



Embedded PC/MB Roadmap_2022_Q3

Embedded PC

Entry-level Player



Main-stream Player



Multi-display Player



OPS/SDM Module



Embedded PC

Entry-level Player





Available



Developing



Planning



Fanless



vPro™



New products

Giada

ARM

**DN72**

- ARM RK3288 Quad Core
- Onboard 2GB, DDR3L
- 1 x HDMI

**DN73**

- ARM RK3328
- Onboard 2GB, DDR4
- 1 x HDMI

**DN74**

- ARM RK3399
- Onboard 4GB, LPDDR4
- 2 x HDMI

**DN75**

- ARM RK3399
- Onboard 4GB, LPDDR4
- 2 x HDMI
- 1 x HDMI IN

**DN76**

- ARM RK3568
- 2 GB, Onboard DDR4
- 2 x HDMI

Intel

**F200**

- Intel® Celeron N2807
- Onboard 2GB, DDR3L
- 1 x HDMI

**F202**

- Intel® Celeron N2807
- Onboard 2GB, DDR3L
- 1 x HDMI 1X VGA

**F210U**

- Intel® Atom x5-Z8350
- Onboard 2GB/4GB, DDR3L
- 1 x HDMI 1 x VGA

**VM23**

- Intel® Apollo N3350/N3450
- Onboard 2GB/4GB, LPDDR4
- 1 x HDMI 1 x DP

**VM27**

- Intel® Elkhart lake
N6210/N6415
- Onboard 4GB/8G, LPDDR4
- 1 x HDMI 1 x DP

**DK310**

- Intel® Elkhart lake
J6412/J6426
- Onboard 4GB/8G, LPDDR4
- 1 x HDMI 1 x DP

**F110D**

- Intel® Celeron J1900/N2807
- Max. 8GB, DDR3L
- 2 x RJ45
- 1 x HDMI 1 x VGA

**F103D**

- Intel® Celeron N3160
- Max. 4GB, DDR3L SODIMM
- 2 x RJ45
- 1 x HDMI 1 x DP

F106D-NU

- Intel® Celeron N5095
- Onboard LPDDR4, 4GB/8GB
- 1 x RJ45(2xRJ45 optional)
- 1 x DP1.2 1 x HDMI 2.0

**F106D-FV**

- Intel® Celeron N5100
- Onboard LPDDR4, 4GB/8GB
- 1 x RJ45(2xRJ45 optional)
- 1 x DP1.2 1 x HDMI 2.0

2022 Q2**2022 Q3**

Main Stream		F106D-FV	F106D-NU	F103D	F110D
Processor	CPU	Intel® Celeron N5100(Fanless)	Intel® Celeron N5095	Intel® Celeron N3160	Intel® Celeron J1900/N2807
	Frequency	1.1 GHz (Up to 2.8GHz)	2.0 GHz (Up to 2.9GHz)	1.6 GHz (Up to 2.2 GHz)	2.0 GHz (Up to 2.4 GHz) 1.5 GHz (Up to 2.1 GHz)
	Platform	Jasper Lake	Jasper Lake	Braswell	Baytrail
Memory	Memory	Onboard 4GB LPDDR4-2666MHz (Optional:8 GB)	Onboard 4GB LPDDR4-2666MHz (Optional:8 GB)	1 x SO-DIMM DDR3L-1600MHz, Onboard 2GB, Up to 4GB	1 x SO-DIMM DDR3L- 1333MHz Up to 8GB
Graphics	GPU	Intel® UHD Graphics	Intel® UHD Graphics	Intel® HD Graphics	Intel® HD Graphics
	Display	1 x DP1.2(Max. 4096 x 2304@60Hz) 1 x HDMI 2.0(Max. 3840 x 2160@60Hz)	1 x DP1.2(Max. 4096 x 2304@60Hz) 1 x HDMI 2.0(Max. 3840 x 2160@60Hz)	1 x DP (Max. 3840 x 2160@30Hz) 1 x HDMI(Max. 2560 x 1600@60Hz)	1 x HDMI (Max. 1920 x 1080@60Hz) 1 x VGA (Max. 2048 x 1280@60Hz)
Storage	Storage	1 x M.2(2242/2280) PCIe 3.0x4 for SSD (Optional: 32 GB/64 GB onboard eMMC)	1 x M.2(2242/2280) PCIe 3.0x4 for SSD (Optional: 32 GB/64 GB onboard eMMC)	1 x 2.5" SATA 1 x Full-size Mini-PCle for mSATA 1 x TF Card Reader	1 x 2.5" SATA 1 x Full-size Mini-PCle for mSATA
I/O	Ethernet	1 x RJ45 (Optional 2x RJ45)	1 x RJ45 (Optional 2x RJ45)	2 x RJ45	2 x RJ45
	USB	2 x USB 3.2 GEN2, 4 x USB 2.0	2 x USB 3.2 GEN2, 4 x USB 2.0	3 x USB 3.2 GEN1, 2 x USB 2.0	1 x USB 3.2 GEN1, 4 x USB 2.0
	Serial Port	1 x RS232	1 x RS232	2 x RS232	2 x RS232
	Wireless	1 xFull-size Mini-PCle for MSATA/3G/4G 1 x SIM slot 1 x M.2(2230) for WiFi/BT(WiFi 6 CNVi)	1 xFull-size Mini-PCle for MSATA/3G/4G 1 x SIM slot 1 x M.2(2230) for WiFi/BT(WiFi 6 CNVi)	1 x Full-size Mini-PCle for WiFi/BT 1 x Full-size Mini-PCle for mSATA	1 xHalf-size Mini-PCle for WiFi/BT 1 x Full-size Mini-PCle for mSATA/3G/4G 1 x SIM slot
OS		Windows 10(64bit)/ Windows 11(64bit) /Linux	Windows 10(64bit)/ Windows 11(64bit) /Linux	Windows 7/8.1/10/Linux	Windows 7/8.1/10/Linux

Entry level		DK310 	VM27 
Processor	CPU	Intel® Celeron J6412 Intel® Pentium J6426	Intel® Celeron N6210 Intel® Pentium N6415
	Frequency	2.0GHz(Up to 2.6GHz) 2.0GHz(Up to 3.0GHz)	1.2GHz(Up to 2.6GHz) 1.2GHz(Up to 3.0GHz)
	Platform	Elkhart Lake	Elkhart Lake
Memory	Memory	4 GB, Onboard LPDDR4 (Optional: 8 GB)	4 GB, Onboard LPDDR4 (Optional: 8 GB)
Graphics	GPU	Intel® UHD Graphics	Intel® UHD Graphics
	Display	1 x DP (Max.4096 x 2160@60Hz) 1 x HDMI (Max.4096 x 2160@60Hz)	1 x DP (Max.4096 x 2160@60Hz) 1 x HDMI (Max.4096 x 2160@60Hz)
Storage	Storage	1 x Full-size Mini-PCle for mSATA (Optional: Onboard eMMC5.1)	64 GB, Onboard eMMC5.1 (Optional: 32 GB) 1 x Full-size Mini-PCle for mSATA
I/O	Ethernet	1 x RJ45	1 x RJ45
	USB	4 x USB3.2 Gen2 (10 Gbps)	4 x USB3.2 Gen2 (10 Gbps)
	Serial Port	1 x RS232	1 x RS232
	Wireless	1 x M.2 (2230) for Wi-Fi/BT (Wi-Fi 6)	1 x M.2 (2230) for Wi-Fi/BT (Wi-Fi 6)
Construction	Dimensions	130 mm x 129.3 mm x 25.4 mm (5.12" x 5.09" x 1")	154mm x 125.5 mm x 40mm (6.06" x 4.94" x 1.57")
	Fanless	No	Yes
OS		Windows 10(64bit)/Windows 11 (64bit)/Linux	Windows 10(64bit)/Windows 11 (64bit)/Linux



DK310



VM27

Entry level		F202	F200	VM23	F210U
Processor	CPU	Intel® Celeron N2807	Intel® Celeron N2807	Intel® Celeron N3350/N3450	Intel® Atom x5-Z8350
	Frequency	1.58GHz(Up to 2.16GHz)	1.5GHz(Up to 2.1GHz)	1.1 GHz (Up to 2.4GHz) 1.1 GHz (Up to 2.2GHz)	1.4GHz(Up to 1.9GHz)
	Platform	Baytrail	Baytrail	Apollo Lake	Cherry Trail
Memory	Memory	2GB Onboard DDR3L	2GB Onboard DDR3L	2GB/4GB Onboard LPDDR4	2GB/4GB Onboard DDR3L
Graphics	GPU	Intel® HD Graphics	Intel® HD Graphics	Intel® UHD Graphic	Intel® HD Graphics 400
	Display	1 x HDMI (Max. 1920 x 1080@60Hz) 1 x VGA (Max. 2560 x 1600@60Hz)	1 x HDMI (Max.1920 x 1080@60Hz)	1 x DP (Max.4096 x 2304@60Hz) 1 x HDMI (Max.3840 x 2160@30Hz)	1 x HDMI (Max. 2560 x 1600@24Hz) 1 x VGA(Max. 2048 x 1536@60Hz)
Storage		1 x Full-size Mini-PCle for mSATA	1 x Full-size Mini-PCle for mSATA 1 x TF Card Reader	1 x Full-size Mini-PCle for mSATA Onboard eMMC 32GB/64GB	eMMC Onboard 32GB/64GB 1 x TF Card Reader
I/O	Ethernet	1 x RJ45	1 x RJ45	1 x RJ45	1 x RJ45
	USB	1 x USB3.2 GEN1, 3 x USB2.0	1 x USB3.2 GEN1, 2 x USB2.0	2 x USB3.2 GEN1, 2 x USB2.0	1 x USB3.2 GEN1, 3 x USB2.0
	Serial Port	N/A	N/A	1 x RS232	1 x RS232
	Wireless	1 x Full-size Mini-PCle For Wi-Fi/BT	1 x Full-size Mini-PCle For WiFi/BT/3G/4G 1 x SIM slot	1 x M.2 (2230) for Wi-Fi/BT	1 x Full-size Mini-PCle For 3G/4G 1 x SIM slot Wi-Fi/BT Module Onboard
OS		Windows 7/8.1/10/Linux	Windows 7/8.1/10/Linux	Windows 10(64-bit)/Linux	Windows 8.1/10(64-bit) /Linux/Android



VM23



F210U



F202



F200

Entry level		DN76	DN75
Processor	CPU	ARM RK3568	ARM RK3399
	Frequency	Up to 2.0 GHz	Up to 1.8GHz
	Memory	2 GB, Onboard DDR4	4GB, Onboard LPDDR4
Graphics	GPU	ARM G52 2EE	Mali-T860MP4
	Multi-media codec	4K 60fps H.265/H.264/VP9 decoder 1080P 60fps H.265/H.264 encoder	4K VP9 and 4K 10bits H265/H264 video decoders, up to 60fps, 1080P other video decoders (VC-1, MPEG-1/2/4, VP8)
	Display	1 x HDMI (Max. 4K @60Hz) 1 x HDMI (Max. 2K @30Hz)	1 x HDMI (Max. 4K @60Hz) 1 x HDMI (Max. 2K @30Hz)
Storage		eMMC Onboard 16GB (Optional: 32GB)	eMMC Onboard 32GB (Optional: 16GB/64GB) 1 x TF Card Reader
I/O	Ethernet	1 x RJ45	1 x RJ45
	USB	1 x USB 3.2 GEN1, 1 x USB 3.2 GEN1(OTG), 2 x USB2.0	1 x USB 3.2 GEN1(OTG), 3 x USB2.0
	Serial Port	1 x RS232	1 x RS232
	Wireless	1 x Full-size Mini-PCle for 3G/4G 1 x SIM slot Wi-Fi/BT Module Onboard	1 x Full-size Mini-PCle for 3G/4G 1 x SIM slot Wi-Fi/BT Module Onboard
	HDMI-IN	NA	1 x HDMI-IN
OS		Android 11	Android 8.1



DN76



DN75

Entry level		DN74	DN73	DN72
Processor	CPU	ARM RK3399	ARM RK3328	ARM RK3288
	Frequency	Up to 1.8GHz	Up to 1.5GHz	Up to 1.8GHz
	Memory	4GB, Onboard LPDDR4	2GB, Onboard DDR4	Onboard 2GB DDR3L
Graphics	GPU	Mali-T860MP4	Mail-450MP2 GPU	ARM Mali-T764
	Multi-media codec	4K VP9 and 4K 10bits H265/H264 video decoders, up to 60fps; 1080P other video decoders (VC-1, MPEG-1/2/4, VP8)	4K VP9 decoders 4K 10bits H.265 decoders 1080P VC-1, MPEG-1/2/4, VP8 video decoders	4K 10bits H.264/H.265 video decoders 1080P VC-1, MPEG-1/2/4, VP8 video decoders
	Display	1 x HDMI (Max. 4K @60Hz) 1 x HDMI (Max. 2K @30Hz)	1 x HDMI (Max. 3840 x 2160@60Hz)	1 x HDMI (Max. 3840 x 2160@60Hz)
Storage		eMMC Onboard 32GB (Optional: 16GB/64GB) 1 x TF Card Reader	eMMC Onboard 16GB (Optional: 32GB/64GB) 1 x TF Card Reader	eMMC Onboard 16GB (Optional: 32GB/64GB) 1 x TF Card Reader
I/O	Ethernet	1 x RJ45 Wifi+BT onboard	1 x RJ45 Wifi+BT onboard	1 x RJ45 Wifi+BT onboard
	USB	1 x USB 3.2 GEN1(OTG), 3 x USB2.0	1 x USB3.2 GEN1, 2 x USB 2.0, 1 x USB2.0 OTG	3 x USB 2.0, 1 x USB2.0 OTG
	Serial Port	1 x RS232	1 x RS232	1 x RS232
	mini-PCle	1 x Full-size Mini-PCle for 3G/4G 1 x SIM slot	1 x Full-size Mini-PCle for 3G/4G 1 x SIM slot	1 x Full-size Mini-PCle for 3G/4G 1 x SIM slot
OS		Android 7.1 /8.1 (Optional: Android 11)	Android 7.1 (Optional 10.0)	Android 5.1 (Optional 7.1)



DN74



DN73



DN72

Embedded PC

Main-stream Player



AMD

DM5

- AMD Ryzen R1305G
- Max. 32GB, DDR4
- 3 x HDMI

DM6

- AMD V1202B/V1605B
- Max. 32GB, DDR4
- 4 x HDMI

DM8

- AMD Ryzen5 3500U
- Max. 32GB, DDR4
- 4 x HDMI

Intel

D360

- Intel® LGA1151 6/7th
- H110 Chipset
- Max. 32GB, DDR4
- 1 x HDMI 1 x VGA

DE67

- Intel® Core i3-7100U
- Max. 32GB, DDR3L
- 1 x HDMI 1xDP 1xVGA

D68

- Intel® Core i5-8260U
- Max. 32GB, DDR4
- 2 x HDMI 1 x DP

D610

- Intel® Core i3-10110U /i5-10210U
- Max. 32GB, DDR4
- 2 x HDMI 1 x DP

DF610

- Intel® Core i3-10110U /i5-10210U
- Max. 32GB, DDR4
- 1 xHDMI 2.0,1 x DP

D611

- Intel® Tiger Lake UP3 i3-1115G4/i5-1135G7/6305
- Max. 32GB, DDR4
- 2x HDMI 2.0(4K)
- 1x DP1.4(8K)

BQ611

- Intel® LGA1200 10th/11th
- Chip H510/B560
- Max. 32GB, DDR4
- 1x HDMI 2.0, 1xDP1.2 1xVGA

vPro™ D612

- Intel® Alder Lake-P 12th Mobile CPU (15W/28W/35W)
- Max. **64GB**, DDR4
- 4 x HDMI 2.0 (4K)

BQ612

- Intel® LGA1700 12th/13th
- Chipset H610/B660
- Max. **64GB**, DDR4
- 1x HDMI 2.0, 1xDP1.2 1xVGA

vPro™ DF612

- Intel® Alder Lake-P 12th Mobile CPU (15W)
- Max. **64GB**, DDR4
- 2 x HDMI 2.0 (4K), 1xDP 1.4 (8K)

2022 Q2

2022 Q3

Main Stream		D612	D611	D610	D68
Processor	CPU	Intel® Alder Lake-P Core™ i3/i5/i7 processors	Intel® Core i3-1115G4 Intel® Core i5-1135G7 Intel® Celeron 6305	Intel® Core i3-10110U Intel® Core i5-10210U	Intel® Core i5-8260U
	Frequency	i3 up to 4.40 GHz i5 up to 4.40 GHz i7 up to 4.80 GHz	3.0 GHz (Up to 4.1 GHz) 2.4 GHz (Up to 4.2 GHz) 1.8 GHz	2.1 GHz (Up to 4.1 GHz) 1.6 GHz (Up to 4.2 GHz)	1.6 GHz (Up to 3.9 GHz)
	Processing units	i3 up to 6 cores i5 up to 10 cores i7 up to 10cores	4 Cores/2 Cores/2 Cores	2 Cores/4 Cores	4 Cores
Memory	Memory	2 x SO-DIMM DDR4-3200MHz Up to 64GB	2 x SO-DIMM DDR4-3200MHz Up to 32GB	2 x SO-DIMM DDR4 Up to 32GB	2 x SO-DIMM DDR4 Up to 32GB
Graphics	GPU	Intel® UHD/Iris® Xe	Intel® UHD/Iris® Xe	Intel® UHD Graphics	Intel® UHD Graphics
	Display	4 x HDMI2.0 (4K@60Hz)	1 x DP1.4(8K@60Hz) 2 xHDMI2.0(4K@60Hz)	1 x DP (Max. 4096 x 2304@60Hz) 1 x HDMI (Max. 4096 x 2304@60Hz) 1 x HDMI (Max. 4096 x 2304@24Hz)	1 x DP (Max. 4096 x 2304@60Hz) 1 x HDMI (Max. 4096 x 2304@60Hz) 1 x HDMI (Max. 4096 x 2304@24Hz)
Storage		1x M.2(2242/2280) PCIe 4.0 x4 SSD	1x M.2(2242/2280) PCIe 4.0 x4 SSD	1 x Full-size Mini-PCle for mSATA(Optional) 1 x M.2 (2242/2280) for SSD	1 x Full-size Mini-PCle for mSATA(Optional) 1 x M.2 (2242/2280) for SSD
I/O	Ethernet	1 x RJ45	1 x RJ45	1 x RJ45	1 x RJ45
	USB	1x USB Type-C 3.2 Gen 2 (10Gbps), 1x USB 3.2 Gen 2(10Gbps), 2xUSB2.0	1x USB Type-C 3.2 Gen 2 (10Gbps), 1x USB 3.2 Gen 2(10Gbps), 2xUSB2.0	5 x USB 3.2 Gen1	5 x USB 3.2 Gen1
	Serial Port	1 x RS232	1 x RS232	1 x RS232	1 x RS232
	Wireless	1 xM.2 2230 for Wi-Fi/BT (WiFi 6 CNVi) 1 x M.2 3052 for 3G/4G/5G 1 x SIM slot	1 xM.2 2230 For Wifi/BT (WiFi 6 CNVi) 1 x M.2 3052 Key-B for 3G/4G/5G 1 x SIM slot	1 x Full-size Mini-PCle for mSATA/WiFi/3G/4G 1 x SIM slot	1 x Full-size Mini-PCle for mSATA/W-iFi/3G/4G 1 x SIM slot
OS		Windows 10(64bit)/Windows 11 (64bit) /Linux	Windows 10(64-bit)/Windows 11 (64bit) /Linux	Windows 10(64-bit)/Linux	Windows 10(64-bit)/Linux

Main Stream		DF612	DF610	DE67
Processor	CPU	Intel® Alder Lake-P 12 th Mobile CPU	Intel® Comet lake-U processors i3-10110U/i5-10210U	Intel® Core i3-7100U
	Frequency	N/A	2.1GHz(Up to 4.1 GHz)/1.6GHz(Up to 4.2 GHz)	2.4 GHz(Up to 3.1 GHz)
	Memory	2 x SO-DIMM DDR4-3200MHz, Up to 64GB	2 x SO-DIMM DDR4-2400MHz, Up to 32GB	2 x SO-DIMM DDR3L-1600MHz, Up to 32GB
Graphics	GPU	N/A	Intel® UHD 620 Graphics	Intel® HD Graphics 620
	Display	1 x DP1.4(8K @60Hz) 2 x HDMI(4K@60Hz)	1 x HDMI(Max. 3840 x 2160@60Hz) 1 x DP(Max. 4096 x 2304@60Hz)	1 x DP(Max. 4096 x 2304@60Hz) 1 x HDMI (Max. 3840 x 2160@60Hz) 1 x VGA(Max. 2048 x 1536@60Hz)
Storage	Storage	1 x M.2 (2242/2280) for SSD	1 x M.2(2242/2280) PCIe X4 for SSD	1 x 2.5" SATA 1 x Full-size Mini-PCle for mSATA 1 x M.2 (2242/2280) for SSD
I/O	Ethernet	2 x RJ45	2 x RJ45	2 x RJ45
	USB	4 x USB3.2 Gen2 (10GB) 2 x USB2.0 1 x USB Type-C3.2 Gen2(10GB)	5 x USB 3.2 GEN1or 4 x USB 3.2 GEN1, 1 x USB 2.0 (Celeron 4205U)	1 x Type-C USB3.2 GEN1, 3 x USB 3.2 GEN1 2 x USB 2.0
	Serial Port	1xRS232(DB9), 1xRS232/422/485(DB9)	1 x RS232	4 x RS232, 2 x RS485
	Wireless	1 x M.2(2230)WIFI6E/BT,support CNVi 1 x M.2 (3042) for 3G/4G	1 x M.2(2230) for Wifi/BT 1xMini PCle for 3G/4G or for mSATA	1 x Full-size Mini-PCle for WiFi/BT/3G/4G 1 x Full-size Mini-PCle for mSATA
Dimension		150mm x 200mm x 40mm (TBD) gray	240mmx158mm x22mm	260mmx173.4mmx38.5mm
OS		Windows 10/Windows 11(64bit) /Linux	Windows 10(64-bit)/Linux	Windows 8.1/10(64-bit)/Linux



DE67



DF610

Main Stream		DM8	DM6	DM5
Processor	CPU	AMD® Ryzen™5 3500U	AMD® Ryzen™ V1202B AMD® Ryzen™ V1605B	AMD® Ryzen™ R1305G
	Frequency	3.70 GHz	2.3GHz,2Core 4Threads 2.0GHz,4Core 8Threads	1.5GHz,2Core 4Threads
	Memory	2 x SO-DIMM DDR4 Up to 32GB	2 x SO-DIMM DDR4 Up to 32GB	2 x SO-DIMM DDR4 Up to 32GB
Graphics	GPU	AMD® Radeon™ Vega 8 Graphics	AMD® Radeon™ Vega 3 Graphics/ AMD® Radeon™ Vega 8 Graphics	AMD® Radeon™ Vega3 Graphics
	Display	4 x HDMI 2.0 (Max. 3840 x 2160 @60Hz)	4 x HDMI 2.0 (Max. 3840 x 2160 @60Hz)	3 x HDMI 2.0 (Max. 3840 x 2160 @60Hz)
Storage		1 x 2.5" SATA mSATA colay with 1 x Mini-PCle for 3G/4G	1 x 2.5" SATA mSATA colay with 1 x Mini-PCle for 3G/4G	1 x 2.5" SATA mSATA colay with 1 x Mini-PCle for 3G/4G
I/O	Ethernet	1 x RJ45	1 x RJ45	1 x RJ45
	USB	2 x USB 3.2 GEN1, 2 x USB 2.0	2 x USB 3.2 GEN1, 2 x USB 2.0	2 x USB 3.2 GEN1, 2 x USB 2.0
	Serial Port	1 x RS232	1 x RS232	1 x RS232
	Wireless	1 x Full-size Mini-PCle for 3G/4G 1 x SIM slot 1 x Full-size Mini-PCle for Wi-Fi/BT	1 x Full-size Mini-PCle for 3G/4G 1 x SIM slot 1 x Full-size Mini-PCle for Wi-Fi/BT	1 x Full-size Mini-PCle for 3G/4G 1 x SIM slot 1 x Full-size Mini-PCle for Wi-Fi/BT
OS		Windows 10(64-bit)/Linux	Windows 10(64-bit)/Linux	Windows 10(64-bit)/Linux



DM5



DM6



DM8

Main Stream		BQ612	BQ611	D360
Processor	CPU	Intel® LGA1700 Socket 12 th /13 th CPU (TDP ≤ 65W);	Intel® LGA1200 Socket 10 th /11 th CPU (TDP ≤ 65W);	Intel® LGA1151 Socket 6 th /7 th Gen. Processor
	Chipset	H610 (PCIe 3.0) /B660 (PCIe 3.0/4.0)	H510/B560	H110
	Memory	2 x SO-DIMM DDR4-3200MHz, Up to 64GB	2 x SO-DIMM DDR4 3200MHz(Max), Up to 32GB	2 x U-DIMM DDR4-2133MHz, Up to 64GB
Graphics	GPU	Intel® UHD Graphics	Intel® UHD Graphics	Intel® HD Graphics
	Display	1 x HDMI 2.0 (4096x2160@60Hz) 1 x DP1.2 (4096 x 2160 @75Hz) 1 x VGA (2048 x 1536@60Hz)	1 x HDMI 2.0 (4096x2160@60Hz) 1 x DP1.2 (4096 x 2160 @75Hz) 1 x VGA (2048 x 1536@60Hz)	1 x VGA (Max. 2048 x 1536@60Hz) 1 x HDMI (Max.3840 x 2160@30Hz)
Storage	Storage	1 x 2.5" SATA 3.0 1 x M-Key M.2(2242/2280) for SSD	1 x 2.5" SATA 3.0 1 x M.2(2242/2280) for SSD	1 x 2.5" SATA 1 x Full-size Mini-PCIe For mSATA 1 x M.2(2242/2280) for SSD
I/O	Ethernet	1 x RJ45(2 xRJ45 Optional)	2 x RJ45(Optional 1 x RJ45)	1 x RJ45
	USB	H610: 2xUSB3.2 Gen1, 6xUSB2.0, 1 x Type-C3.2 Gen1 B660: 2xUSB3.2 Gen2, 6xUSB2.0, 1 x Type-C3.2 Gen2	H510: 2xUSB3.2 Gen1,6xUSB2.0,1xType C USB3.2 Gen1 B560: 2xUSB3.2 Gen2,6xUSB2.0,1xType C USB3.2 Gen2	4 x USB 3.0, 2 x USB 2.0
	Serial Port	1 x RS232 & 1 x RS232 colay with 1 x DP1.2	1 x RS232 & 1 x RS232 colay with 1 x DP1.2	2 x RS232
	Wireless	1 x M.2(2230) for Wifi/BT(WiFi 6 CNVi)	1 x M.2(2230) for Wifi/BT(WiFi 6 CNVi)	1 x Half-size Mini-PCIe for WiFi/BT
Dimension		200mm x185mm x33.5 mm(1.24L)	200mm x185mm x33.5 mm(1.24L)	236mm x178.4mm x50mm
OS		Windows 10(64-bit)/Windows 11 (64bit) /Linux	Windows 10(64-bit)/Windows 11(64bit) /Linux	Windows 7/8.1/10(64-bit)/Linux



D360



BQ611

Embedded PC

Multi-display Player





Available



Developing



Planning



Fanless

vPro™



New products

Giada

AMD

G468

- AMD V1605B/V1807B
- Max. 32GB, 2 x DDR4
- AMD VEGA GPU
- 4 x HDMI2.0 with EDID

Intel

G367

- Intel® Core i3-7100U
- Max. 32GB, DDR3L
- NVIDIA GT730
- 2 x DP 1 x HDMI

G330

- Intel® LGA1151 6th/7th +H110
- Max. 32GB, DDR3L
- AMD Radeon™ 7750 GPU
- 6 x DP

2022 Q2

2022 Q3

Multi-display Player		G330	G468	G367
Processor	CPU	Intel® LGA1151 Socket 6 th /7 th Gen. Processor	AMD V1605B/V1807B	Intel® Core i3-7100U
	Frequency	/	2.0GHz,4Core 8Threads/ 3.35GHz,4Core 8Threads	2.4GHz 2Core 4Threads
	Memory	2 x SO-DIMM DDR3L-1600MHz Up to 32GB	2 x SO-DIMM DDR4-2400MHz Up to 32GB	2 x SO-DIMM DDR3L-1600MHz Up to 32GB
Graphics	GPU	AMD Radeon™ 7750 GPU GDDR5 2GB	AMD VEGA GPU	NVIDIA GT730, SDDR3 2GB
	Display	6 x DP (3 x 2: Max. 5760×2160)	4 x HDMI 2.0 (Max. 4096 x 2304 @60Hz) with EDID	2 x DP (Max. 4096 x 2304@24Hz) 1 x HDMI (Max. 4096 x 2304@24Hz)
Storage		1 x 2.5" SATA 1 x Full-size Mini-PCle for mSATA	1 x 2.5" SATA 1 x M.2 (2242/2280) for SSD	1 x 2.5" SATA 1 x Full-size x Mini-PCle for mSATA
I/O	Ethernet	2 x RJ45	1 x RJ45	1 x RJ45
	USB	1 x Type-C USB3.2 GEN1, 1 x USB 3.2 GEN1 4 x USB 2.0	3 x USB3.2 GEN1, 1x USB2.0	2 x USB3.2 GEN1, 2 x USB2.0
	Serial Port	2 x RS232	2 x RS232	1 x RS232
	mini-PCle/M.2	1 x Full-size Mini-PCle for WiFi/BT 1 x Full-size Mini-PCle for mSATA	1xM.2(2230) for WiFi/BT 1 x M.2 (2242/2280) for SSD	1 x Full-size Mini-PCle for WiFi/BT/3G/4G 1 x SIM slot 1 x Full-size Mini-PCle for mSATA
OS		Windows 7/8.1/10(64-bit)/Linux	Windows 10(64-bit)/Linux	Windows 10(64-bit)/Linux

Embedded PC

OPS/SDM Module



SDM

SDM-S-Z8350

- Intel® Atom x5-Z8350
- Onboard 2GB DDR3L
- Onboard 32G eMMC
- 1 x RJ45 2 x USB2.0

vPro™

SDM-L 611



- Intel® Core i3-1115G4/I5-1135G7
- 2* DDR4 SO-DIMM,Max: 32GB
- M.2 PCIe x4
- 1 x HDMI,
SDM I/O(DP 8K+HDMI 4K)

OPS

PC68-N2

- Coffee Lake-S Intel® LGA1151 8/9th Desktop CPU
- Max. 32GB, DDR4
- Chipset H310
- JAE HDMI2.0

PC610

- Comet Lake-S 10th Desktop CPU,Max 35W,LGA1200
- 2 xSO-DIMM DDR4,Max 32GB
- Chipset H470
- JAE(HDMI 2.0+DP 1.2)

vPro™

PC612



- Alder Lake-P 12th Mobile CPU, (TDP 15W 28W 35W)
- JAE(HDMI 2.0+DP 1.4)
- 2 xSO-DIMM DDR4,Max 32G

2022 Q2

2022 Q3

SDM (All in one system)		vPro™ SDM-L 611 	SDM-S
Processor	CPU	Intel® Celeron 6305 Intel® Core i3-1115G4 Intel® Core i5-1135G7 Intel® Core i5-1145G7-vPro(Optional)	Intel® Atom x5-Z8350
	Frequency	1.8 GHz 3.0 GHz (Up to 4.1 GHz) 2.4 GHz (Up to 4.2 GHz) 2.6 GHz (Up to 4.4 GHz)	1.44 GHz(Up to 1.9 GHz)
	Memory	2 x SO-DIMM DDR4-3200MHz, Up to 32GB	Onboard 2 GB DDR3L-1600MHz
Graphics	GPU	Intel® UHD Graphics for 11th Gen processor Intel® Iris® Xe Graphics	Intel® HD Graphics 400
	Display	1 x HDMI (Max. 4096 x 2160@24Hz)	N/A
Storage		1 x M.2(2242/2280) for SSD	eMMC Onboard 32GB
I/O	SDM I/O	USB3.2 Gen1, UART, GSPI, I²C, PCIe, SYS_FAN, 1 x HDMI 2.0 (Max. 4096 x 2304@60Hz) 1 x DP 1.4 (Max. 7680 x 4320@60Hz)	USB3.2 Gen1, UART, 1 x HDMI(Max. 2560 x 1600@24Hz) 1 x DP(Max. 4096 x 2304@60Hz)
	Rear I/O	1 x RJ45 2 x USB 3.2 GEN2, 2 x USB2.0 1 x Type-C (USB 3.2 Gen2) 1 x HDMI(Max. 3840 x 2160@60Hz)	1 x RJ45 2 x USB 2.0
	Internal I/O	1 x M.2(2230) for WiFi/BT 1 x M.2(2242/2280) for SSD	Onboard WIFI+BT Module
OS		Windows 10(64-bit)/Linux	Windows 8.1/10(64-bit)/Android5.1/Linux



SDM-S



SDM-L 611

vPro™ Vpro default function standards support under WIN OS

OPS (Plug-in system)		PC612 	PC610	PC68-N2
Processor	CPU	Intel® Core™ i3-1215U processor Intel® Core™ i5-1235U processor Intel® Core™ i7-1255U processor	Intel® LGA1200 Socket 10 th Gen Processor (TDP 35W) , Chipset: H470	Intel® LGA1151 Socket 8 th /9 th Gen.Processor (TDP 35W) Chipset: H310
	Frequency	4.40 GHz/4.40 GHz/4.70 GHz	N/A	N/A
	Processing units	6 Cores/10 Cores/10 Cores	N/A	N/A
Memory		2 x SO-DIMM DDR4-3200MHz, Up to 32GB	2 x SO-DIMM DDR4-2666MHz, Up to 32GB	2 x SO-DIMM DDR4-2133MHz, Up to 32GB
Graphics	GPU	Intel® UHD Graphics (Core™ i3 processor) Intel® Iris® Xe Graphics (Core™ i5/i7 processor)	N/A	N/A
	Display interface	1 x HDMI 2.0 (Max. 4096 x 2304@60Hz)	1 x HDMI 2.0 (Max. 4096 x 2304@60Hz)	1 x HDMI (Max. 4096 x 2304@24Hz)
Storage		1 x M.2 (2242/2280) for SSD	1 x M.2 (2242/2280) for SSD	1 x M.2 (2242/2280) for SSD
I/O	Ethernet	1 x RJ45	1 x RJ45	1 x RJ45
	USB	2x USB3.2 Gen2, 2x USB2.0, 1x Type-C USB3.2 GEN 2	2x USB3.2 GEN 2, 2xUSB3.2 GEN 1, 1x Type-C USB3.2 GEN 2	3 x USB3.2 Gen1, 1 xUSB2.0
	Serial Port	1 x UART(80Pin JAE)	1 x UART(80Pin JAE)	1 x RS232
	Wireless	1 x M.2 (2242/2280) for NVMeSSD 1 x M.2(2230) for WiFi/BT(Wi-Fi6 CNVi)	1 x M.2 (2242/2280) for NVMeSSD 1 x M.2(2230) for WiFi/BT(Wi-Fi6)	1 x M.2 (2242/2280) for SSD 1 x M.2(2230) for Wi-Fi/BT
	JAE	1 x HDMI2.0(Max. 4096 x 2304@60Hz) 1 x DP(JAE)(Max. 8K @60Hz)	1 x HDMI2.0(Max. 4096 x 2304@60Hz) 1 x DP(Max. 4096 x 2304@60Hz)	1 x HDMI2.0(Max. 4096 x 2304@60Hz) 1 x DP(Max. 4096 x 2304@60Hz)
OS		Windows 10/ Windows11(64-bit) /Linux	Windows 10(64-bit)/Linux	Windows 10(64-bit)/Linux

Embedded PC

Motherboard



PICO ITX
(2.5 Inch)

 **NI-Z3850UL**

- Intel ATOM Z8350
- Onboard 2G/4GB, DDR3L
- Onboard 32G/64G eMMC
- 1 x HDMI ,1 x LVDS

3.5 Inch

 **EN-N2807DL**

- Intel® Celeron N2807
- 1 x DDR3L SO-DIMM
- 1 x mSATA 1 x SATA
- 1 x HDMI 1 x VGA 1x LVDS

 **IBC-381**

- RK3328 Quad-core ARM Cortex-A53
- Onboard 1GB DDR3L Memory, Up to 2GB
- Onboard eMMC 8GB, up to 64GB
- 1 x LVDS(or 1 x HDMI)

 **IBC-382**

- RK3288 Quad Core-A17 Processor
- Onboard 2GB DDR3L Memory, Up to 4GB
- Onboard eMMC 8GB, up to 64GB
- 1*HDMI2.0+1*LVDS+1*eDP+1*MIPI

IBC-386

- RK3399 Quad Core-A17 Processor
- Onboard 2GB LPDDR4 Memory, Up to 4GB
- Onboard eMMC 16GB, up to 64GB
- LVDS + EDP + MIPI

EN-J6412DL

- Intel® Elkhart lake J6412
- 2 x SO-DIMM DDR4
- 1 x HDMI + 1 x DP + 1 x eDP/LVDS

Mini ITX

DT-H110DL

- Intel LGA1151 6th/7th Desktop
- Chipset Intel H110
- 2 x DDR4 U-DIMM
- 1 x mSATA 3 x SATA
- 1 x HDMI 2 x DP

DN612U4

- Alder Lake -S
- Intel® LGA1700 12th Desktop
- chipset Intel® H610
- 2 x DDR4 U-DIMM
- 1*HDMI2.0 1*DP ,1*VGA

Thin Mini ITX

 **MI-J1900DL-N**

- Intel® Celeron J1900
- 1 x DDR3L SO-DIMM
- 1 x mSATA 1 x SATA
- 1 x HDMI 1 x VGA 1x LVDS

 **MI-J1900SL**

- Intel® Celeron J1900
- 2 x DDR3L SO-DIMM
- 1 x mSATA 1 x SATA
- 1 x HDMI 1 x VGA 1x LVDS

 **MI-N3160SL**

- Intel® N3160
- 1 x DDR3L SO-DIMM
- 1 x mSATA 1 x SATA
- 1 x HDMI 1x VGA 1 x LVDS

PN611S4

Rocket Lake -S

- Intel® LGA1200 10/11th Desktop
- chipset Intel® H510
- 2*SO-DIMM DDR4
- 1*HDMI2.0,1*VGA ,1*LVDS

2022 Q2

2022 Q3

PICO ITX		NI-Z8350UL
Processor	CPU	Intel® ATOM X5-Z8350
	Frequency	1.44 GHz(Up to 1.92 GHz)
	Memory	Onboard 2GB DDR3L1600MHz
Graphics	GPU	Intel® HD Graphics
	Display	1 x HDMI (Max. 2560 x 1600@24Hz) 1 x LVDS(Max.1920 x 1080@60Hz)
Storage		Onboard eMMC 32G 1 x TF CardReader
I/O	Rear I/O	1 x RJ45 1 x USB 3.2 GEN1, 1 x USB 2.0 1 x HDMI(Max. 4096 x 2304@24Hz)
	Internal I/O	1 x LVDS(Max.1920 x 1080@60Hz) 2 x USB2.0 1 x Mini-PCle for 3G/4G 1 x SIM slot
	Other I/O	1 x UART TTL 1 x INT_SPK 1 x F_AUDIO OnBoard WiFi/BT Module
OS		Windows 8.1/10(64-bit)/Linux



NI- Z8350UL

3.5 Inch		IBC-381	IBC-382	IBC-386
Processor	CPU	RK3328 Quad Core A53	RK3288 Quad Core A17	RK3399 Dual-core Cortex-A72& Quad-core Cortex-A53
	Frequency	Up to 1.50GHz	Up to 1.80GHz	1.80GHz
	Memory	Onboard 2GB DDR3L	Onboard 2GB DDR3L	Onboard 4GB LPDDR4
Graphics	GPU	ARM Mali-450MP2	ARM Mali-T764	ARM Mali-T860
	Display	1 x HDMI (Max.3840 x 2160@60Hz) (or 1 x LVDS)	1*HDMI(Max.3840 x 2160@60Hz) 1*LVDS 1*MIPI_DSI(1080P@60Hz) 1*eDP(Max.4Kx2K @ 30Hz)	1*HDMI(Max.3840 x 2160@60Hz) 1*LVDS1*eDP(Max.4Kx2K @ 30Hz) ,1*MIPI_CSI(Camera)
Storage		eMMC Onboard 16GB 1 x TF Card Reader	eMMC Onboard 8GB 1 x TF Card Reader	eMMC Onboard 16GB 1 x TF Card Reader
I/O	Ethernet	1 x RJ45	1 x RJ45	1 x RJ45
	USB	1 x USB 2.0, 1 x USB2.0 OTG 2 x USB 2.0 (4pin)	1 x USB 2.0, 1 x USB2.0 OTG 3 x USB 2.0 (4pin)	1 x USB 3.0(OTG), 1 x USB3.0 4 x USB2.0, 1 x USB2.0
	Serial Port	1 x COM,1 x TTL	1x RS232, 2 x TTL	3 x RS232, 1 x RS485, 1 x TTL
	Wireless	1 x Full-size Mini-PCle for 3G/4G	N/A	1 x Full-size Mini-PCle for 3G/4G 1 x SIM Slot Wi-Fi/BT Module Onboard (2.4GHz/5GHz)
	Audio	1x2-in-1 Headset (AUDIO-OUT & MIC-IN) 1 x AUDIO-OUT, 1 x MIC-IN	1x2-in-1 Headset (AUDIO-OUT & MIC-IN) 1 x AUDIO-OUT, 1 x MIC-IN	1x2-in-1 Headset (AUDIO-OUT & MIC-IN) 1 x AUDIO-OUT, 1 x MIC-IN
OS		Android 7.1	Android 7.1	Android 7.1/Android 11



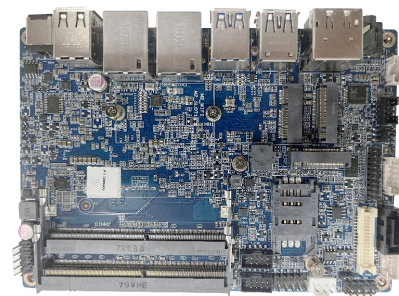
IBC-386



IBC-381



IBC-382



EN-J6412DL



EN-N2807DL

3.5 Inch		EN-N2807DL	EN-J6412DL
Processor	CPU	Intel® Celeron N2807	Intel® Celeron J6412
	Frequency	1.58 GHz (Up to 2.16 GHz)	2.0GHz(Up to 2.6GHz)
	Memory	1 x SO-DIMM DDR3L- 1333MHz Up to 8GB	2 x SO-DIMM DDR4
Graphics	GPU	Intel® HD Graphics	Intel® UHD Graphics
	Display	1 x HDMI (Max. 2560 x 1600@60Hz) 1 x VGA(Max.1920 x 1080@60Hz) 1 x LVDS (Max. 1920 x 1080@60Hz)	1 x DP (Max.4096 x 2160@60Hz) 1 x HDMI (Max.4096 x 2160@60Hz) 1 x eDP / LVDS
Storage		1 x SATA for 2.5" HDD/SSD 1 x Full-size Mini-PCle for mSATA	1 x SATA3.0 Onboard eMMC 32GB/64GB 1 x M.2 2280 (PCIe / SATA)
I/O	Ethernet	2 x RJ45	2 x RJ45, 1 x M.2 2230 for Wi-Fi/BT 1 x M.2 3042 for 3G/4G, 1 x SIM Slot
	USB	1 x USB3.0, 1 xUSB2.0 4 x USB2.0(internal)	4 x USB3.2 GEN2 + 2 x USB2.0 + 2 x USB2.0(9Pin)
	Serial Port	4 x RS232, 2 x RS232/RS485	1 x RS232 header, 1 x RS232/422/485 header
	Other IO (Header)	1 xFull/Half-size Mini-PCle for WiFi/BT/3G/4G 1 x Full-size Mini-PCle for mSATA 1 x SIM Slot	1 x GPIO, 1 x SYS FAN, 1 x DC-IN(12V-24V) 1 x F_Panel
	Audio	1 x F_Audio	1x2-in-1 Headset (AUDIO-OUT & MIC-IN) 1 x Speaker header
OS		Windows 7/8.1/10/Linux	Windows 10(64-bit) / Ubuntu 20.10 / Nix OS 21.05

ITX		DN612U4 (Preliminary)	DT-H110DL
Processor	CPU	Intel® LGA1700 Chipset H610	Intel® LGA1151 Chipset H110
	Memory	2 * DDR4 U-DIMM, Up to 32GB	2 * DDR4 U-DIMM, Up to 32GB
Graphics	GPU	Intel® UHD Graphics	Intel® HD Graphics
	Display	1 x DP (Max. 4096 x 2160@60Hz) 1 x HDMI (Max. 4096 x 2160@60Hz) 1 x VGA(Max.1920 x 1080@60Hz)	2 x DP (Max. 4096 x 2160@60Hz) 1 x VGA(Max.2048 x 1536@60Hz)
Storage	Storage	1 x M.2(2242/2280) for SSD(SATA&PCIE) 3 x SATA	1 x Full Size Mini-PCle for mSATA 3 x SATA
I/O	Rear I/O	2 x RJ45 4 x USB 3.2 GEN1, 2 x USB2.0 1 x COM (RS232) 3 x Audio Jack	2 x RJ45 4 x USB 3.2 GEN1, 2 x USB2.0 1 x COM (RS232) 3 x Audio Jack
	Internal I/O	4 x USB2.0 1 x PCIe x16 5 x RS232 1 x M.2 (2230)for WIFI/BT 1 x Full-size Mini PCIe for 3G/4G 1 x CPU_FAN(4Pin), 1 x SYS_FAN(4Pin)	4 x USB2.0 1 x PCIe x16 1 x J_HDMI(Max. 4096 x 2304 @ 24Hz) 5 x RS232 1 x Full-size Mini PCIe for WIFI/BT/3G/4G 1 x CPU_FAN(4Pin), 1 x SYS_FAN(3Pin)
Power	Power Requirement	ATX 24 + 4Pin	ATX 24 + 4Pin
OS		Windows 10/11(64-bit)/Linux	Windows 7/8.1/10(64-bit)/Linux

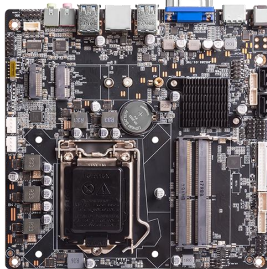


DT-H110DL

Thin Mini ITX		MI-N3160SL	MI-J1900SL	MI-J1900DL-N	PN611S4
Processor	CPU	Intel® Celeron N3160	Intel® Celeron J1900	Intel® Celeron J1900	Intel® 10/11th Gen desktop CPU(H510)
	Frequency	1.6 GHz (Up to 2.24 GHz)	2.0 GHz (Up to 2.42 GHz)	2.0 GHz (Up to 2.42 GHz)	N/A
	Memory	1 x SO-DIMM DDR3L-1600MHz, Up to 4GB	2 x SO-DIMM DDR3L- 1333MHz Up to 8GB	1 x SO-DIMM DDR3L- 1333MHz Up to 8GB	2 x SO-DIMM DDR4- 2666MHz Up to 32GB
Graphics	GPU	Intel® HD Graphics	Intel® HD Graphics	Intel® HD Graphics	Intel® UHD Graphics
	Display	1 x HDMI (Max. 2560 x 1600@60Hz) 1 x VGA(Max.1920 x 1080@60Hz) 1 x LVDS (Max. 1920 x 1080@60Hz)	1 x HDMI (Max. 2560 x 1600@60Hz) 1 x VGA(Max.1920 x 1080@60Hz) 1 x LVDS (Max. 1920 x 1080@60Hz)	1 x HDMI (Max. 2560 x 1600@60Hz) 1 x VGA(Max.1920 x 1080@60Hz) 1 x LVDS (Max. 1920 x 1080@60Hz)	1 x HDMI (Max.4096 x 2160@60Hz) 1 x VGA(Max.2048 x 1536@60Hz) 1 x LVDS (Max. 1920 x 1080@60Hz)
Storage	Storage	2 x SATA for 2.5" HDD/SSD 1 x Full-size Mini-PCle for mSATA	1 x SATA for 2.5" HDD/SSD 1 x Full-size Mini-PCle for mSATA	1 x SATA for 2.5" HDD/SSD 1 x Full-size Mini-PCle for mSATA	2 x SATA for 2.5" HDD/SSD 1 x M.2 (2242/2280) for SATA&PCIE SSD
I/O	Ethernet	1 x RJ45	1 x RJ45	2 x RJ45	1 x RJ45
	USB	2 x USB 3.2 GEN1, 2 x USB 2.0, 3 x USB2.0 Header	4 x USB 2.0, 2 x USB2.0 Header, 1 x USB3.2 GEN1 Header	1 x USB 3.2 GEN1, 1 x USB 2.0, 4 x USB2.0 Header	4 x USB 3.2 GEN1, 5 x USB2.0 Header
	Serial Port	2 x RS232	2 x RS232	6 x RS232	1 x RS232
	mini-PCle/M.2	1 x Full-size Mini-PCle for WiFi/BT/3G/4G 1 x SIM slot	1 x Full-size Mini-PCle for WiFi/BT/3G/4G 1 x SIM slot	1 x Full-size Mini-PCle for WiFi/BT/3G/4G 1 x SIM slot	1 x M.2 (2230) for WIFI/BT
OS		Windows 7/8.1/10/Linux	Windows 7/8.1/10/Linux	Windows 7/8.1/10/Linux	Windows 10/Linux



MI-J1900SL



PN611S4

Thank You!

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