WinCE 6.0 Pro ARK-5260 V1.3 ENG (customized BIOS required)

# ARK-5261

## Fanless Embedded Box PC with Intel® Celeron® J1900 Processor, PCI/PCIe Expansion Slots, and Dual Mobile HDDs/SSDs



ARK-5261S  
ARK-5261P



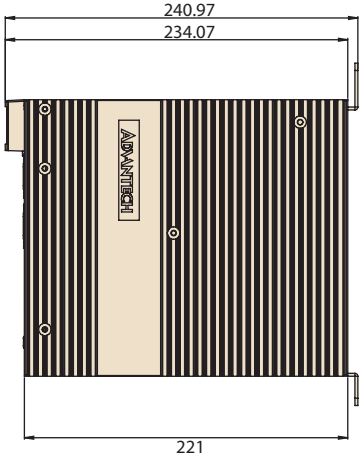
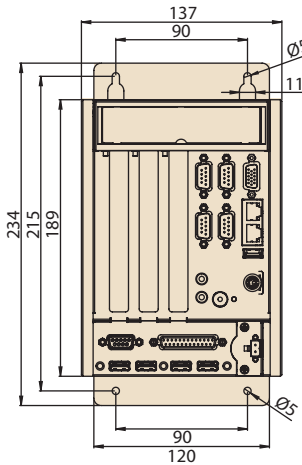
### Features

- Fanless embedded box PC with Intel® Celeron® J1900 processor, 2.0 GHz
- 2 x Giga LAN, 1 x USB 3.0, and 5 x USB 2.0
- 4 x RS-232/422/485 with auto-flow control, 1 x COM1, and 1 x COM2 ports with 5V/12V power
- 1 x PCIe and 2 x PCI or 3 x PCI expansion slots
- 4 x RS-422/485 (isolation type)
- Rubber anti-vibration card holder for PC expansion boards
- 9 ~ 30V<sub>DC</sub> input power range
- Wide operating temperature (-20 ~ 60 °C)
- Supports Advantech SUSIAccess and embedded software APIs

### Specifications

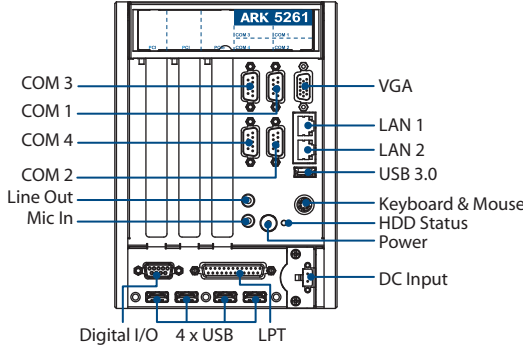
System	CPU	Intel® Celeron® J1900 processor, 2.0 GHz		
	Max. Speed	2.41 GHz		
	BIOS	AMI 16 Mbit SPI BIOS		
Memory	Technology	Dual channel DDR3L-1333 (low power 1.35V)		
	Max. Capacity	4 GB memory built in, supports up to 8 GB		
	Socket	2 x 204-pin SODIMM		
Graphics	Integrated Chipset	Intel® HD Graphics		
	VRAM	Up to 224 MB SDRAM of shared system memory		
	Interface	VGA: 2560 x 1600 @ 60Hz		
Ethernet	LAN1	10/100/1000 Mbps Intel® I211GigaLAN controller, supports Wake-on-LAN		
	LAN2	10/100/1000 Mbps Intel® I211GigaLAN controller, supports Wake-on-LAN		
Audio	Interface	Line-Out, Mic-in		
I/O	Serial Ports	Standard type: 4 x RS-232/422/485, 1 x COM1, and 1 x COM2 with 5V/12V power, supports auto-flow control (ARK-5261S-J0A1E) Isolation type: 4 x RS-422/485 with 15kV ESD protection, 2kV surge protection, and 2kV electrical isolation (ARK-5261I-J0A1E)		
	USB	6 (1 x USB 3.0, 4 x USB 2.0, 1 x internal USB 2.0 type A)		
	PS/2 Port	1 supports PS/2 mouse and keyboard		
	Parallel Port	D-sub 25-pin connector		
	Digital I/O	8-bit digital IO (DB9 connector)		
Other	Watchdog Timer	255-level timer intervals, setup via software		
Storage	HDD/SSD	2 x 2.5" SATA HDD/SSD bays (9.5 mm height)		
	mSATA	1 x mSATA or SATAII		
Expansion	PCI/PCIe	2 x PCI, 1 x PCIe x1 (AKR-5261S-J0A1E and ARK-5261I-J0A1E)		
		3 x PCI, 1 x full-size mini PCIe (ARK-5261P-J0A1E) Supports 15W max. power and 99 x 186 mm max. dimensions (W x L) for PC expansion board		
Software	OS Support	Microsoft Windows 7/8.1/Embedded and Linux Fedora 19		
Power	Type	ATX / AT		
	Input Voltage	9 ~ 30 V <sub>DC</sub>		
	Minimum Voltage	9V @ 6.6A ~ 30V @ 2A		
	Power Adapter	AC-to-DC, 65 W DC19 V/3.4 A		
Power Consumption	Idle	9.9 W (with Intel® Celeron® J1900, 2.0 GHz processor, memory, and SATA HDD)		
	Maximum	12.9 W (with Intel® Celeron® J1900, 2.0 GHz processor, memory, and SATA HDD)		
Mechanical	Construction	Aluminum housing		
	Mount Options	Desk/wall mounting		
	Dimensions (W x H x D)	137 x 189 x 221 mm (5.39" x 7.44" x 8.70")		
	Weight	4.2 kg (9.24 lbs)		
Environment	Temperature	Operating (with 2 x industrial SSDs without PC expansion boards)	Operating (with 1 x 2.5" HDD or mSATA without PC expansion boards)	Non-operating
		-20 ~ 60 °C with 0.7m/sec air flow	0 ~ 40 °C with 0.7m/sec air flow	-40 ~ 85 °C (-40 ~185 °F)
	Storage Temperature	-40 ~ 85 °C (-40 ~185 °F)		
	Relative Humidity	95% @ 40 °C (non-condensing)		
Certifications	Safety	EMC	CE/FCC, CCC, BSMI	
		Safety	CCC, BSMI	

**Dimensions**

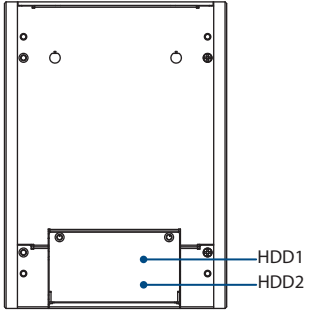


Unit: mm

**Front View**



**Rear View**



**Ordering Information**

Part Number	VGA	USB	GbE	RS-232	RS-422/485	PS/2	PCIe	PCI	Power
ARK-5261S-J0A1E	1	1 USB 3.0, 5 USB 2.0	2	4	4	1	1 x PCIe x1	2	9 ~ 30V <sub>DC</sub>
ARK-5261P-J0A1E	1	1 USB 3.0, 4 USB 2.0	2	4	4	1	1 x Mini PCIe	3	9 ~ 30V <sub>DC</sub>
ARK-5261I-J0A1E	1	1 USB 3.0, 5 USB 2.0	2	4	4	1	1 x PCIe x1	2	9 ~ 30V <sub>DC</sub>

**Packing List**

Part Number	Description	Quantity
ARK-5261	ARK-5261 Unit	1
2061526100	Driver/utility CD	1
2001526110	ARK-5261 startup manual (Eng+CN)	1
1960049826N001	Upper mount bracket	1
1960049827N001	Lower mount bracket	1
1990000505	Shock-proof rubber boot	3
2001526120	ARK-5261 startup manual (TC)	1

**Optional Accessories**

Part Number	Description
1700021831-01	DP to DVI-D cable with BKT
PCA-TPM-00A1E	TPM module
96PSA-A120W24T2	Adaptor 100 ~ 240V <sub>AC</sub> 120W 24V
96PSA-A65W19P2-2	Adaptor 100 ~ 240V <sub>AC</sub> 65W 19V without PFC
1702002600	Power cord UL/CSA (USA) 3P, 125V, 10A, 1.83 M, 180 D (for 120W)
1700001524	Power cord UL 3P, 125V, 10A, 1.80 cm (for 165W)
1700022940-01	Power cord (PSE) 3P, 125V, 7A, 3 M, DAC-ST01 (for 120W)
1700021376-01	Power cord (PSE) 3P, 125V, 7A, 250 cm, IEC60320-C5 (for 65W)
1702002605	Power cord (EU) 2P, 220V, 10A/16A, 1.83 M, 90 D (for 120W)
170203183C	Power cord (EU) 3P, (WS-010+WS-083), 1.83 M (for 165W)

**Embedded OS**

Part Number	Description
2070013108	WE8S ARK-5261 x64 V6.5.2 10MUI; SAP image
2070013109	WES7P ARK-5261 x64 V5.6.6 10MUI ;SAP image

# ARK-5420

## Intel® 3rd Generation Core™ i Processor Fanless System with PCIe4 & PCI Slot



### Features

- Support Intel 3rd Generation Core i7/i5/Celeron BGA type CPU
- Intel® HM76 PCH
- Support wide temperature -25° C ~ 60° C
- Support VGA & HDMI
- 1 x 2.5" HDD+1 x m-SATA
- Support PCIe4 /PCI slot /Mini-PCIE
- Supports 9 ~ 36V wide range DC input

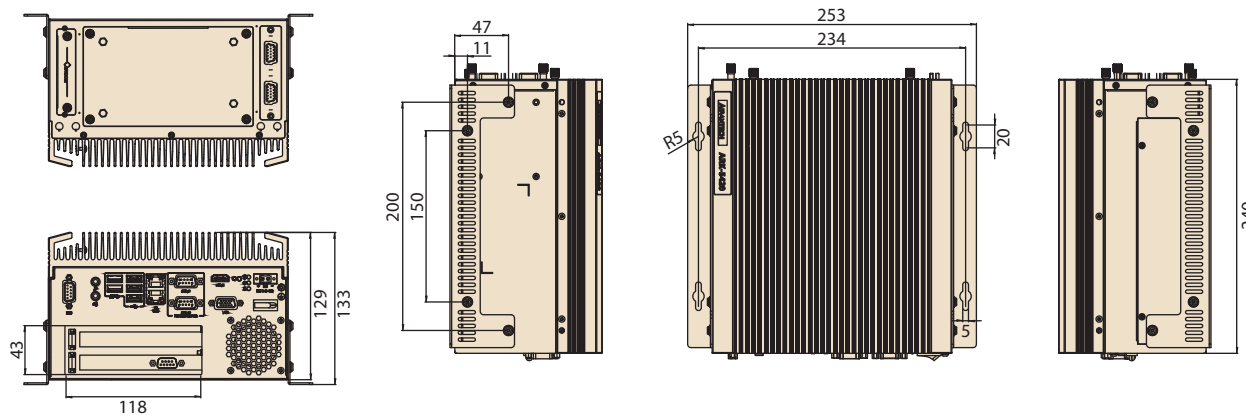


### Specifications

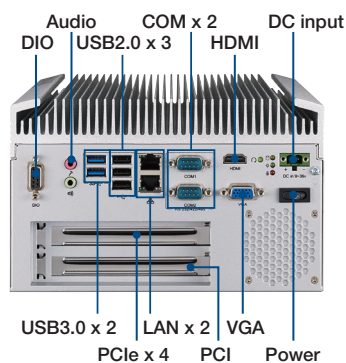
System Chipset	CPU	Intel Core i7-3555LE	Intel i5-3610ME Processor	Intel Celeron 1020E processor
	Max Speed	2.5GHz	2.7 GHz	2.20 GHz
	L3 Cache	6 MB	4 MB	2 MB
	Chipset	Intel HM76		
	BIOS	AMI SPI 64 Mb		
Memory	Technology	DDR3 1333/1600, non ECC		
	On board memory	4 GB on board		
	Socket	1 x 204-pin SODIMM (up to 8GB per DIMM) Note: SODIMM and HDD Tray has mechanism interferences, only 1 x HDD or 1 x CF can be used when you request to expand memory size		
	Maximum Capacity	12 GB		
Display	Chipset	Intel Integrated Graphics HD4000, support Direct x11		
	VGA	1 x DB15, max resolution up to 2048 x 1536		
	HDMI	1 x HDMI, support HDMI1.4 standard, max to 1920 x 1200 @ 60Hz		
	Display Option	Support Dual independent display		
Ethernet	Controller	Intel i210-AT, 10/100/1000 Mbps		
	Interface	2 x RJ-45		
Storage	HDD	Support 1x 2.5"HDD + CF module (Optional function)		
	SSD	1 x internal mSATA (Mini-PCIE interface)		
I/O	USB	2 x USB3.0 + 3x USB 2.0		
	Serial Port	2 x DB9, RS232/422/485 with automatic flow control		
	DIO	1 x DB9, 8-bit		
	Audio	2 (1 x Line-Out, 1 x Mic-in)		
	LPT	1 x DB26 (Front panel, option)		
	PCIE	1 x PCIe4		
Expansion Slot	PCI	1 x PCI32 33Mhz Slot 1 x Internal Mini-PCle (Full-Size)		
	LED	Power x 1/Storage x 1/Fault x 1		
LED & Button	Button	Power on/off Switch x 1 Reset button x 1		
	Power Type	ATX/AT		
Power	Power Input Voltage	9 ~ 36V <sub>DC</sub>		
	Output	System reset		
Watchdog Timer	Interval	Programmable 1~255 sec/min		
	Temperature	Operating (With Industrial SSD)      Operating (with HDD)      Non-Operating		
Environment	Humidity	-25 ~ 60° C with 0.7m/S air flow      0 ~ 40° C      -40 ~ 85° C		
	Vibration	95% @ 40° C (non-condensing)		
	Shock	With SSD: 2 Grms @ 5 ~ 500 Hz, random, 1 hr/axis With 2.5" HDD: 0.5 Grms @ 5 ~ 500 Hz, random, 1 hr/axis		
	Shock	With SSD: 20G, IEC-68-2-27, half-sine wave, 11 ms duration With 2.5" HDD: 10G, IEC-68-2-27, half-sine wave, 11 ms duration		
Mechanical Features	Dimension (W x H x D)	253 x 129 x 240 mm		
	Install	Desktop/Wall-mounting		
Certifications	EMC	CE/FCC Class A, CCC, BSMI		
	Safety	UL,CCC,BSMI		

## Dimensions

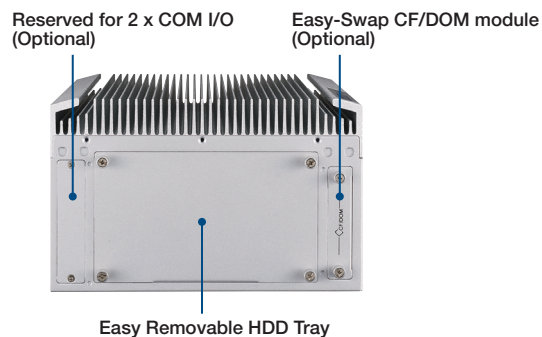
Unit: mm



## Front View



## Rear View



## Ordering Information

Part Number	CPU	VGA	HDMI	USB3/2	GbE	COM	PCIe Exp	PCI Exp	Power
ARK-5420-U5A1E	i7-355LE	1	1	2 + 3	2	2	1(x4)	1	DC9 ~ 36V
ARK-5420-U7A1E	i5-3610ME	1	1	2 + 3	2	2	1(x4)	1	DC9 ~ 36V
ARK-5420-U2A1E	Celeron 1020	1	1	2 + 3	2	2	1(x4)	1	DC9 ~ 36V

## Packing List

Part No.	Description
-	ARK-5420
-	1 x Driver CD
1960059401N001	2 x Supporting-angels
1652002205	1 x 2-pin Terminal Block

## Optional Accessory

Part No.	Description
1700019592	Parallel cable/D-SUB 25P(F)/IDE#2 26P-2.0 15cm
9692005000E	CF card board
96PSA-A120W24T2	ADP A/D 100-240V 120W 24V
1702002600	Power Cord 3P UL/CSA(USA) 125V 10A 1.83M 180D (for 120W)
1700022940-01	Power cord PSE 7A 125V 3P 3m DAC-ST01 (for 120W)
1702002605	Power cord 2P FRANCE 10A/16A 220V 1.83M 90D (for 120W)
96PSA-A65W19P2-2	ADP A/D 100-240V 65W 19V WO/PFC
1700001524	Power Cord 3P UL 10A 125V 180cm (for 65W)
170203183C	POWER Code 3P Europe (WS-010+WS-083)183cm (for 65W)
1700021376-01	Power Cord 3P PSE 7A 125V 250cm(IEC60320-C5) (for 65W)
PCA-TPM-00A1E	TPM module
PCA-COM232-00A1E	COM 232 module (4xCOM 232 expanded by cable)
98R1542000E	ARK-5420 TPM/COM module Bracket Accessory
98R2542002E	ARK-5420 FAN module accessory

## Embedded OS

Part Number	Description
2070013339	Img WES7P ARK-5420 V5.6.6 10muti;sap
2070013330	Image WES2009 ARK-5420 V4.7 10muti;SAP