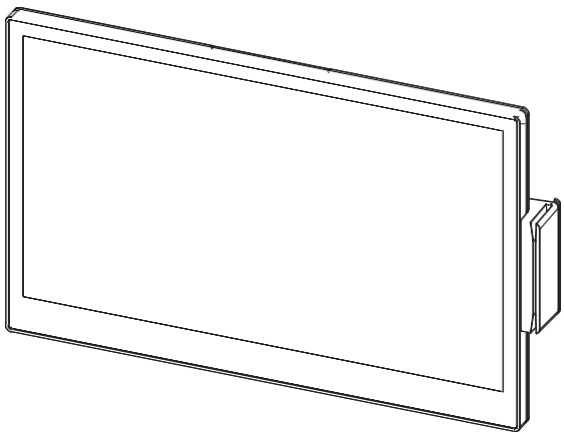
VERSION 2.2 March 2022

VK Series Touch Screen User Manual



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Manual Version 2.2

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Safety

IMPORTANT SAFETY INSTRUCTIONS

1. To disconnect the machine from the electrical power supply, turn off the power switch and remove the power cord plug from the wall socket. The wall socket must be easily accessible and in close proximity to the machine.
2. Read these instructions carefully. Save these instructions for future reference.
3. Follow all warnings and instructions marked on the product.
4. Do not use this product near water.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in the cabinet and the back or bottom are provided for ventilation to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register or in a built-in installation unless proper ventilation is provided.
7. This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
8. Do not allow anything to rest on the power cord. Do not locate this product where

persons will walk on the cord.

9. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
10. To avoid the risk of electric shock, this equipment must only be connected to a supply main with protective earth.
11. No modification of this equipment is allowed.
12. Power supply is specified as part of medical equipment.
13. The medical PC can be cleaned in accordance with normal clinical cleaning practices, including wiping with water or medical grade wipes, provided no substance containing acids or cleaning alkali liquids is used.
14. Medical grade wipes must not contain more than 80% alcohol content measured against the total content of the wipe.
15. Operator shall not contact patient simultaneously when in use with the medical computer.

CE MARK

This device complies with the requirements of the EEC directive 2014/30/EU with regard to "Electromagnetic compatibility" and 2014/35/EU "Low Voltage Directive".

FCC

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference.
(2) This device must accept any interference received, including interference that may cause undesired operation.

CAUTION ON LITHIUM BATTERIES

There is a danger of explosion if the battery is replaced incorrectly. Replace only with the same or equivalent type recommended by the manufacturer. Discard used batteries according to the manufacturer's instructions.

Battery Caution

Risk of explosion if battery is replaced by an incorrectly type. Dispose of used battery according to the local disposal instructions.

Safety Caution

Note: To comply with IEC60950-1 Clause 2.5 (limited power sources, L.P.S) related legislation, peripherals shall be 4.7.3.2 "Materials for fire enclosure" compliant.

4.7.3.2 Materials for fire enclosure

For MOVABLE EQUIPMENT having a total mass not exceeding 18kg.the material of a

FIRE ENCLOSURE, in thinnest significant wall thickness used, shall be of V-1 CLASS MATERIAL or shall pass the test of Clause A.2.

For MOVABLE EQUIPMENT having a total mass exceeding 18kg and for all STATIONARY EQUIPMENT, the material of a FIRE ENCLOSURE, in the thinnest significant wall thickness used, shall be of 5VB CLASS MATERIAL or shall pass the test of Clause A.1

LEGISLATION AND WEEE SYMBOL

2012/19/EU Waste Electrical and Electronic Equipment Directive on the treatment, collection, recycling and disposal of electric and electronic devices and their components.

The crossed dust bin symbol on the device means that it should not be disposed of with other household wastes at the end of its working life. Instead, the device should be taken to the waste collection centers for activation of the treatment, collection, recycling and disposal procedure.
To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take this item for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract.

This product should not be mixed with other commercial wastes for disposal.

Troubleshooting

For your own safety and that of your equipment, always take the following precautions. Disconnect the power plug (by pulling the plug, not the cord), from your computer if any of the following conditions exists:

- The power cord or plug becomes frayed or otherwise damaged.
- You spill something into the system.
- Your computer has been dropped or damaged.
- You suspect that your computer needs service or repair.
- You want to clean the computer or screen.
- You want to remove/install any parts.

Repair of the device may only be carried out by the manufacture.
We recommend that a service contract be obtained with supplier and that all repairs also be carried out by them. Otherwise, the correct functioning of the device may be compromised.

Revision History

Changes to the original user manual are listed below:

Revision	Description	Date
1.0	• Initial release	June 2020
1.1	• F14 motherboard added • PoE module added	August 2020
2.0	• F64U motherboard added	November 2020
2.1	• F64U motherboard removed • F34 motherboard added • New camera peripheral added	October 2021
2.2	• F84U motherboard added • F14 motherboard CPU modified	March 2022

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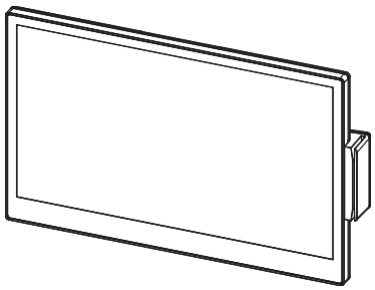
1. Packing List

1-1. Standard Items

a.



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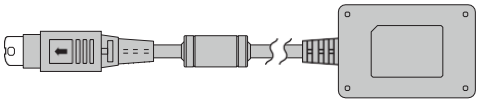


c.

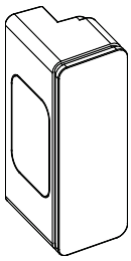
a. System
b. Power adapter
c. Power cord

Note: Power cord will be supplied differently according to various region or country.

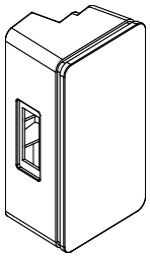
1-2. Optional Items

a.

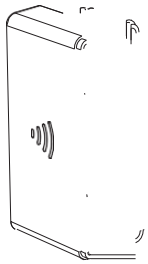
b.



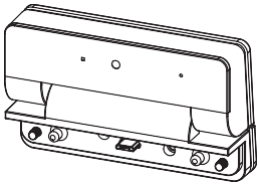
c.



d.



e.



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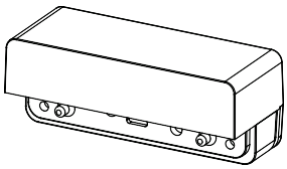
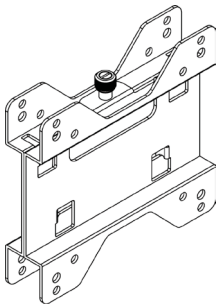
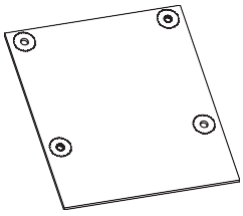


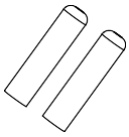
g.



h.



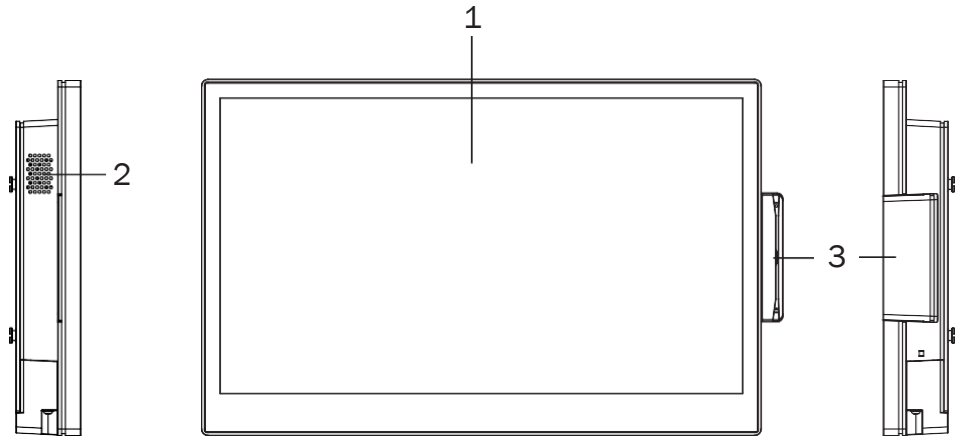
i.



a. MSR
b. Fingerprint
c. 2D scanner
d. NFC
e. Camera
f. Light bar
g. Wall mount kits
h. PoE module
i. Antenna (x2)

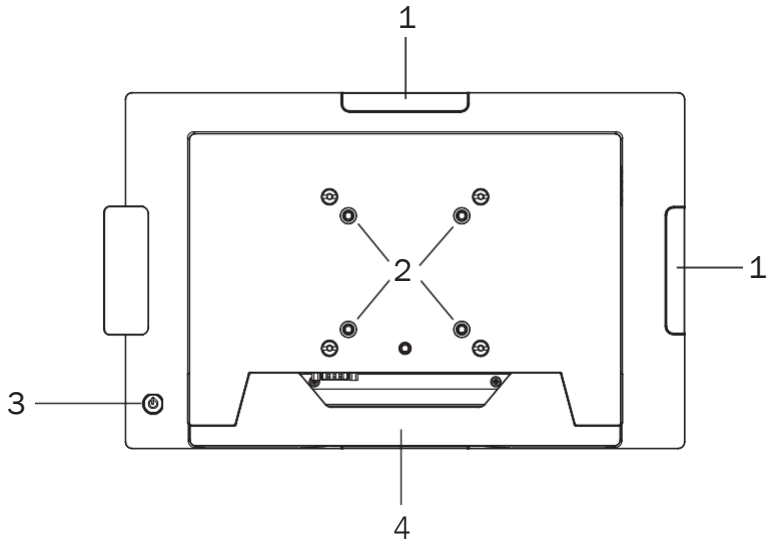
2. System View

2-1. Front & Side View



Item No.	Description
1	Touch panel
2	Speaker
3	MSR / Fingerprint / NFC / 2D scanner

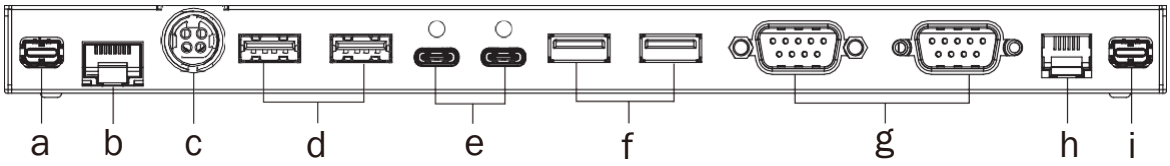
2-2. Rear & Bottom View



Item No.	Description
1	Dummy cover of MSR/ Fingerprint/ Scanner
2	75 x 75 mm /100 x 100mm VESA mounting holes
3	Power button
4	Cable cover

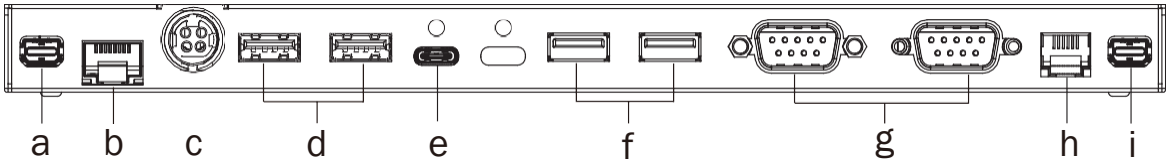
2-3. I/O View

D84U, F34 & F84U Motherboard



No.	Description
a	FeDP (2nd display)
b	LAN
c	DC 19V in
d	USB 2.0 x 2
e	USB Type C x 2
f	USB 3.0 x 2
g	COM x 2
h	Cash drawer
i	FeDP (Main display)

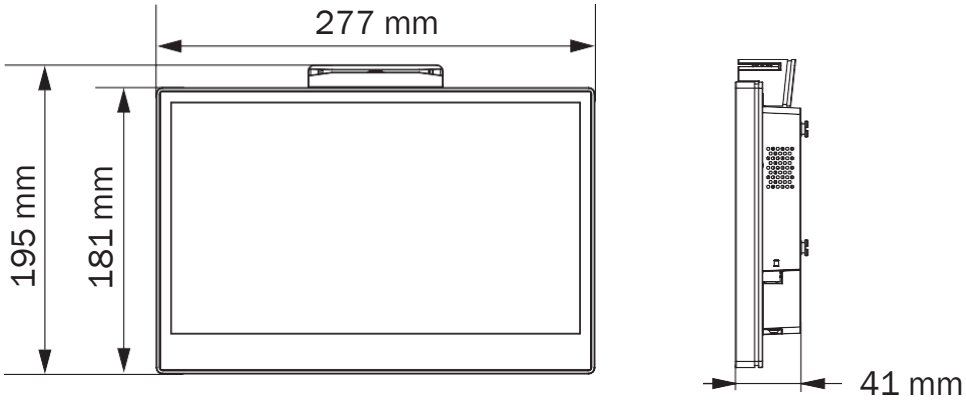
F14 Motherboard



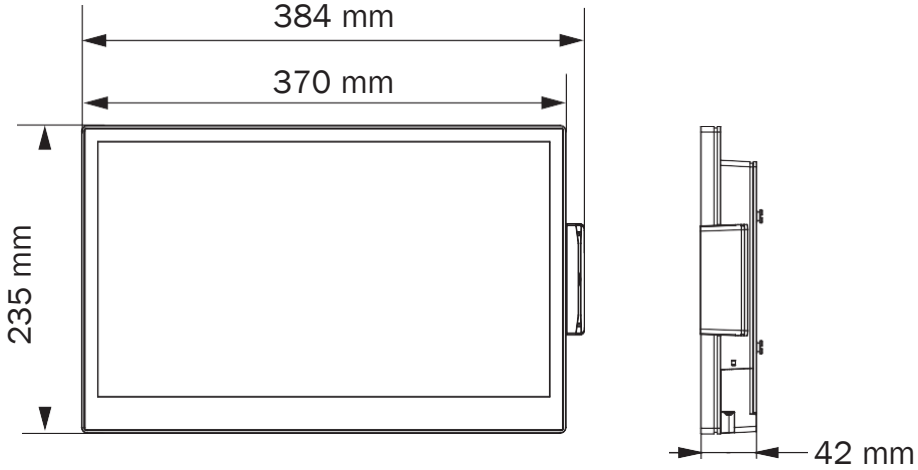
No.	Description
a	FeDP (2nd display)
b	LAN
c	DC 19V in
d	USB 2.0 x 2
e	USB Type C
f	USB 3.0 x 2
g	COM x 2
h	Cash drawer
i	FeDP (Main display)

2-4. Dimensions

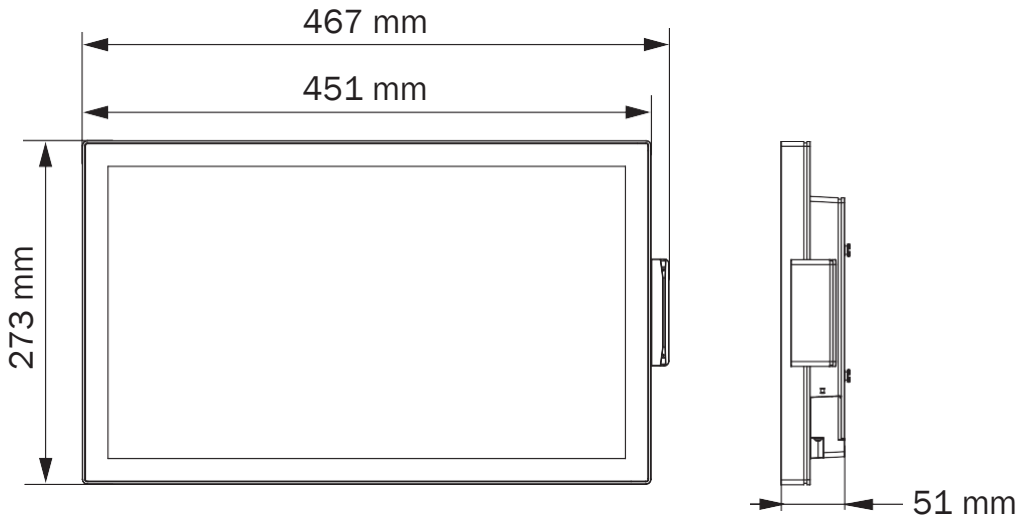
VK116W - 11.6" LED panel



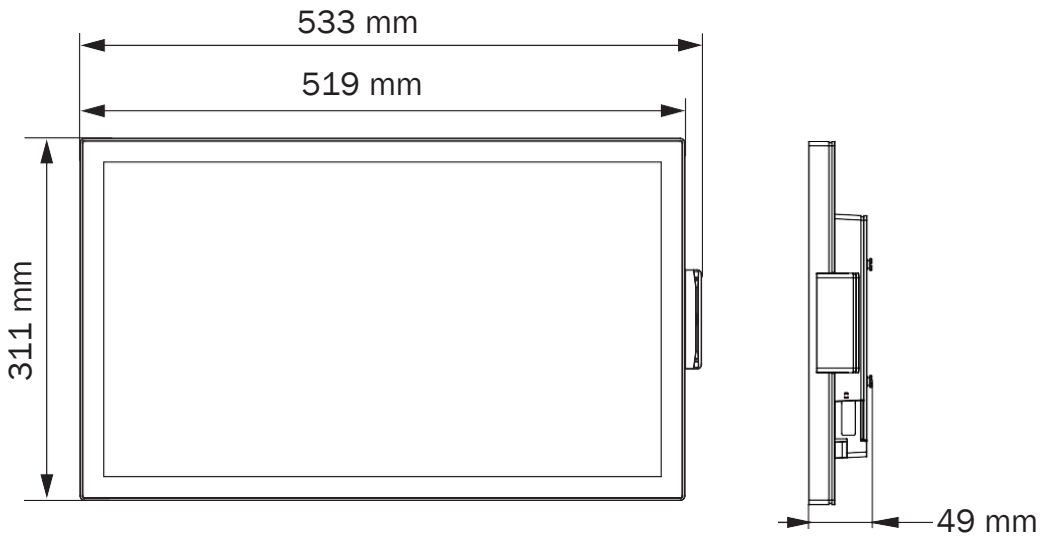
VK156W - 15.6" LED panel



VK185W - 18.5" LED panel

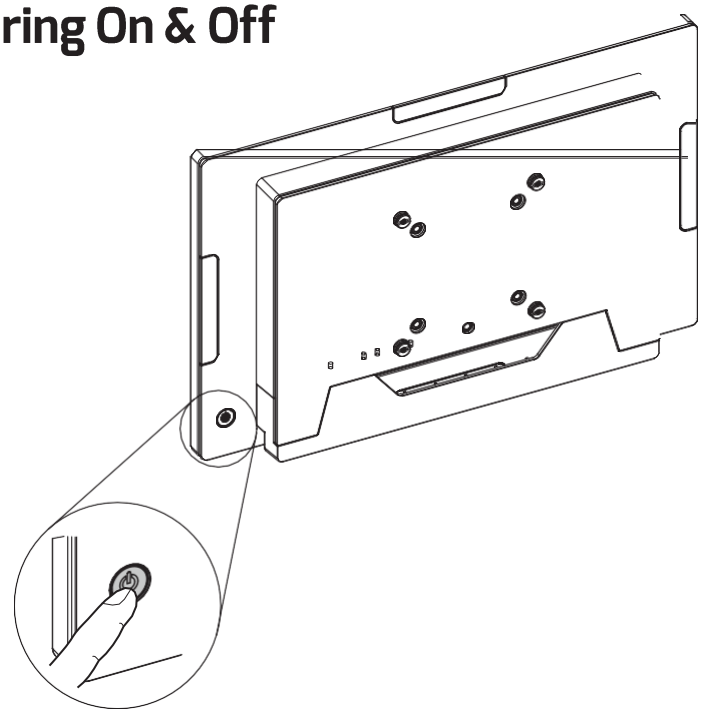


VK215W - 21.5" LED panel



3. System Assembly

3-1. Powering On & Off

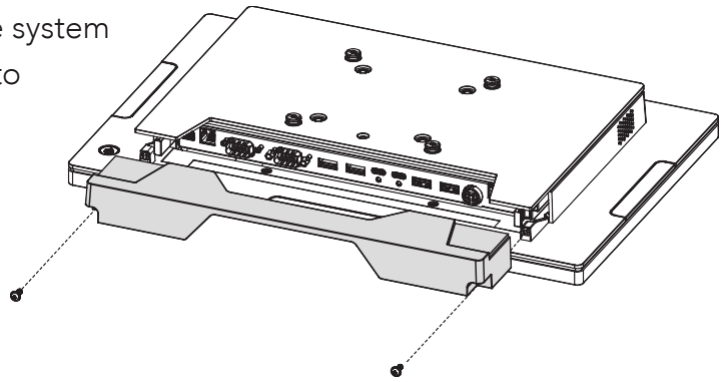


To activate the system, push and quickly release the power button and the display will come on in a few seconds. *NOTE:* The system must be plugged into power adapter before turning on for the first time.

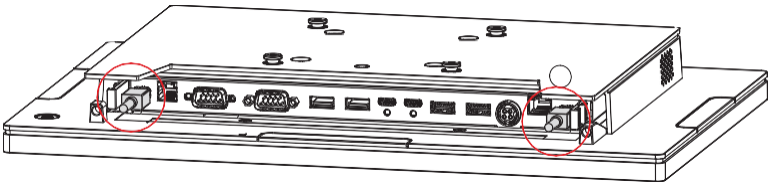
To turn off the system, power off the device safely using software function that "shuts down computer" provided in the operating system.

3-2. Remove the Cable Cover

1. Turn to the back side of the system and loosen the screws (x2) to release the cable cover.

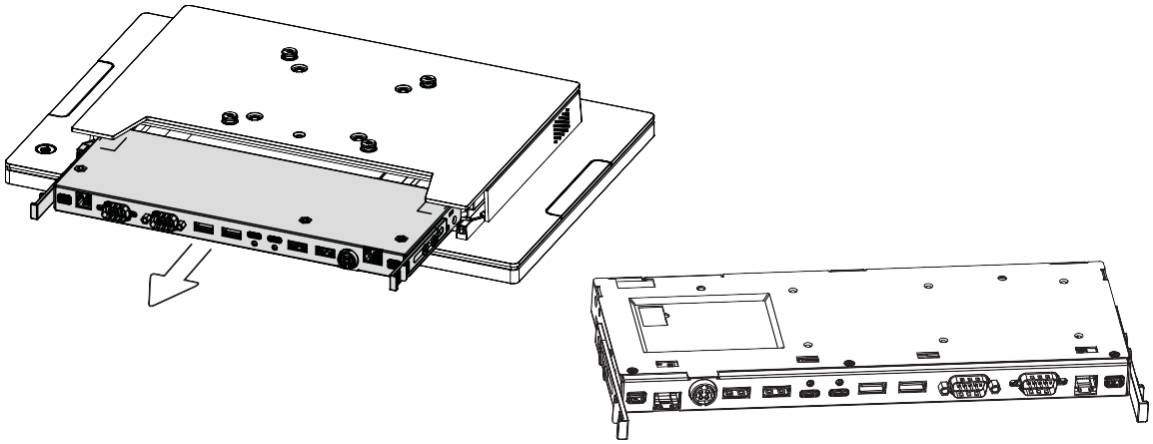


3-3. Remove the Motherboard Box



1. To remove the motherboard box, please remove the cable cover firstly as steps described in chapter 3-2.
2. Unplug the FeDP cables (x2) connected directly to the ports on the I/O panel. Always power down the system before releasing the cables or it may cause damage to the motherboard inside.

3. Push the plastic holder of the motherboard box and pull it outward to release the motherboard box from the system.

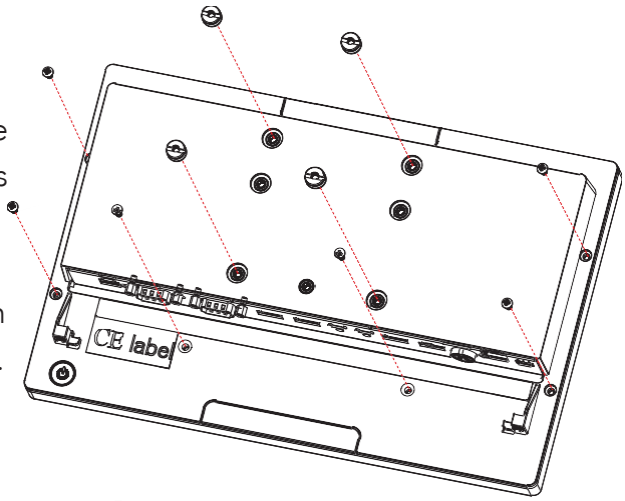


3-4. Replace the RAM Module

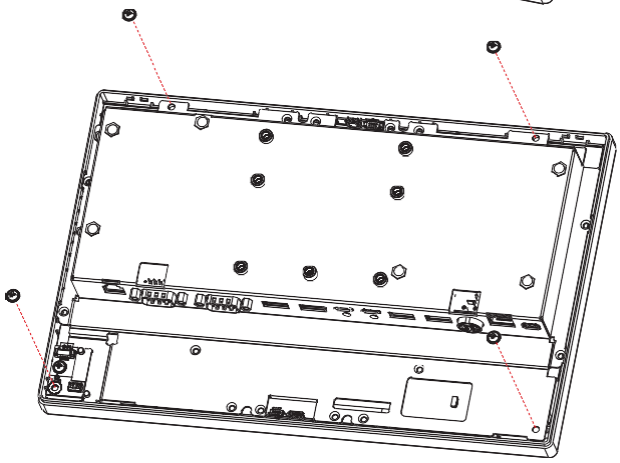
VK116W Model

1. To replace the RAM, please remove the cable cover firstly as steps described in chapter 3-2.

2. Remove the screws (x10) to open the rear cover of the touch panel.

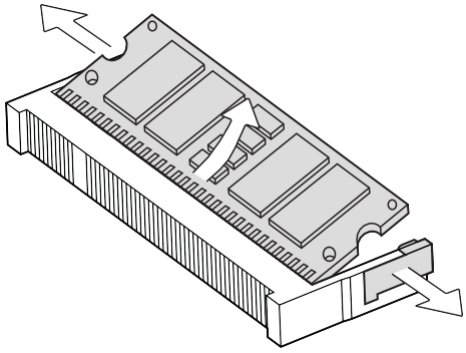


3. Remove the screws (x4) of the metal bracket to access the motherboard.



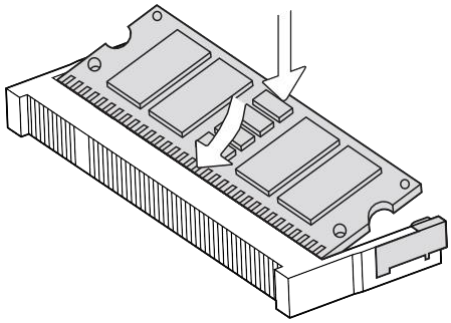
Removing a RAM module

1. Flip the ejector clips outwards to remove the memory module from the memory slot.

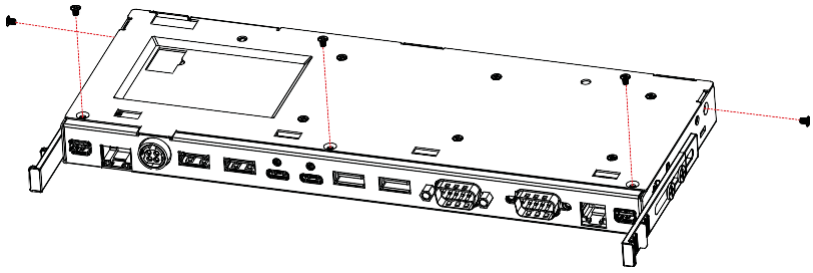


Installing a RAM module

2. Slide the memory module into the memory slot and press down until the ejector clips snaps in place.



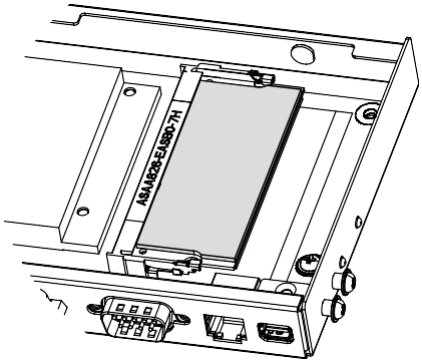
VK156W / VK185W / VK215W Model



1. To replace the RAM, please release the motherboard box firstly as steps described in chapter 3-3.

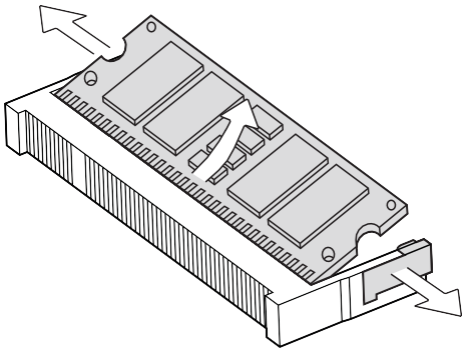
2. Remove the screws (x5) to open the metal cover of the motherboard box.

3. Find the RAM module located at the right side of the motherboard.



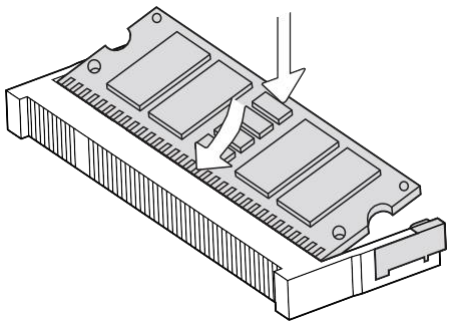
Removing a RAM module

1. Flip the ejector clips outwards to remove the memory module from the memory slot.

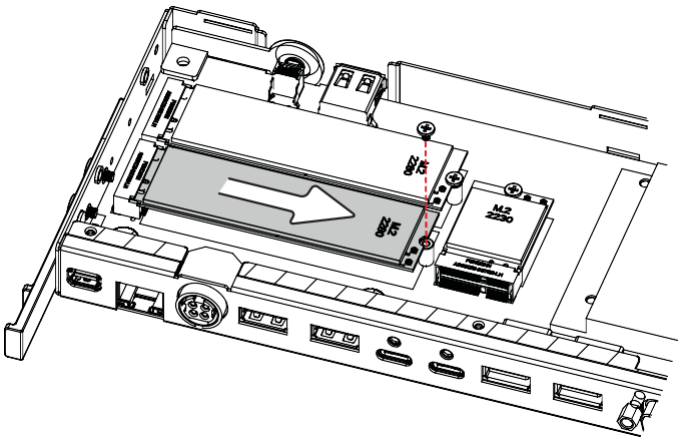


Installing a RAM module

2. Slide the memory module into the memory slot and press down until the ejector clips snaps in place.



3-5. Replace the M.2 SSD Card

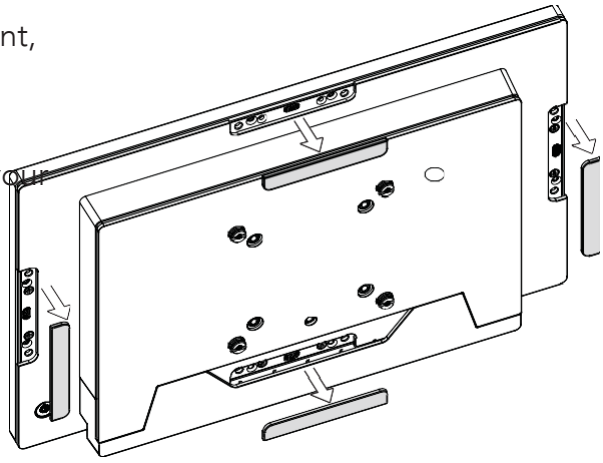


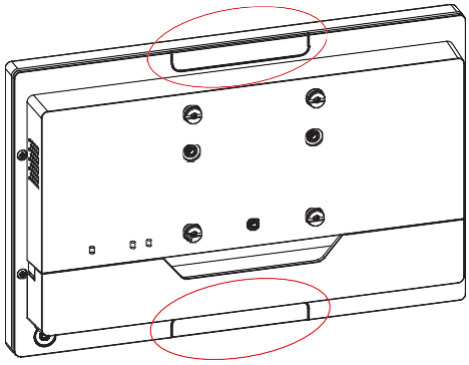
1. To replace the RAM, please release the motherboard box firstly as steps described in chapter 3-3 (VK156W/VK185W/VK215W) and 3-4 (VK116W).
2. Remove the screws (x1) and pull the M.2 SSD card outwards as shown in the picture.

4. Peripherals Installation

4-1. Install the MSR/ Fingerprint/ NFC / 2D Scanner Module

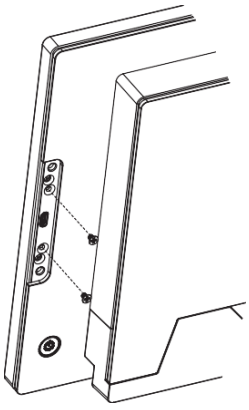
1. The variety of peripherals MSR, fingerprint, NFC and 2D scanner modules can be installed
   to each side of the system depends on your preference.
2. Remove the dummy cover.

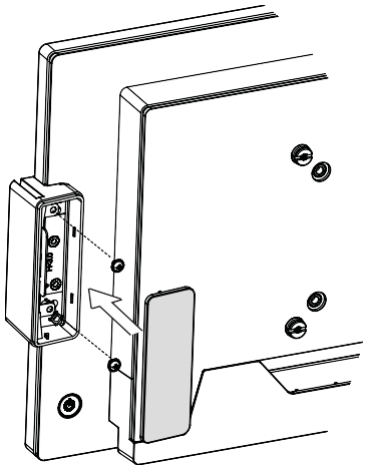




** The modules can only be installed to the top or bottom side for the VK116W model.

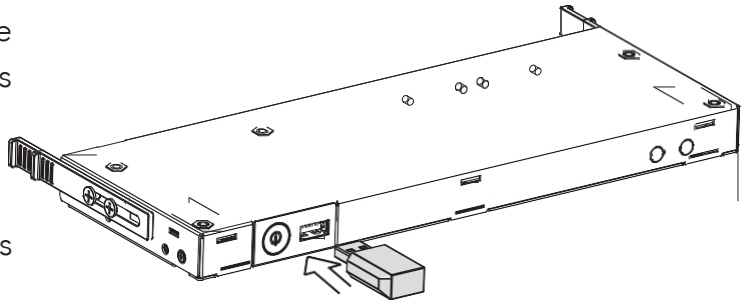
3. Remove the retaining screws (x2).
4. Insert the MSR / fingerprint/ 2D scanner module and fasten the screws (x2). Then attach the top cover of the module.





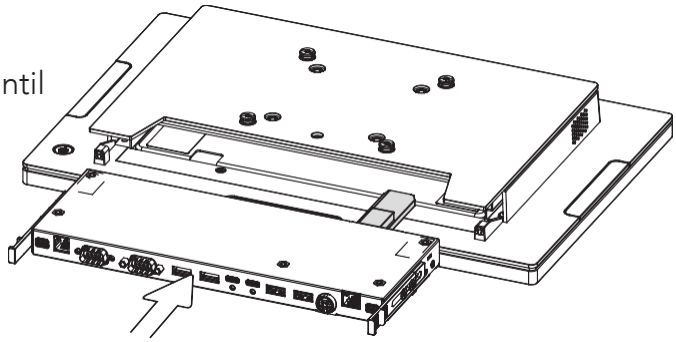
4-2. Install the Wi-Fi Dongle Module

1. To install the Wi-Fi dongle module, please release the motherboard box firstly as steps described in chapter 3-3.

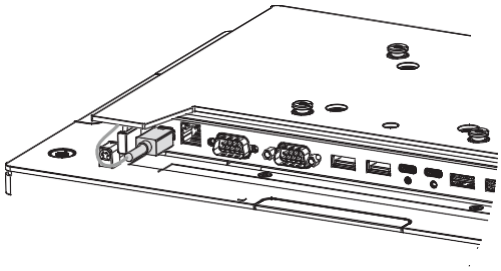


2. Insert the Wi-Fi dongle module as picture shown.

3. Slide the motherboard box in until it clicks in place.

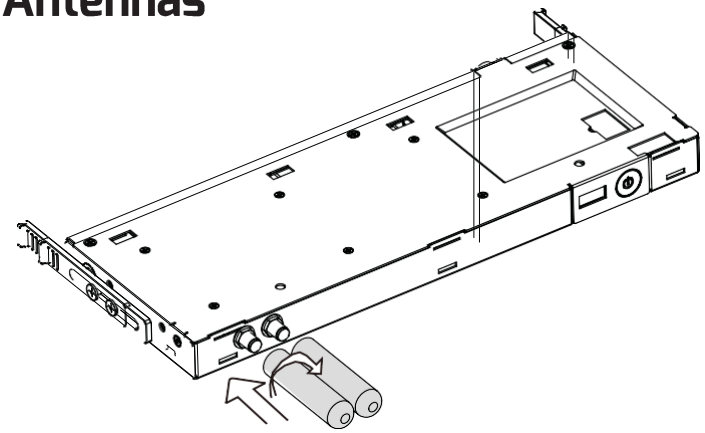


4. Finally connect the FeDP cable.



- Wi-Fi dongle module is only available for VK156W/VK185W/VK215W equipped with D84U motherboard. For the above models equipped with F14 motherboard, please install the Antennas.
- VK116W only supports M.2 WLAN card.

4-3. Install the Antennas



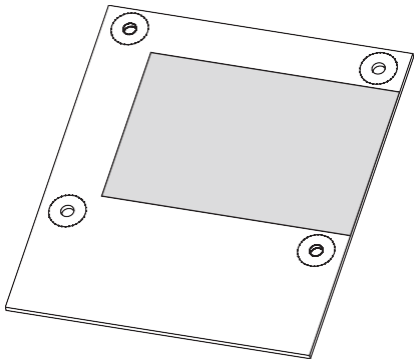
1. To install the antennas, please release the motherboard box firstly as steps described in chapter 3-3.
2. Screw the antennas tight to the Wi-Fi antenna connectors as shown.

4-4. Install the PoE Module

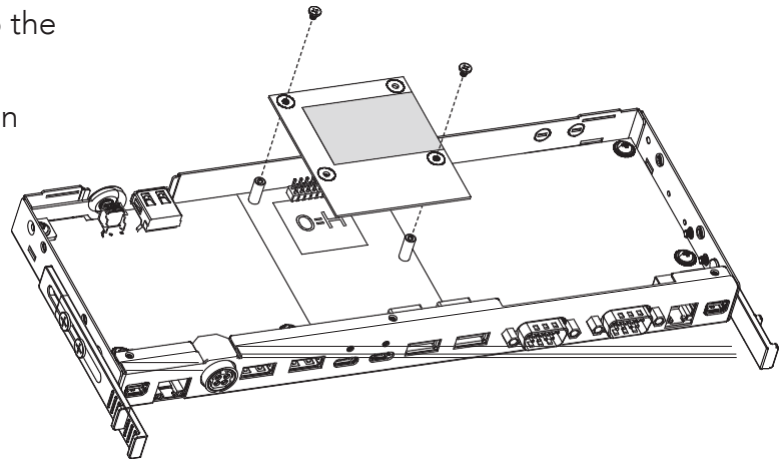
When the PoE module is connected to motherboard, it would change to PoE mode. There are two restrictions on PoE mode:

- *No powered COM ports*
- *Do not support 2nd display*

1. To install the PoE module, please release the motherboard box firstly as steps described in chapter 3-3 (VK156W/VK185W/VK215W) and 3-4 (VK116W).
2. Attach a thermal pad onto the PoE board.



3. Connect the PoE board to the connector on the motherboard side and then fasten the screws (x2) provided.



5. Specifications

Model Name	VK116W	VK156W	VK185W	VK215W
Mainboard	D84U			
CPU	Intel KabyLakeU CPU Celeron 3965U 2.2GHz, i3-7100U 2.4GHz			
Chipset	CPU Integrated			
System memory	1x DDR4 2133MHz SO-DIMM 8GB			
LCD/Touch Panel				
LCD size	11.6" LED Panel	15.6" LED Panel	18.5" LED Panel	21.5" LED Panel
Brightness	300 nits	300 nits	250 nits	300 nits
Maximal resolution	1920 x 1080 (full HD)	1920 x 1080 (full HD)	1366 x 768 (HD)	1920 x 1080 (full HD)
Touch screen type	True flat PCAP multi touch			
Storage				
Flash memory	1x M.2 SATA SSD module 128GB			
Peripherals (Option)				
Webcam	2M/5M (USB)			
MSR	1 (USB)			
NFC	1 (USB)			
2D scanner	1 (USB)			
Fingerprint	1 (USB)			
Status light	1 (USB)			
Communication				
Wireless LAN (option)	M.2 Wi-Fi/BT module	USB Wi-Fi/BT dongle (a/b/g/n/ac)		
External I/O Ports				
USB Type A	2x USB3.0 / 2x USB2.0			
USB Type C	1x USB3.0 Type C (full-functional) PDO 5V@3A / PDO 12V@1.5A / PDO 20V@1A 1x USB3.0 Type C (data only)			
Serial / COM	2x DB9 (Powered RS232) (default 0V; COM1 5V, COM2 12V)			
LAN	1x RJ45			
Cash drawer	1x RJ11			
Mini display port	1 (Proprietary)	2 (Proprietary)		
DC jack	4 pin DIN (with latch)			
Control/ Indicate				
Power button	1			
LED indicator	1			
Audio				
Speaker	1x 3W			
Power				
Power adapter	120W/19V			
Environment				
EMC & Safety	FCC Class A, CE mark Class A, LVD			
Operating temperature	0°C ~ 35°C (32°F ~ 95°F)			
Storage temperature	-20° ~ 60°C (-4°F ~ 140°F)			
Humidity	20% - 85% RH non-condensing			
Dust & Waterproof	IP 54 (front panel)			
Weight	1.4 Kg	3.0 Kg	4.4 Kg	5.4 Kg
Dimensions (W x D x H)	277 x 181 x 41 mm	370 x 235 x 42 mm	451 x 273 x 51 mm	519 x 311 x 49mm
Mounting	VESA mount holes 75 x 75 mm	VESA mount holes 75 x 75 mm /100 x 100 mm		
OS support	Windows 10 IoT Enterprise, Linux			

*This specification is subject to change without prior notice.

Model Name	VK116W	VK156W	VK185W	VK215W
Mainboard	F14			
CPU	Qualcomm 660 Octa-Core 1.8GHz			
Chipset	CPU Integrated			
System memory	8GB LPDDR4			
Storage device	64GB eMMC			
LCD/Touch Panel				
LCD size	11.6" LED Panel	15.6" LED Panel	18.5" LED Panel	21.5" LED Panel
Brightness	300 nits	300 nits	250 nits	300 nits
Maximal resolution	1920 x 1080 (full HD)	1920 x 1080 (full HD)	1366 x 768 (HD)	1920 x 1080 (full HD)
Touch screen type	True flat PCAP multi touch			
Peripherals (Option)				
Webcam	2M/5M (USB)			
MSR	1 (USB)			
NFC	1 (USB)			
2D scanner	1 (USB)			
Fingerprint	1 (USB)			
Status light	1 (USB)			
Communication				
Wireless LAN (option)	System build-in Wi-Fi+BT (a/b/g/n) (Antenna (option)			
PoE				
POE module (option)	POE module 802.3bt Type 3			
External I/O Ports				
USB Type A	2x USB3.0 / 2x USB2.0			
USB Type C	1x USB2.0 Type C (data only)			
Serial / COM	2x DB9 (Powered RS232) (default 0V; COM1 5V, COM2 12V)			
LAN	1x RJ45			
Cash drawer	1x RJ11			
Mini display port	1 (Proprietary)	2 (Proprietary)		
DC jack	4 pin DIN (with latch)			
Control/ Indicate				
Power button	1			
LED indicator	1			
Audio				
Speaker	1x 3W			
Power				
Power adapter	65W/19V			
Environment				
EMC & Safety	FCC Class A, CE mark Class A, LVD			
Operating temperature	0°C ~ 35°C (32°F ~ 95°F)			
Storage temperature	-20° ~ 60°C (-4°F ~ 140°F)			
Humidity	20% - 85% RH non-condensing			
Dust & Waterproof	IP 54 (front panel)			
Weight	1.4 Kg	3.0 Kg	4.4 Kg	5.4 Kg
Dimensions (W x D x H)	277 x 181 x 41 mm	370 x 235 x 42 mm	451 x 273 x 51 mm	519 x 311 x 49mm
Mounting	VESA mount holes 75 x 75 mm	VESA mount holes 75 x 75 mm /100 x 100 mm		
OS support	Android 10.0			

*This specification is subject to change without prior notice.

Model Name	VK116W	VK156W	VK185W	VK215W
Mainboard	F34			
CPU	Intel Elkhart Lake CPU J6412 2.60 GHz			
Chipset	CPU Integrated			
System memory	1x DDR4 2133MHz SO-DIMM 8GB			
LCD/Touch Panel				
LCD size	11.6" LED Panel	15.6" LED Panel	18.5" LED Panel	21.5" LED Panel
Brightness	300 nits	300 nits	250 nits	300 nits
Maximal resolution	1920 x 1080 (full HD)	1920 x 1080 (full HD)	1366 x 768 (HD)	1920 x 1080 (full HD)
Touch screen type	True flat PCAP multi touch			
Storage				
Flash memory	1x M.2 SATA SSD module 128GB			
Peripherals (Option)				
Webcam	2M/5M (USB)			
MSR	1 (USB)			
NFC	1 (USB)			
2D scanner	1 (USB)			
Fingerprint	1 (USB)			
Status light	1 (USB)			
Communication				
Wireless LAN (option)	M.2 Wi-Fi/BT module	USB Wi-Fi/BT dongle (a/b/g/n/ac)		
External I/O Ports				
USB Type A	2x USB3.0 / 2x USB2.0			
USB Type C	1x USB2.0 Type C (data only) / 1x USB3.0 Type C (data only)			
Serial / COM	2x DB9 (Powered RS232) (default 0V; COM1 5V, COM2 12V)			
LAN	1x RJ45			
Cash drawer	1x RJ11			
Mini display port	1 (Proprietary)	2 (Proprietary)		
DC jack	4 pin DIN (with latch)			
Control/ Indicate				
Power button	1			
LED indicator	1			
Audio				
Speaker	1x 3W			
Power				
Power adapter	65W/19V			
Environment				
EMC & Safety	FCC Class A, CE mark Class A, LVD			
Operating temperature	0°C ~ 35°C (32°F ~ 95°F)			
Storage temperature	-20° ~ 60°C (-4°F ~ 140°F)			
Humidity	20% - 85% RH non-condensing			
Dust & Waterproof	IP 54 (front panel)			
Weight	1.4 Kg	3.0 Kg	4.4 Kg	5.4 Kg
Dimensions (W x D x H)	277 x 181 x 41 mm	370 x 235 x 42 mm	451 x 273 x 51 mm	519 x 311 x 49mm
Mounting	VESA mount holes 75 x 75 mm	VESA mount holes 75 x 75 mm /100 x 100 mm		
OS support	Windows 10 IoT Enterprise, Linux			

*This specification is subject to change without prior notice.

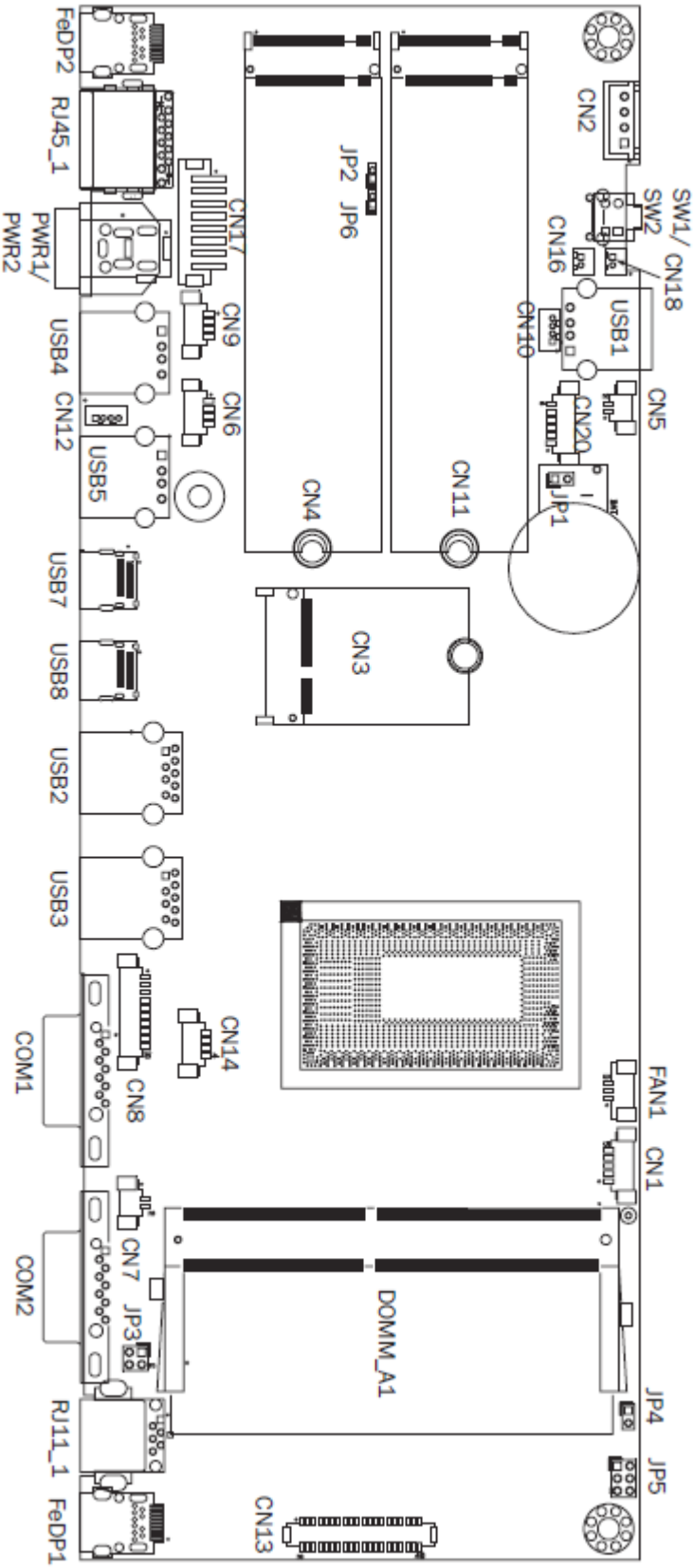
Model Name	VK116W	VK156W	VK185W	VK215W
Mainboard	F84U			
CPU	Intel TigerLakeU CPU i3-1115G4 1.7GHz			
Chipset	CPU Integrated			
System memory	1x DDR4 2133MHz SO-DIMM 8GB			
LCD/Touch Panel				
LCD size	11.6" LED Panel	15.6" LED Panel	18.5" LED Panel	21.5" LED Panel
Brightness	300 nits	300 nits	250 nits	300 nits
Maximal resolution	1920 x 1080 (full HD)	1920 x 1080 (full HD)	1366 x 768 (HD)	1920 x 1080 (full HD)
Touch screen type	True flat PCAP multi touch			
Storage				
Flash memory	1x M.2 SATA SSD module 128GB			
Peripherals (Option)				
Webcam	2M/5M (USB)			
MSR	1 (USB)			
NFC	1 (USB)			
2D scanner	1 (USB)			
Fingerprint	1 (USB)			
Status light	1 (USB)			
Communication				
Wireless LAN (option)	M.2 Wi-Fi/BT module	USB Wi-Fi/BT dongle (a/b/g/n/ac)		
External I/O Ports				
USB Type A	2x USB3.0 / 2x USB2.0			
USB Type C	1x USB3.0 Type C (full-functional) PDO 5V@3A / PDO 12V@1.5A / PDO 20V@1A 1x USB3.0 Type C (data only)			
Serial / COM	2x DB9 (Powered RS232) (default 0V; COM1 5V, COM2 12V)			
LAN	1x RJ45			
Cash drawer	1x RJ11			
Mini display port	1 (Proprietary)	2 (Proprietary)		
DC jack	4 pin DIN (with latch)			
Control/ Indicate				
Power button	1			
LED indicator	1			
Audio				
Speaker	1x 3W			
Power				
Power adapter	120W/19V			
Environment				
EMC & Safety	FCC Class A, CE mark Class A, LVD			
Operating temperature	0°C ~ 35°C (32°F ~ 95°F)			
Storage temperature	-20° ~ 60°C (-4°F ~ 140°F)			
Humidity	20% - 85% RH non-condensing			
Dust & Waterproof	IP 54 (front panel)			
Weight	1.4 Kg	3.0 Kg	4.4 Kg	5.4 Kg
Dimensions (W x D x H)	277 x 181 x 41 mm	370 x 235 x 42 mm	451 x 273 x 51 mm	519 x 311 x 49mm
Mounting	VESA mount holes 75 x 75 mm	VESA mount holes 75 x 75 mm /100 x 100 mm		
OS support	Windows 10 IoT Enterprise, Linux			

*This specification is subject to change without prior notice.

6 Configuration

6.1. D84U Motherboard

6.1-1. Motherboard Layout



6-1-2. Connectors & Functions

Connector	Function
CN1	EC Debug
CN2	SATA power connector
CN3	M.2 E-KEY WIFI connector
CN4/11	M.2 M-KEY PCIE/SATA connector
CN5	Speaker R output
CN6	S0/S5 LED & power button connector
CN7	Storage LED connector
CN9/CN10/CN12/CN14	Internal USB connector
CN16	RTC battery Connector
CN17	Wide range & power connector
CN18	Speaker L output
CN20	Line-out/Mic-in connector
PWR1/PWR2	DC jack (2pin/4pin)
RJ11_1	Cash drawer connector
RJ45_1	LAN connector
SW1/SW2	Power button
DIMM_A1	DDR4 SO-DIMM
FAN1	CPU FAN connector
FeDP1	FeDP main display connector
FeDP2	FeDP 2nd display connector
USB1/USB4/USB5	USB2.0 connector
USB2/USB3	USB3.0 connector
USB7	USB-C full function connector
USB8	USB-C data only connector
COM1/COM2	COM port connector
COM3	Internal COM port connector
MINI_PCIE1	MINI PCIE
JP1	Audio Line-out setting
JP3	Cash drawer power setting
JP4	CPU power setting
JP5 (1-2) (3-4)	Speaker cable setting
JP5(5-6)	Speaker watt setting

6-1-3. Jumper Setting

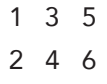
Audio Line-out Setting

Function	JP1
▲Stereo	
Reserved (line-out)	

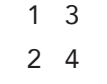
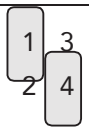
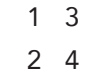
Cash Drawer Power Setting

Function	JP3
▲+19V	
+12V	

Speaker Watt Setting

Function	JP5
2W	
▲3W	

Speaker Cable Setting

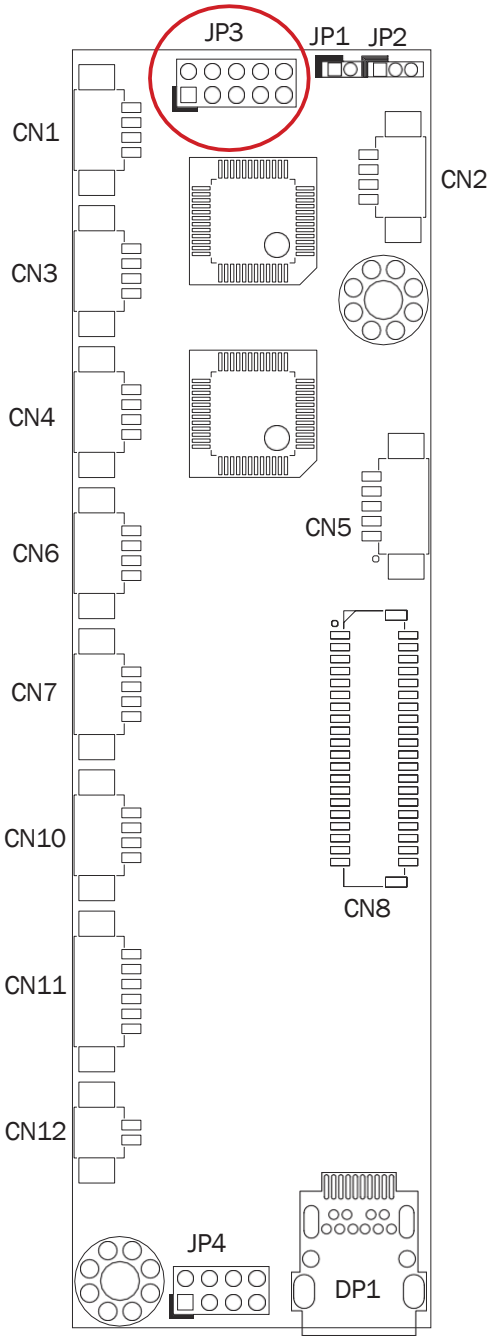
Function	JP5
▲L=0.58m	
L=2.0m	
M/B	

LCD ID Setting

To set the panel ID, please insert the jumper on the FeDP to LVDS board.

Panel#	Resolution	JP3
0	Reserved	
1	800 x 600	
2	800 x 600	
3	1024 x 768	
4	1024 x 768	
5	1366 x 768	
6	1366 x 768	
7	1024 x 600	
8	1280 x 1024	
9	1440 x 900	
15	1920 x 1080	

1 2 Jumper open 1 2 Jumper short

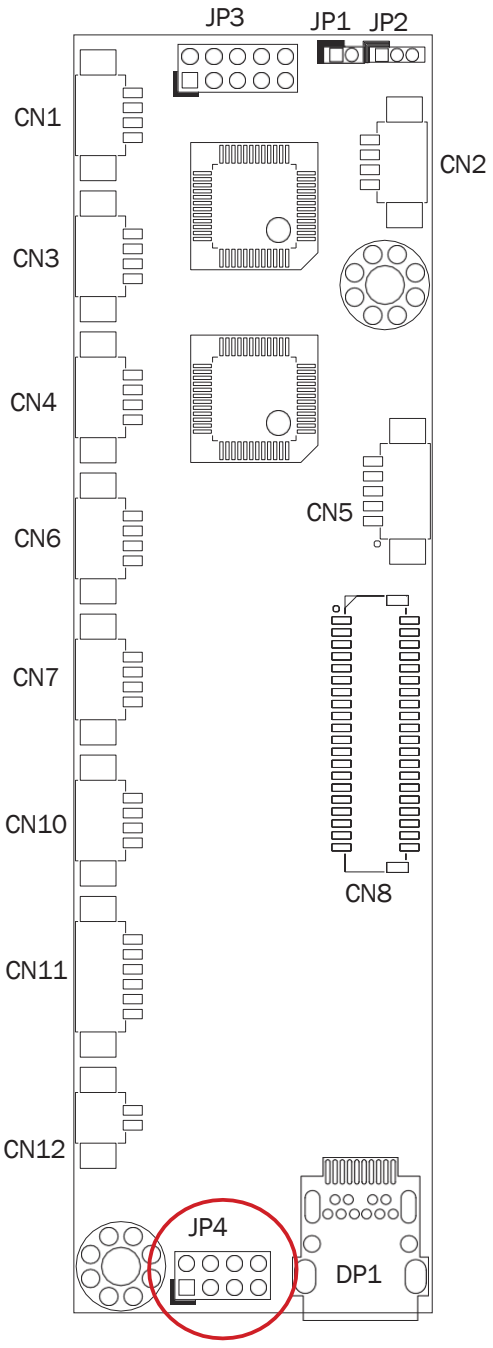


Panel Backlight Current Setting

LED current	JP4
200mA	1 5 7 2 6 8
240mA	1 3 7 2 4 8
280mA	1 3 5 2 4 6
320mA	5 7 6 8
360mA	3 7 4 8
400mA	3 5 4 6
420mA	1 7 2 8
460mA	1 5 2 6
500mA	1 3 5 7 2 4 6 8

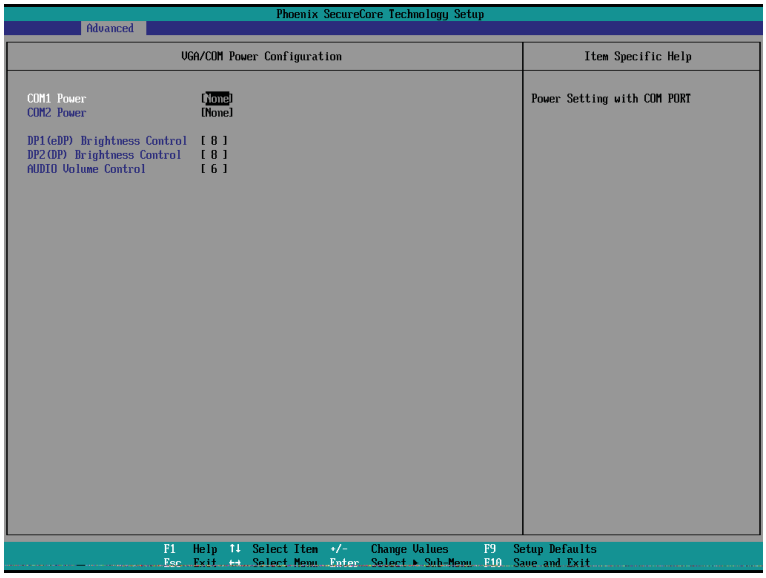
1
2 Jumper open

1
2 Jumper short



COM1/COM2 Power Setting

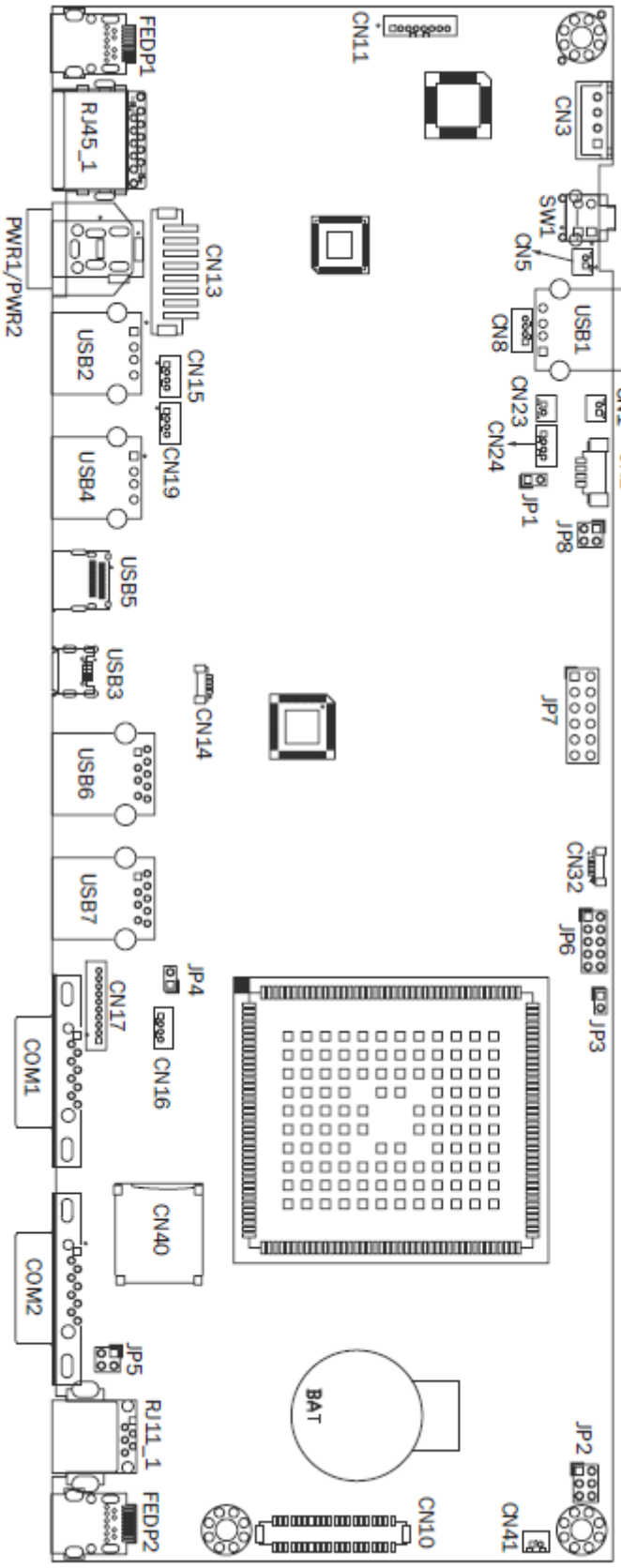
COM1, COM2 can be set to provide power to your serial device. The voltage can be set to +5V or +12V in the BIOS.



1. Power on the system and press the <DEL> key when the system is booting up to enter the BIOS Setup utility.
2. Select the Advanced tab.
3. Select **VGA/COM Power Configuration** Ports and press <Enter> to go to display the available options.
4. To enable the power, select COM1, COM2 Power setting and press <Enter>. Select Power and press <Enter>. Save the change by pressing F10.

6-2. F14 Motherboard

6-2-1. Motherboard Layout



6-2-2. Connectors & Functions

Connector	Function
CN1	Speaker_R connector
CN2	Power LED connector
CN3	SATA power connector
CN5	Speaker_L connector
CN8/15/16/19	USB port (internal) connector
CN10	40pin external connector
CN11	MCU debug connector
CN13	Wide range connector
CN17	COM3 connector
CN18	WIFI 5G connector
CN21	WIFI 2.4G connector
CN23	Analog Mic in connector
CN24	Line out connector
CN32	Digital mic connector
CN40	Micro SD card connector
PWR1	DC Jack (2 pin) connector
PWR2	DC Jack (4 pin) connector
RJ11_1	Cash drawer connector
RJ45_1	LAN connector
USB1/USB2/USB4	USB 2.0 connector
USB3	System USB debug connector
USB5	USB type C
USB6/USB7	USB 3.0 connector
FeDP1	2nd display connector
FeDP2	Main display connector
SW1	Power button
COM1/COM2	RS-232 connector
JP1	Speaker R/L setting
JP2	Speaker watt setting
JP5	Cash drawer power setting
JP8	PoE watt setting

6-2-3. Jumper Setting

Speaker R/L Setting

Function	JP1
R/L separated (two speakers)	[1] 2
▲R/L mix (single speaker)	[1] [2]

Speaker Watt Setting

Function	JP2
▲ with FeDP cable	1 3 5 2 4 6
without FeDP cable	[1] 3 5 [2] 4 6

PoE Mode Setting

Function	JP2
with PoE module	1 3 [5] 2 4 [6]

PoE Watt Setting

Function	JP8
▲40W	1 3 2 4
51W	[1] 3 [2] 4
62W	1 [3] 2 [4]

Cash Drawer Power Setting

Function	JP5
▲19V	[1] 3 [2] 4
+12V	1 [3] 2 4

1 2 Jumper open [1] [2] Jumper short

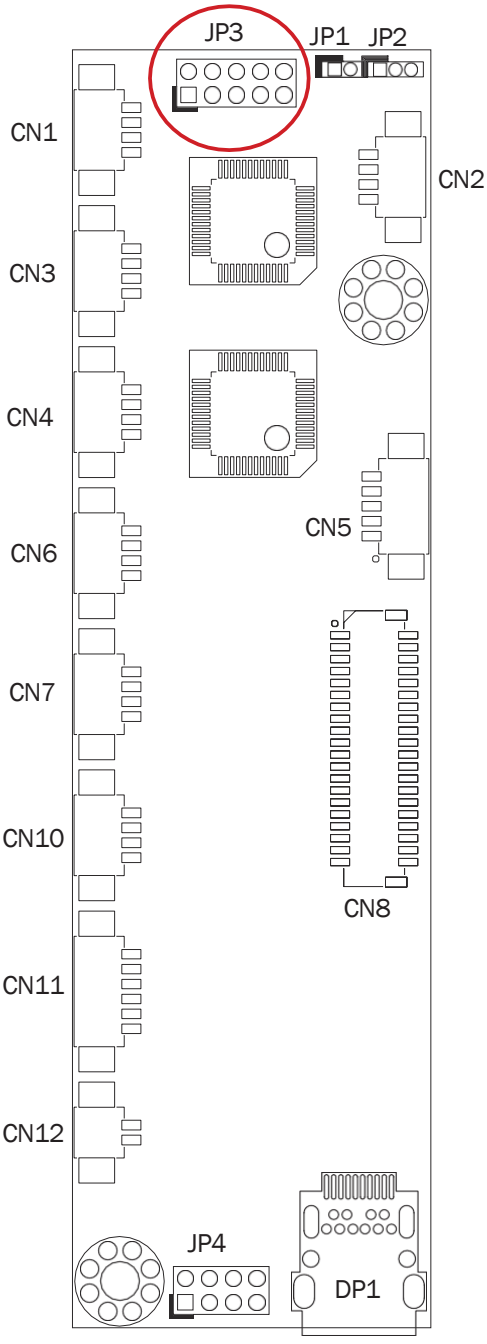
▲ = Manufacturer Default Setting

LCD ID Setting

To set the panel ID, please insert the jumper on the FeDP to LVDS board.

Panel#	Resolution	JP3
0	Reserved	
1	800 x 600	
2	800 x 600	
3	1024 x 768	
4	1024 x 768	
5	1366 x 768	
6	1366 x 768	
7	1024 x 600	
8	1280 x 1024	
9	1440 x 900	
15	1920 x 1080	

1 2 Jumper open 1 2 Jumper short

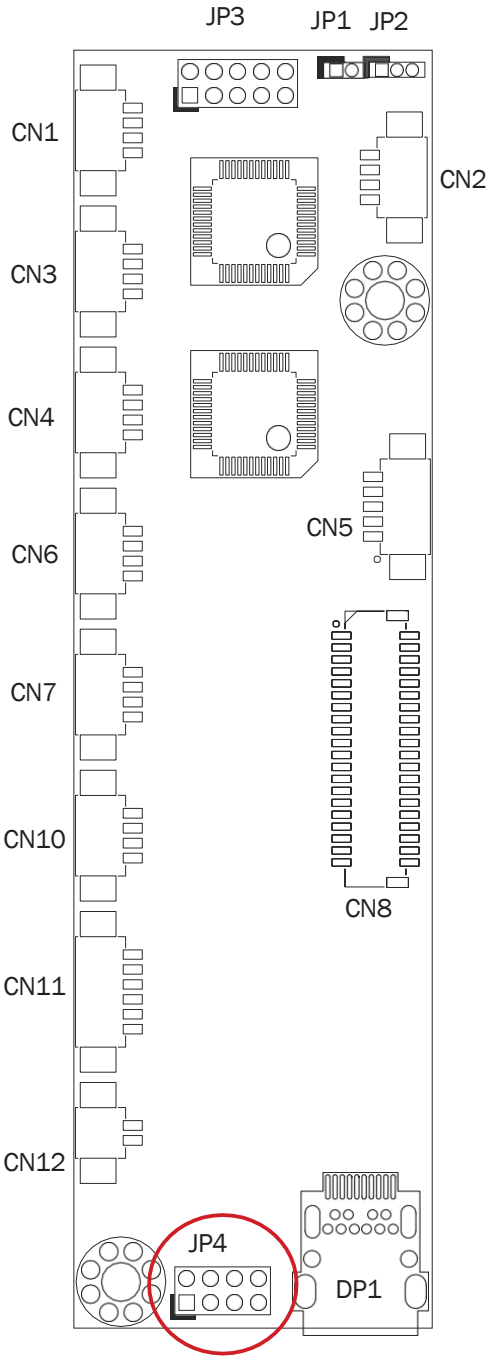


Panel Backlight Current Setting

LED current	JP4
200mA	1 5 7 2 6 8
240mA	1 3 7 2 4 8
280mA	1 3 5 2 4 6
320mA	5 7 6 8
360mA	3 7 4 8
400mA	3 5 4 6
420mA	1 7 2 8
460mA	1 3 5 7 2 4 6 8
500mA	1 3 5 7 2 4 6 8

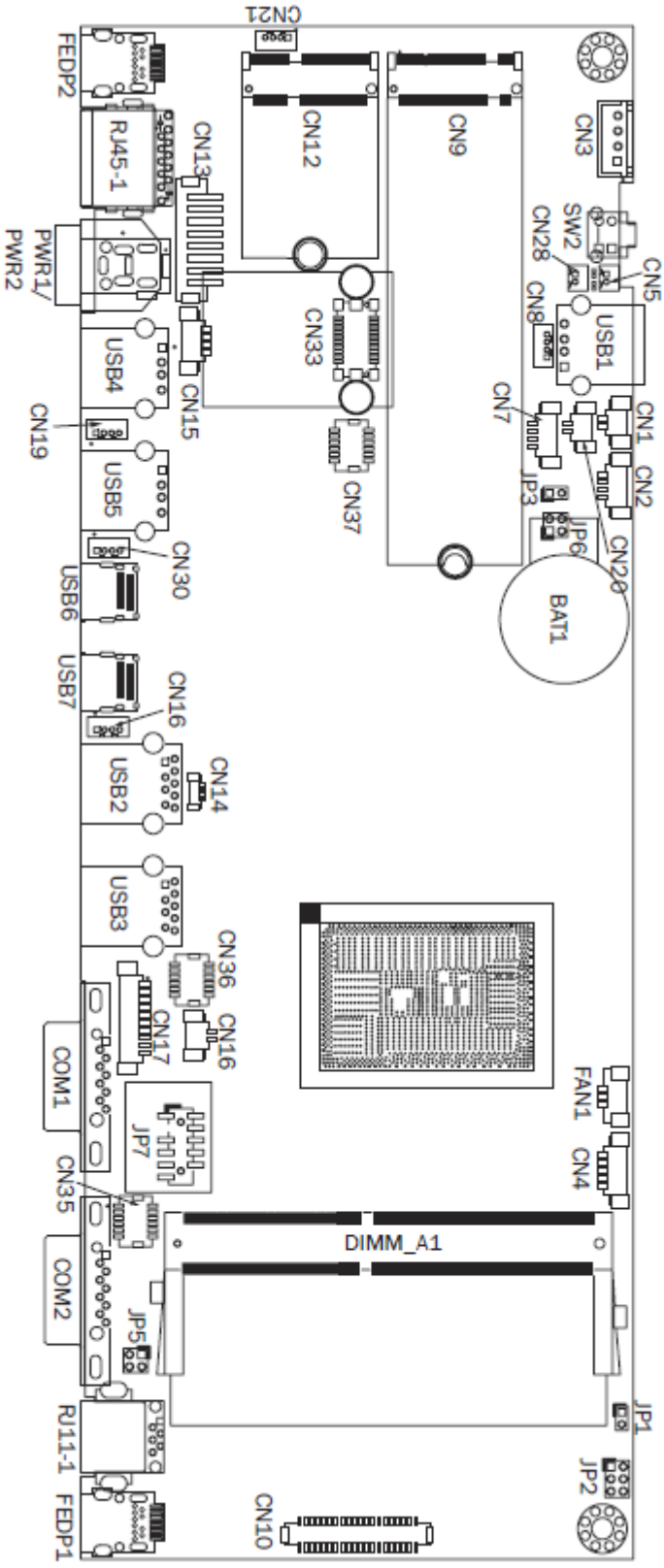
1
2 Jumper open

1
2 Jumper short



6-3. F34 motherboard

6-3-1. Motherboard Layout



6-3-2. Connectors & Functions

Connector	Function
CN1	Speaker R output
CN2	S0/S5 LED & power button connector
CN3	SATA power connector
CN4	EC Debug
CN5	Speaker L output
CN7	Earphone connector
CN8/CN15/CN16/CN19/ CN29/CN30	Internal USB connector
CN9	M.2 M-KEY PCIE/SATA connector
CN10	Internal eDP connector
CN12	M.2 E-KEY WIFI connector
CN13	Wide range & power connector
CN18	Storage LED connector
CN20	Mic-out connector
CN28	RTC battery
CN33	OOB BD connector
CN35/CN36	USB COM BD connector
CN37	USB LAN BD connector
PWR1/PWR2	DC jack (2pin/4pin)
RJ11_1	Cash drawer connector
RJ45_1	LAN connector
SW1/SW2	Power button
DIMM_A1	DDR4 SO-DIMM
FAN1	CPU FAN connector
FeDP1	FeDP main display connector
FeDP2	FeDP 2nd display connector
USB1/USB4/USB5	USB2.0 connector
USB2/USB3	USB3.0 connector
USB6	USB-C data only connector (USB3.0/2.0)
USB7	USB-C data only connector (USB2.0)
COM1/COM2	COM port connector
COM3 (CN17)	Internal COM port connector
JP2	Speaker watt setting
JP3	Audio Line-out setting
JP5	Cash drawer power setting
JP7	TPM BD connector

6-3-3. Jumper Setting

Speaker Watt Setting

Function	JP2
▲L=0.58m	1 3 2 4
L=2.0m	[1] 3 [2] 4
M/B	1 [3] 2 [4]

Audio Line-out Setting

Function	JP3
▲Stereo	[1] [2]
Reserved (line-out)	1 2

Cash Drawer Power Setting

Function	JP5
▲19V	[1] 3 [2] 4
+12V	1 3 2 4

▲ = Manufacturer Default Setting

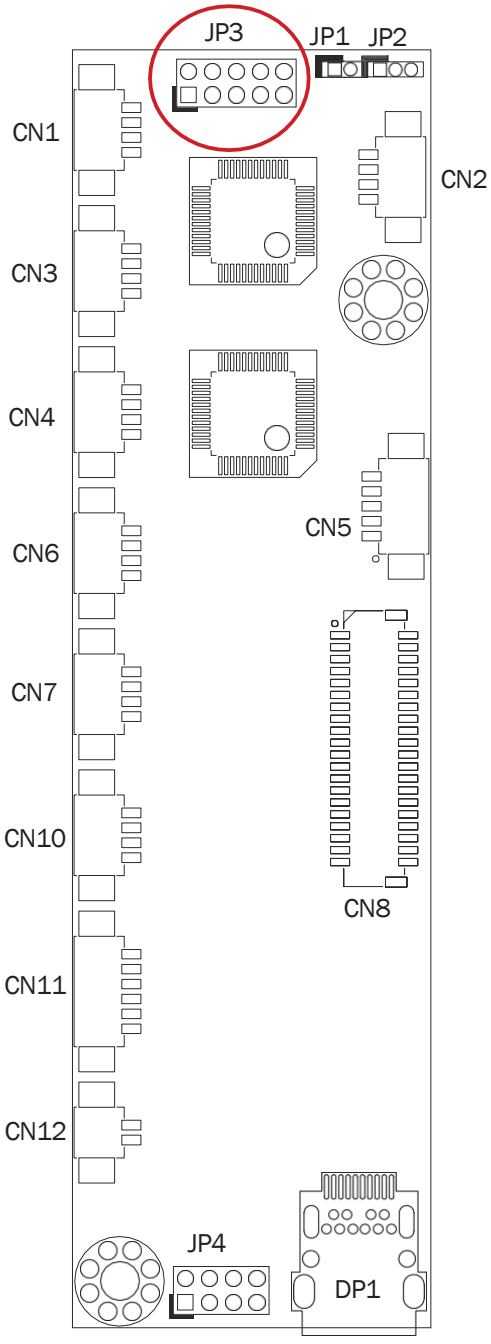
1
2 Jumper open [1]
[2] Jumper short

LCD ID Setting

To set the panel ID, please insert the jumper on the FeDP to LVDS board.

Panel#	Resolution	JP3
0	Reserved	
1	800 x 600	
2	800 x 600	
3	1024 x 768	
4	1024 x 768	
5	1366 x 768	
6	1366 x 768	
7	1024 x 600	
8	1280 x 1024	
9	1440 x 900	
15	1920 x 1080	

1 2 Jumper open 1 2 Jumper short

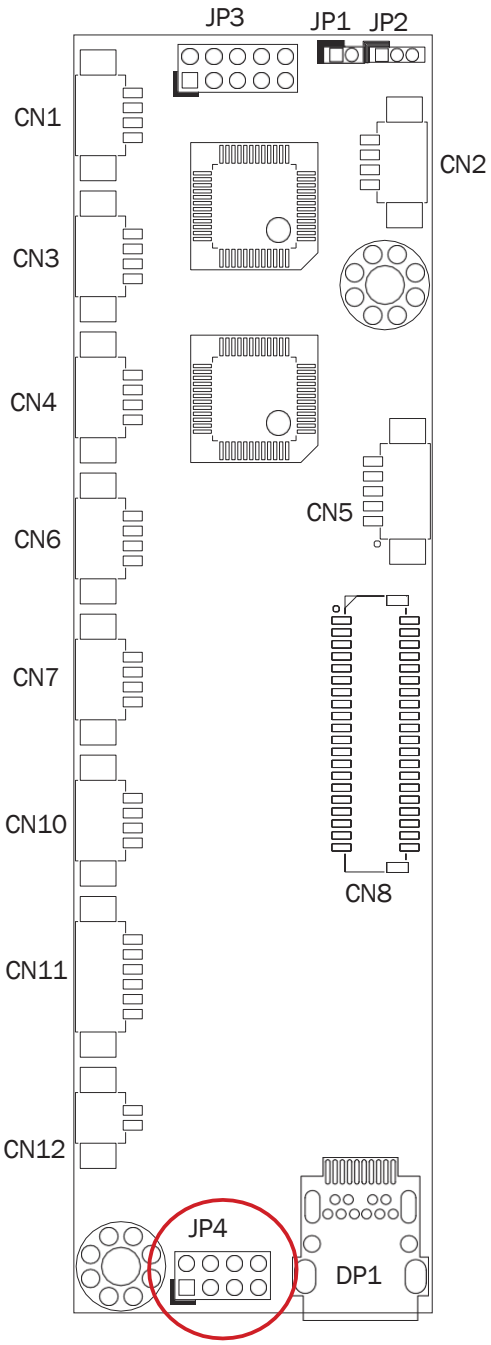


Panel Backlight Current Setting

LED current	JP4
200mA	1 5 7 2 6 8
240mA	1 3 7 2 4 8
280mA	1 3 5 2 4 6
320mA	5 7 6 8
360mA	3 7 4 8
400mA	3 5 4 6
420mA	1 7 2 8
460mA	1 5 2 6
500mA	1 3 5 7 2 4 6 8

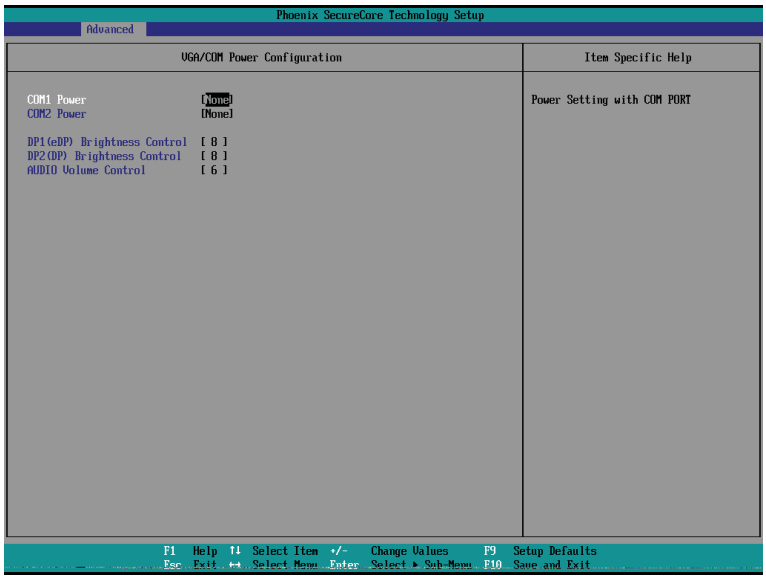
1
2 Jumper open

1
2 Jumper short



COM1/COM2 Power Setting

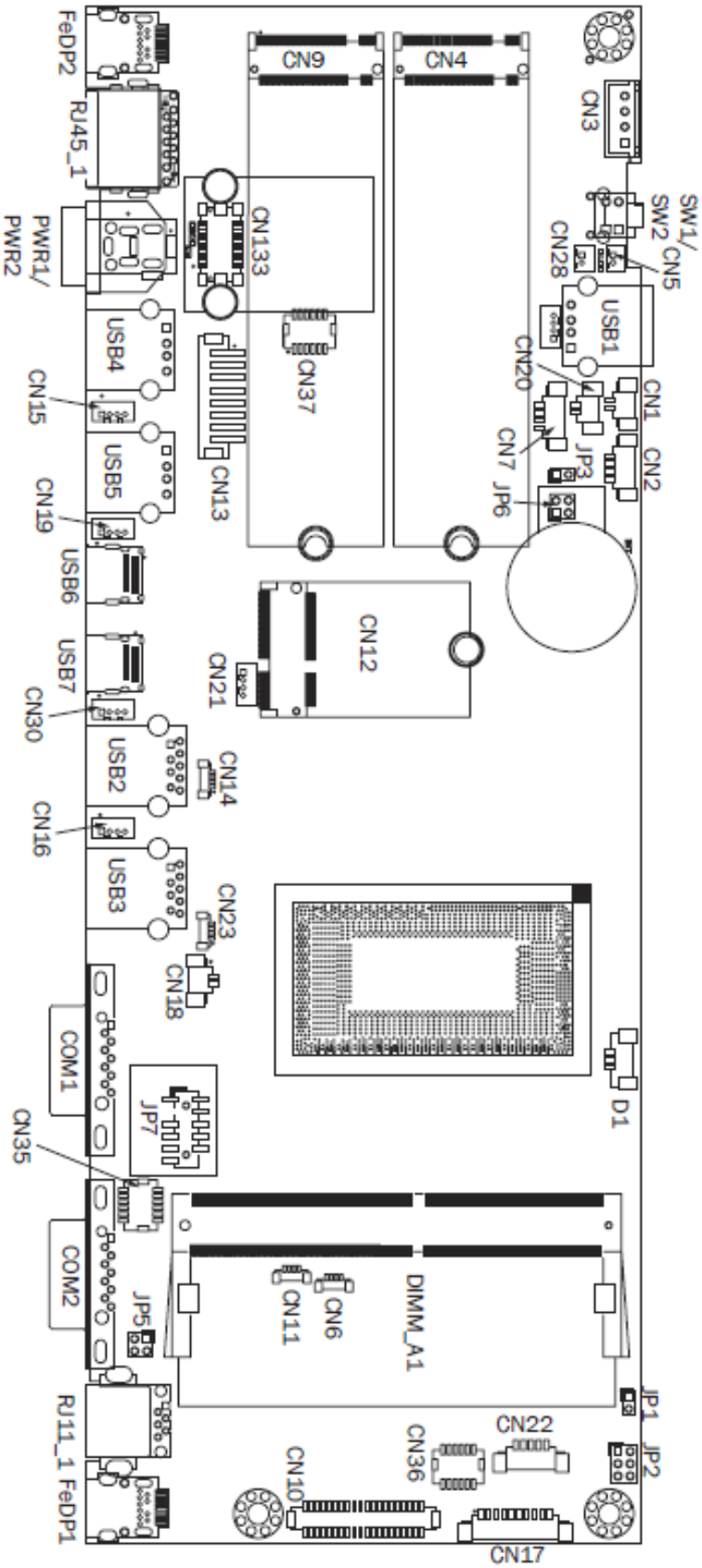
COM1, COM2 can be set to provide power to your serial device.
The voltage can be set to +5V or +12V in the BIOS.



1. Power on the system and press the <DEL> key when the system is booting up to enter the BIOS Setup utility.
2. Select the Advanced tab.
3. Select **VGA/COM Power Configuration** Ports and press <Enter> to go to display the available options.
4. To enable the power, select COM1, COM2 Power setting and press <Enter>. Select Power and press <Enter>. Save the change by pressing F10.

6-4. F84U Motherboard

6-4-1. Motherboard Layout



6-4-2. Connectors & Functions

Connector	Function
CN1	Speaker R connector
CN2	4 pin power button w/2 LED
CN3	SATA power connector
CN4	M.2 SSD key M (CPU PCIE4)
CN5	Speaker L connector
CN7	Audio line out connector
CN9	M.2 SSD key M (PCIE GEN3)
CN10	40 pin eDP connector
CN12	M.2 E-KEY WIFI connector
CN15/16/19/30	Internal USB 2.0 connector
CN16	HDD LED connector
CN17	COM3 connector
CN20	Mic-in connector
CN33	OOB connector
PWR1	DC jack (2 pin) connector
PWR2	DC jack (4 pin) connector
RJ11_1	Cash drawer connector
RJ45_1	LAN connector
SW1/SW2	Power button w/LED
DIMM_A1	DDR4 SO-DIMM
FAN1	CPU FAN connector
FeDP1	FeDP main display connector
FeDP2	FeDP 2nd display connector
USB1/CN8	USB2.0 connector (front USB, option)
USB2/USB3	USB3.0 connector
USB4/USB5	USB2.0 connector
USB6	USB type C
USB7	USB type C (DP/ USB3.0)
COM1/COM2	COM port connector
JP2	Speaker cable setting
JP3	Audio Line-out setting
JP5	Cash drawer power setting
JP7	TPM connector

6-4-3. Jumper Setting

Speaker Cable Setting

Function	JP2
▲L=0.46m~2m (2W)	
On M/B (2W)	
L=0.46m~2m (2W)	
On M/B (3W)	

Audio Line-out Setting

Function	JP3
▲Stereo	
Reserved (line-out)	

Cash Drawer Power Setting

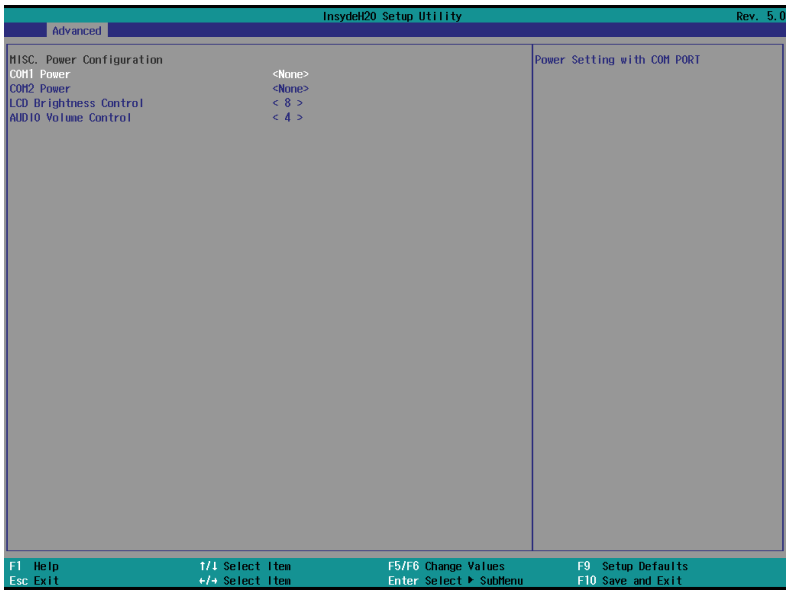
Function	JP5
▲19V	
+12V	

Jumper open Jumper short

▲ = Manufacturer Default Setting

COM1/COM2 Power Setting

COM1, COM2 can be set to provide power to your serial device.
The voltage can be set to +5V or +12V in the BIOS.



1. Power on the system and press the <DEL> key when the system is booting up to enter the BIOS Setup utility.
2. Select the Advanced tab.
3. Select **MISC. Power Configuration** and press <Enter> to go to display the available options.
4. To enable the power, select COM1, COM2 Power setting and press <Enter>. Select Power and press <Enter>. Save the change by pressing F10.