

Moxa New Arm-based 64-bit Computers

Entry-level Arm-based 64-bit Computers



Dual-core, 2-GB RAM
Compact



Dual-core, 2-GB RAM
Built-in LTE

Series	UC-1200A Series		UC-2200A Series	
Model Name	UC-1222A		UC-2222A-T/UC-2222A-T-CN	
			UC-2222A-T-EU/AP/US	
Computer				
CPU	Armv8 Cortex-A53 1 GHz dual-core		Armv8 Cortex-A53 1 GHz dual-core	
Memory	2 GB		2 GB	
Storage Preinstalled	16 GB		16 GB	
Storage Slot	Micro SD x 1		Micro SD x 1	
OS	Moxa Industrial Linux 3 (Linux Debian 11 kernel 5.10)		Moxa Industrial Linux 3 (Linux Debian 11 kernel 5.10)	
TPM	TPM 2.0		TPM 2.0	
Ethernet Ports	2 GbE		2 GbE	
Serial Ports (RS-232/422/485)	2		2	
CAN Ports	-		-	
DIs / DOs	-		-	
USB Ports	USB 2.0 x 1		USB 2.0 x 1	
Wireless				
Wireless Expansion Slot	mPCIe x 1		mPCIe x 1	
Cellular Connectivity	-		-	
SIM Slots	Nano SIM x 1		Nano SIM x 1	
Wi-Fi	-		-	
GPS	-		-	
Standards and Certification				
Safety/EMC/RF	FCC, IC, UL, CE, BSMI, KC, RCM		FCC, IC, UL, CE, BSMI, KC, RCM	
Carrier Approval	-		-	
Hazardous Locations	C1D2, ATEX		C1D2, ATEX	
Operating Temperature	-40 to 60°C		UC-2222A-T: -40 to 75°C UC-2222A-T-CN: -40 to 70°C	
Power Consumption	4.5 W		4.5 W	
			7.8 W	

Moxa New Arm-based 64-bit Computers (preliminary)

Value-added Arm-based 64-bit Computers



Quad-core, 4-GB RAM
Built-in LTE

Series	UC-3400A Series			
Model Name	UC-3420A-T-LTE	UC-3424A-T-LTE	UC-3430A-T-LTE-WiFi	UC-3434A-T-LTE-WiFi
Computer				
CPU	Armv8 Cortex-A53 1.4 GHz quad-core	Armv8 Cortex-A53 1.4 GHz quad-core	Armv8 Cortex-A53 1.4 GHz quad-core	Armv8 Cortex-A53 1.4 GHz quad-core
Memory	4 GB	4 GB	4 GB	4 GB
Storage Preinstalled	16 GB	16 GB	16 GB	16 GB
Storage Slot	Micro SD x 1	Micro SD x 1	Micro SD x 1	Micro SD x 1
OS	Moxa Industrial Linux 3 (Linux Debian 11 kernel 5.10)	Moxa Industrial Linux 3 (Linux Debian 11 kernel 5.10)	Moxa Industrial Linux 3 (Linux Debian 11 kernel 5.10)	Moxa Industrial Linux 3 (Linux Debian 11 kernel 5.10)
TPM	TPM 2.0	TPM 2.0	TPM 2.0	TPM 2.0
Ethernet Ports	2 GbE	2 GbE	2 GbE	2 GbE
Serial Ports (RS-232/422/485)	2	2	2	2
CAN Ports	-	2	-	2
DIs / DOs	-	-	-	-
USB Ports	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1
Wireless				
Wireless Expansion Socket	-	-	-	-
Cellular Connectivity	Built-in LTE Cat. 4	Built-in LTE Cat. 4	Built-in LTE Cat. 4	Built-in LTE Cat. 4
SIM Slots	Nano SIM x 2	Nano SIM x 2	Nano SIM x 2	Nano SIM x 2
Wi-Fi	-	-	Built-in WiFi 6	Built-in WiFi 6
GPS	Yes	Yes	Yes	Yes
Standards and Certification				
Safety/EMC/RF	FCC, IC, UL, CE, UKCA, NCC, KC, RCM	FCC, IC, UL, CE, UKCA, NCC, KC, RCM	FCC, IC, UL, CE, UKCA, NCC, KC, RCM	FCC, IC, UL, CE, UKCA, NCC, KC, RCM
Carrier Approval	AT&T, Verizon	AT&T, Verizon	AT&T, Verizon	AT&T, Verizon
Hazardous Locations	C1D2, ATEX	C1D2, ATEX	C1D2, ATEX	C1D2, ATEX
Operating Temperature	-40 to 70°C	-40 to 70°C	-40 to 70°C	-40 to 70°C
Power Consumption	10 W			

Moxa New Arm-based 64-bit Computers (preliminary)

Value-added Arm-based 64-bit Computers



Quad-core, 4-GB RAM
5G/CAN/serial Isolation

Series	UC-4400A Series					
Model Name	UC-4410A-T	UC-4430A-T	UC-4450A-T-5G	UC-4454A-T-5G	UC-4414A-I-T	UC-4434A-I-T
Computer						
CPU	Armv8 Cortex-A53 1.6 GHz quad-core	Armv8 Cortex-A53 1.6 GHz quad-core	Armv8 Cortex-A53 1.6 GHz quad-core	Armv8 Cortex-A53 1.6 GHz quad-core	Armv8 Cortex-A53 1.6 GHz quad-core	Armv8 Cortex-A53 1.6 GHz quad-core
Memory	4 GB	4 GB	4 GB	4 GB	4 GB	4 GB
Storage Preinstalled	16 GB	16 GB	16 GB	16 GB	16 GB	16 GB
Storage Slot	Micro SD x 1	Micro SD x 1	Micro SD x 1	Micro SD x 1	Micro SD x 1	Micro SD x 1
OS	Moxa Industrial Linux 3 (Linux Debian 11 kernel 5.10)	Moxa Industrial Linux 3 (Linux Debian 11 kernel 5.10)	Moxa Industrial Linux 3 (Linux Debian 11 kernel 5.10)	Moxa Industrial Linux 3 (Linux Debian 11 kernel 5.10)	Moxa Industrial Linux 3 (Linux Debian 11 kernel 5.10)	Moxa Industrial Linux 3 (Linux Debian 11 kernel 5.10)
TPM	TPM 2.0	TPM 2.0	TPM 2.0	TPM 2.0	TPM 2.0	TPM 2.0
Ethernet Ports	2 GbE	2 GbE	2 GbE	2 GbE	2 GbE	2 GbE
Serial Ports (RS-232/422/485)	2	2	2	4	4 (2 ports with isolation)	4 (2 ports with isolation)
CAN Ports	1	1	1	2	2	2
DIs / DOs	4 DIs, 4 DOs	4 DIs, 4 DOs	4 DIs, 4 DOs	4 DIs, 4 DOs	4 DIs, 4 DOs	4 DIs, 4 DOs
USB Ports	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1
Wireless						
Wireless Expansion Socket	-	M.2 socket x 1 mPCIe slot x 1	M.2 socket x 1	M.2 socket x 1	-	M.2 socket x 1 mPCIe slot x 1
Cellular Connectivity	-	Optional LTE Cat.4 accessory	Built-in 5G	Built-in 5G	-	Optional LTE Cat.4 accessory
SIM Slots	-	Nano SIM x 2	Nano SIM x 2	Nano SIM x 2	-	Nano SIM x 2
Wi-Fi	-	Optional WiFi 6 accessory	Optional WiFi 6 accessory	Optional WiFi 6 accessory	-	Optional WiFi 6 accessory
GPS	-	Optional	Yes	Yes	-	Optional
Standards and Certification						
Safety/EMC/RF	UL, CE, UKCA	UL, CE, UKCA (no RF certification)	FCC, IC, UL, CE, UKCA, NCC	FCC, IC, UL, CE, UKCA, NCC	UL, CE, UKCA	UL, CE, UKCA (no RF certification)
Carrier Approval	-	-	AT&T, Verizon	AT&T, Verizon	-	-
Hazardous Locations	C1D2, ATEX	C1D2, ATEX	C1D2, ATEX	C1D2, ATEX	C1D2, ATEX	C1D2, ATEX
Operating Temperature	<ul style="list-style-type: none"> • Non-wireless: -40 to 75°C • Wireless: -40 to 70°C 					
Power Consumption	<ul style="list-style-type: none"> • 14 W (with cellular and Wi-Fi) • 12 W (with cellular only) • 10 W (without wireless module) 					

Moxa Industrial Linux

Moxa's Debian-based industrial-grade stable Linux distribution for long-term projects



Features and Benefits

- Debian-based distribution that can use all standard Debian packages
- Developed as per IEC 62443-4-1 and compliant with IEC 62443-4-2 industrial cybersecurity standards (Moxa Industrial Linux 3 Secure)
- Long-term support until 2027 for Moxa Industrial Linux 1 and 2031 for Moxa Industrial Linux 3
- Wireless connection management utility with automatic network keep alive and failover
- Ready-to-use APIs and library to ease access to hardware and I/O interfaces
- Crash-free robust file system
- Over-the air (OTA) software updates

Supported Devices

Supported Devices	
Moxa Industrial Linux 1 (Debian 9, Kernel 4.4)	Revision 1.0.0 and Later: <ul style="list-style-type: none"> • UC-2100 Series • UC-3100 Series • UC-5100 Series • UC-8200 Series • UC-8540/8580 Series Revision 2.1.0 and Later: <ul style="list-style-type: none"> • UC-8410A Series: Revision 3.0.0 and later: <ul style="list-style-type: none"> • UC-8100 Series
Moxa Industrial Linux 3 (Debian 11, Kernel 5.10)	Revision 1.0 and later: <ul style="list-style-type: none"> • UC-8200 Series Models: UC-8220-TLX (CTO)/ T-LX-S (CTO), UC-8220-T-LX-US-S (CTO)/ EU-S (CTO)/ AP-S (CTO) • UC-1200A Series • UC-2200A Series • UC-3400A Series • UC-4400A Series

Wireless-ready Arm-based 32-bit Computers

Built-in cellular or Wi-Fi module, RF type approvals, and carrier approvals



Built-in LTE Cat.1



Built-in LTE Cat.1 and Wi-Fi



Built-in LTE Cat.1 and Wi-Fi



Built-in LTE Cat.4 with Wi-Fi expansion

Series	UC-3100 Series			UC-8200 Series
Model	UC-3101	UC-3111	UC-3121	UC-8220
Computer				
CPU	Arm Cortex-A8 1 GHz	Arm Cortex-A8 1 GHz	Arm Cortex-A8 1 GHz	Arm Cortex-A7 1 GHz dual core
Memory	1 GB	1 GB	1 GB	2 GB
Storage Preinstalled	8 GB	8 GB	8 GB	8 GB
Storage Slot	–	SD x 1	SD x 1	MicroSD x 1
OS	Moxa Industrial Linux 1 (Debian 9, Kernel 4.4)	Moxa Industrial Linux 1 (Debian 9, Kernel 4.4)	Moxa Industrial Linux 1 (Debian 9, Kernel 4.4)	Moxa Industrial Linux 1 (Debian 9, Kernel 4.4) Moxa Industrial Linux 3 (Debian 11, Kernel 5.10)
TPM	TPM 2.0	TPM 2.0	TPM 2.0	TPM 2.0
Ethernet Ports	2 LAN	2 LAN	2 LAN	2 GbE
Serial Ports (RS-232/422/485)	1	2	1	2
CAN Ports	–	–	1	1
DIs / DOs	–	–	–	4 DIs, 4 DOs
USB Ports	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1
Wireless				
Wireless Expansion Slot	–	–	–	mPCIe slot x 1
Cellular Connectivity	Built-in LTE Cat. 1 ¹	Built-in LTE Cat. 1 ¹	Built-in LTE Cat. 1 ¹	Built-in LTE Cat. 4 ¹
SIM Slots	Nano SIM x 2	Nano SIM x 2	Nano SIM x 2	Nano SIM x 2
Wi-Fi	–	Built-in WiFi 4	Built-in WiFi 4	Expandable ²
GPS	Yes	Yes	Yes	Yes
Standards and Certifications				
Safety/EMC/RF	CE, FCC, UL, IC, RCM, UKCA	CE, FCC, UL, IC, RCM, UKCA, IFETEL(US model, EU model), ENACOM(US model, EU model), NBTC(US model, EU model), SUBTEL(US model, EU model)	CE, FCC, UL, IC, RCM, UKCA	CE, FCC, UL, IC, RCM, KC, UKCA
Carrier Approval	Verizon, AT&T	Verizon, AT&T	Verizon, AT&T	Verizon, AT&T
Hazardous Locations	ATEX, C1D2, IECEx	ATEX, C1D2, IECEx	ATEX, C1D2, IECEx	ATEX, C1D2
Environmental Limits and Power Parameters				
Operating Temperature	-40 to 70°C	-40 to 70°C	-40 to 70°C	-40 to 70°C
Power Consumption (max.)	6 W	8 W	8 W	10 W

1. Wireless module is built-in. Refer to the *Wireless Connection and Expansion Modules* section for details.

2. Wireless module must be purchased separately. Refer to the *Wireless Connection and Expansion Modules* section for details.

Arm-based 32-bit Computers With **Wireless Options**

Flexibility to add cellular or Wi-Fi capability when needed



Series	UC-2100 Series	UC-5100 Series		UC-8100 Series	UC-8200 Series	UC-8410A Series
Model	UC-2104	UC-5102	UC-5112	UC-8112	UC-8220	UC-8410A
Computer						
CPU	Arm Cortex-A8 600 MHz	Arm Cortex-A8 1 GHz	Arm Cortex-A8 1 GHz	Arm Cortex-A8 1 GHz	Arm Cortex-A7 1 GHz dual core	Arm Cortex-A7 1 GHz dual core
Memory	256 MB	512 MB	512 MB	512 MB	2 GB	1 GB
Storage Preinstalled	8 GB	8 GB	8 GB	8 GB	8 GB	8 GB
Storage Slot	–	SD x 1	SD x 1	SD x 1	MicroSD x 1	SD x 1, mSATA x 1
OS	Moxa Industrial Linux (Debian 9, Kernel 4.4)	Moxa Industrial Linux (Debian 9, Kernel 4.4)	Moxa Industrial Linux (Debian 9, Kernel 4.4)	Moxa Industrial Linux (Debian 9, Kernel 4.4)	Moxa Industrial Linux 1 (Debian 9, Kernel 4.4) Moxa Industrial Linux 3 (Debian 11, Kernel 5.10)	Linux Debian 8 (kernel 4.4) Moxa Industrial Linux (Debian 9, Kernel 4.4)
Ethernet Ports	1 LAN	2 LAN	2 LAN	2 LAN	2 GbE	3 GbE
Serial Ports (RS-232/422/485)	–	4	4	2	2	8
CAN Ports	–	–	2	–	1	–
DIs / DOs	–	4 DIs, 4 DOs	4 DIs, 4 DOs	–	4 DIs, 4 DOs	4 DIs, 4 DOs
USB Ports	–	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 2
Wireless¹						
Wireless Expansion Slot	mPCIe x 1	mPCIe x 1	mPCIe x 1	mPCIe x 1	mPCIe x 2	mPCIe x 1
SIM Slots	Mini SIM x 1	Micro SIM x 2	Micro SIM x 2	Mini SIM x 1	Nano SIM x 2	Mini SIM x 1
Standards and Certifications						
Safety/EMC/RF	CE, FCC, UL, IC, UKCA	CE, FCC, UL, IC, UKCA	CE, FCC, UL, IC, UKCA	CE, FCC, UL, IC, UKCA	CE, FCC, UL, IC, RCM, KC, UKCA	CE, FCC, UL, IC, UKCA
Hazardous Locations	–	–	–	–	ATEX, C1D2	–
Environmental Limits and Power Parameters						
Operating Temperature	-10 to 70°C	<ul style="list-style-type: none"> -40 to 85°C -40 to 70°C (with LTE) -10 to 70°C (with Wi-Fi) 	<ul style="list-style-type: none"> -40 to 85°C -40 to 70°C (with LTE) -10 to 70°C (with Wi-Fi) 	-10 to 60°C	<ul style="list-style-type: none"> -40 to 85°C -40 to 70°C (with LTE/Wi-Fi) 	<ul style="list-style-type: none"> -40 to 75°C -40 to 70°C (with Wi-Fi)
Power Consumption	4 W	11 W	11 W	8 W	10 W	19 W

1. Wireless module must be purchased separately. Refer to the *Wireless Connection and Expansion Modules* section for details.

Standard Arm-based 32-bit Computers

Low power consumption and small form factor



Series	UC-2100 Series				UC-5100 Series		UC-8100 Series	UC-8200 Series	UC-8410A Series
Model	UC-2101	UC-2102	UC-2111	UC-2112	UC-5101	UC-5111	UC-8131	UC-8210	UC-8410A-NW
Computer									
CPU	Arm Cortex-A8 600 MHz	Arm Cortex-A8 600 MHz	Arm Cortex-A8 600 MHz	Arm Cortex-A8 1 GHz	Arm Cortex-A8 1 GHz	Arm Cortex-A8 1 GHz	Arm Cortex-A8 300 MHz	Arm Cortex-A7 1 GHz dual-core	Arm Cortex-A7 1 GHz dual-core
Memory	256 MB	256 MB	512 MB	512 MB	512 MB	512 MB	256 MB	2 GB	1 GB
Storage Preinstalled	8 GB	8 GB	8 GB	8 GB	8 GB	8 GB	8 GB	8 GB	8 GB
Storage Slot	-	-	MicroSD x1	MicroSD x 1	SD x 1	SD x 1	SD x 1	MicroSD x 1	SD x 1 mSATA x 1
OS	Moxa Industrial Linux (Debian 9, Kernel 4.4)	Moxa Industrial Linux (Debian 9, Kernel 4.4)	Moxa Industrial Linux (Debian 9, Kernel 4.4)	Moxa Industrial Linux (Debian 9, Kernel 4.4)	Moxa Industrial Linux (Debian 9, Kernel 4.4)	Moxa Industrial Linux (Debian 9, Kernel 4.4)	Moxa Industrial Linux (Debian 9, Kernel 4.4)	Moxa Industrial Linux (Debian 9, kernel 4.4 or Debian 11, kernel 5.10)	Moxa Industrial Linux (Debian 9, kernel 4.4)
TPM	-	-	-	-	-	-	-	TPM 2.0	-
Ethernet Ports	1 LAN	2 LAN	2 LAN	1 GbE, 1 LAN	2 LAN	2 LAN	2 LAN	2 GbE	3 GbE
Serial Ports (RS-232/422/485)	1	-	2	2	4	4	1	2	8
CAN Ports	-	-	-	-	-	2	-	1	-
DIs / DOs	-	-	-	-	4 DIs, 4 DOs	4 DIs, 4 DOs	-	4 DIs, 4 DOs	4 DIs, 4 DOs
USB Ports	-	-	-	-	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 1	USB 2.0 x 2
Standards and Certifications									
Safety/EMC/RF	CE, FCC, UL, IC, UKCA	CE, FCC, UL, IC, UKCA	CE, FCC, UL, IC, UKCA	CE, FCC, UL, IC, UKCA	CE, FCC, UL, IC, UKCA	CE, FCC, UL, IC, UKCA	CE, FCC, UL, IC, UKCA	CE, FCC, UL, IC, KC, UKCA	CE, FCC, UL, IC, UKCA
Hazardous Locations	-	-	-	ATEX, C1D2	-	-	-	ATEX, C1D2	-
Environmental Limits and Power Parameters									
Operating Temperature	-10 to 60°C	-10 to 60°C	-10 to 60°C	• -40 to 75°C (T models) • -10 to 60°C	• -40 to 85°C (T models) • -10 to 60°C	• -40 to 85°C (T models) • -10 to 60°C	-10 to 60°C	-40 to 85°C	• -40 to 75°C (T models) • -10 to 60°C
Power Consumption	4 W	4 W	4 W	4 W	11 W	11 W	5.4 W	10 W	19 W

Wireless Connectivity and Expansion Modules*

Details of cellular and Wi-Fi support with a list of wireless accessory models

Connection	Series	Models	Wireless Model/ Wireless Module	Countries/regions Supported	Wireless Standard	Bands Supported
Cellular	UC-2100	UC-2104-LX	UC-LTE-CAT1-EU	Europe	LTE Cat. 1	1, 3, 7, 8, 20, 28A
			UC-LTE-CAT1-AP	Asia-Pacific	LTE Cat. 1	1, 3, 5, 8, 9, 18(26), 19, 28
			UC-LTE-CAT4-CN	China	LTE Cat. 4	1, 3, 8, 39, 40, 41
	UC-3100	UC-3101/3111/3121-T-US-LX UC-3101/3111/3121-T-EU-LX UC-3101/3111/3121-T-AP-LX	Built-in	USA	LTE Cat. 1	2, 4, 5, 12, 13, 14, 66, 71
			Built-in	Europe	LTE Cat. 1	1, 3, 7, 8, 20, 28A
			Built-in	Asia-Pacific	LTE Cat. 1	1, 3, 5, 8, 9, 18(26), 19, 28
	UC-5100	UC-5102/5112-LX, UC-5102/5112-T-LX	UC-LTE-CAT1-EU	Europe	LTE Cat. 1	1, 3, 7, 8, 20, 28A
			UC-LTE-CAT1-AP	Asia-Pacific	LTE Cat. 1	1, 3, 5, 8, 9, 18(26), 19, 28
			UC-LTE-CAT4-CN	China	LTE Cat. 4	1, 3, 8, 39, 40, 41
	UC-8200	UC-8220-T-LX-US-S UC-8220-T-LX-EU-S UC-8220-T-LX-AP-S	Built-in	USA	LTE Cat. 4	2, 4, 5, 12, 13, 14, 66, 71
Built-in			Europe	LTE Cat. 4	1, 3, 7, 8, 20, 28A	
Built-in			Asia-Pacific	LTE Cat. 4	1, 3, 5, 8, 9, 18(26), 19, 28	
Wi-Fi	UC-2100	UC-2104-LX	UC-WiFi-USB	–	802.11 a/b/g/n/ac, 1T1R	2.4 GHz / 5 GHz
	UC-3100	UC-3111/3121-T-US-LX, UC-3111/3121-T-EU-LX, UC-3111/3121-T-AP-LX,	Built-in	–	802.11 a/b/g/n, 2T2R	2.4 GHz / 5 GHz
	UC-5100	UC-5102/5112-LX, UC-5102/5112-T-LX	UC-WiFi-USB	–	802.11 a/b/g/n/ac, 1T1R	2.4 GHz / 5 GHz
	UC-8100	UC-8112/8132/8162-LX	WiFi-BGN	–	802.11 a/b/g/n/ac, 1T1R	2.4 GHz / 5 GHz
	UC-8200	UC-8220-T-LX, UC-8220-T-LX-US-S, UC-8220-T-LX-EU-S, UC-8220-T-LX-AP-S	UC-8200 WiFi-AC	–	802.11 a/b/g/n/ac, 2T2R	2.4 GHz / 5 GHz
	UC-8410A	UC-8410A-LX, UC-8410A-T-LX	Wi-Fi-BGN(252NI)	–	802.11 a/b/g/n, 2T2R	2.4 GHz / 5 GHz

* Antennas must be purchased separately