STAR

Bezel-free waterproof
Panel PC

Contents

# WARNING !

1. Please do not remove the caps of waterproof cables unless needed.
2. Waterproof cables must be fastened tightly on the connectors of system.
3. Waterproof cables must be examined by torque wrench, and the torgue must be more than or equal 5kgf-cm.
4. Please align the screw to the system when fasten it.
   Crooked angle should be avoided.
5. Align the screws and fasten them diagonally, just loosely.
   Tighten them until make sure all screws are enable to be fastened correctly to the end.
6. All top cover screws must be examined by torque wrench, and the torgue must be more than or equal 5kgf-cm.
7. If the system error occurred, please turn the power off and unplug it from the power supply before removing system from the water.
8. Please do not unfasten any screw unless the system is clean and completely dry.
9. Please be aware that even one drop of water might carry a risk of damage to the waterproof connectors, make sure to avoid when removing waterproof cables.
10. To avoid causing any damage to the waterproof connectors, using the standard tools are requested.
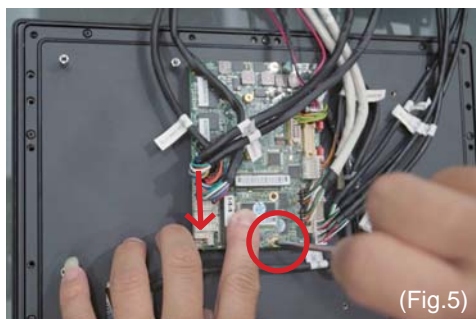
STAR Waterproof Assembly guide
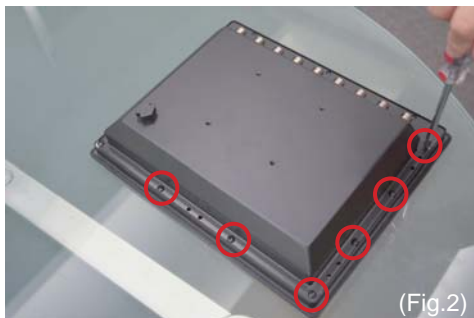
(Fig.1)

(Fig.2)

1. Unscrew thirteen (M2.5*4) screws from the bottom cover and then lift the cover out of the system. (Fig.1)(Fig.2)
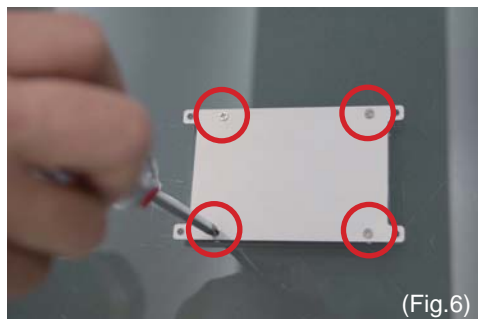

(Fig.3)

45°
(Fig.4)
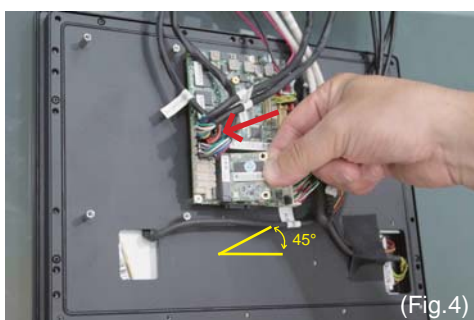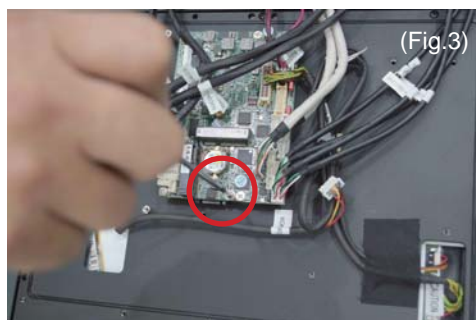
2. Unscrew the(M2*6) screw from the screw thread on motherboard. (Fig.3)

3. Install the mSATA into the connector slot at a 45 degree angle. (Fig.4)

(Fig.5)

4. Push the mSATA down to the motherboard Fasten mSATA with the (M2*6) screw. (Fig.5)

(Fig.6)

(Fig.7)

5. Fasten the HDD on HDD KIT with four (M3*4) screws. (Fig.6)

6. Connect the SATA DATA cable with HDD(Fig.7)

(Fig.8)

(Fig.9)

heat-dissipating holes

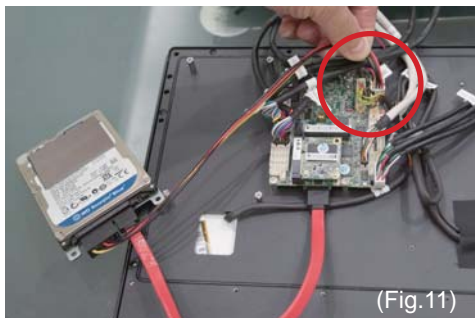7. Connect the SATA Power cable with HDD. (Fig.8)

8. Attach the thermal pad on the HDD and avoid the heat-dissipating holes at the same time. (Fig.9)

(Fig.10)
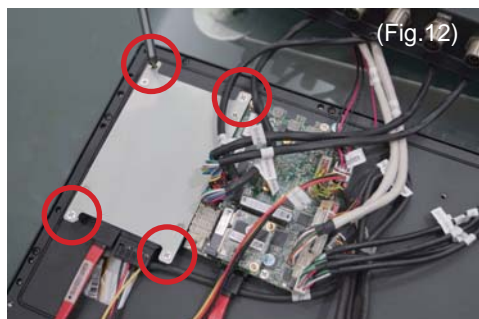

(Fig.11)

9. Connect the SATA DATA cable with motherboard. (Fig.9)
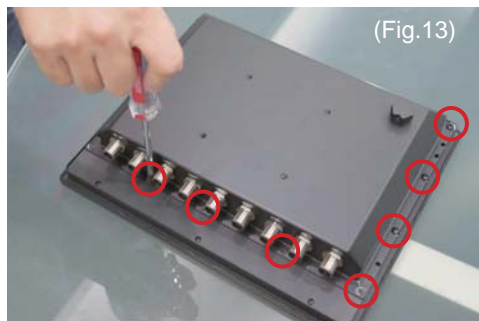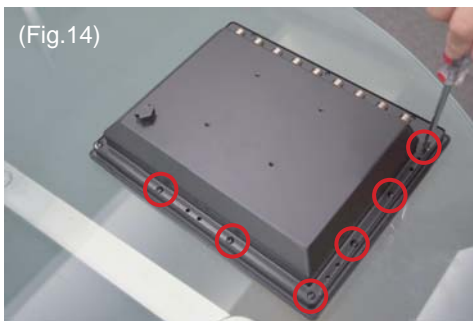
10. Connect the SATA Power cable with motherboard. (Fig.11)

(Fig.12)

11. Screw the HDD KIT back to the system with four (M3*4) screws. (Fig.12)

(Fig.13)

(Fig.14)

12. Unscrew thirteen (M2.5*4) screws from the bottom cover and then lift the cover out of the system. (Fig.13)(Fig.14)

(Fig.15)
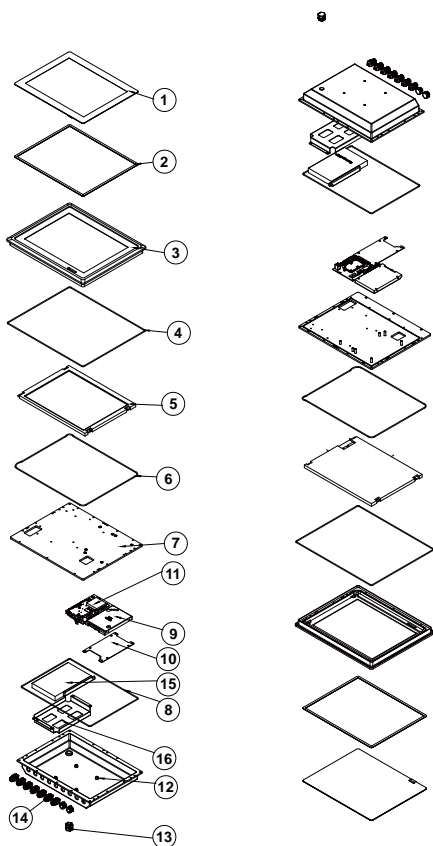

(Fig.16)

13. Remove the waterproof caps. (Fig.15)

14. Plug in the waterproof cables. (Fig.16)

STAR Waterproof Exploded Drawing

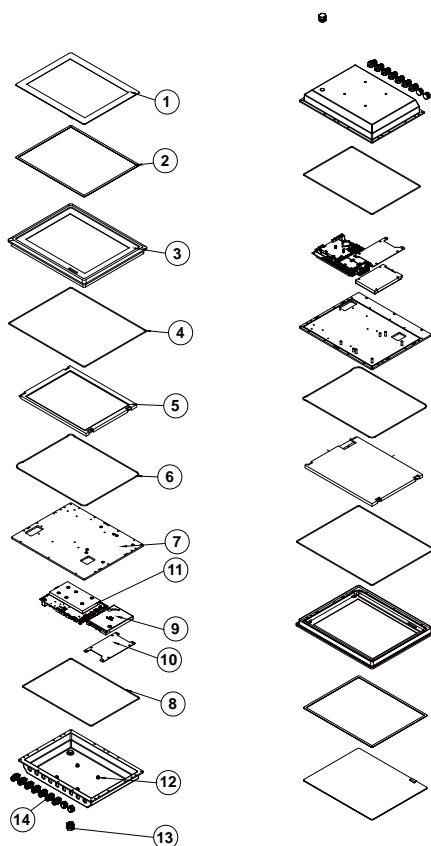**10.4" STAR**

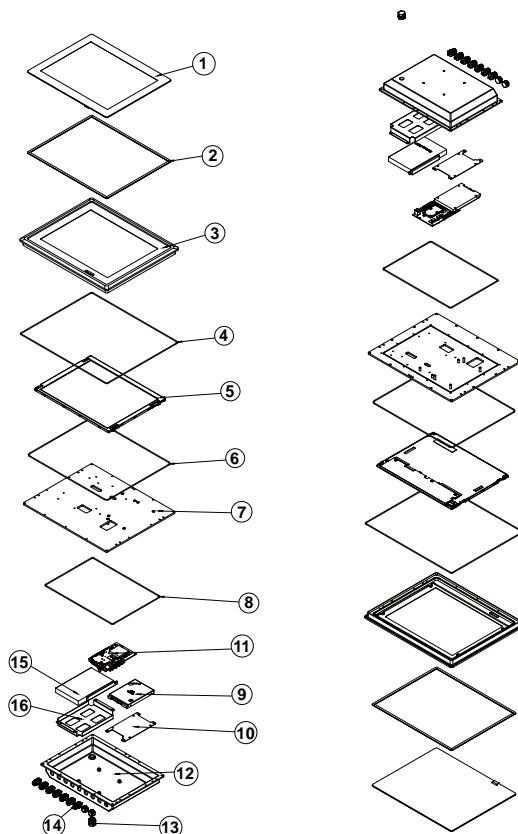| No.	Name	Q'ty	No.	Name	Q'ty
1	10.4" TOUCH 2539	1	9	2.5"HDD	1
2	STAR 10.4,Washer for Touch,LF,t=1.2mm	1	10	STAR 10.4",HDD RACKET,LF,SECC=1.0,MATERIAL	1
3	STAR 10.4",FRONT BEZEL,LF,AL 6063,Black	1	11	2I Mainboard	1
4	STAR 10.4,O-RING FOR FRONT BEZEL-F,L=997MM,Black	1	12	STAR 10.4",BOTTOM COVER-WP,LF,ADC12,Black	1
5	LCD	1	13	WP-VALVE	1
6	STAR 10.4,O-RING FOR FRONT BEZEL-B,L=896MM,Black	1	14	M12 CABLE -WP	X
7	STAR 10.4",CHASSIS-WP,LF,AL=4.0,Black	1	15	BATTERY 2S3P	1
8	STAR 10.4,O-RING FOR CHASSIS,L=846MM,Black	1	16	BATTERY BRACKET	1

STAR Waterproof Exploded Drawing

10.4" STAR

No.	Name	Q'ty	No.	Name	Q'ty
1	10.4" TOUCH 2539	1	8	STAR 10.4,O-RING FOR CHASSIS, L=846MM,Black	1
2	STAR 10.4,Washer for Touch,LF,t=1.2mm	1	9	2.5"HDD	1
3	STAR 10.4",FRONT BEZEL,LF,AL 6063,Black	1	10	STAR 10.4",HDD RACKET,LF,SECC=1.0,MATERIAL	1
4	STAR 10.4,O-RING FOR FRONT BEZEL-F,L=997MM,Black	1	11	3I Mainboard	1
5	LCD	1	12	STAR 10.4",BOTTOM COVER-WP,LF,ADC12,Black	1
6	STAR 10.4,O-RING FOR FRONT BEZEL-B,L=896MM,Black	1	13	WP-VALVE	1
7	STAR 10.4",CHASSIS-WP,LF,AL=4.0,Black	1	14	M12 CABLE -WP	X

STAR Waterproof Exploded Drawing

12.1" STAR

No.	Name	Q'ty	No.	Name	Q'ty
1	12.1" TOUCH 2540	1	9	2.5"HDD	1
2	STAR 12.1,Washer for Touch,LF,t=1.2mm	1	10	STAR 10.4",HDD RACKET,LF,SECC=1.0,MATERIAL	1
3	STAR 12.1",FRONT BEZEL,LF,AL 6063,Black	1	11	2I Mainboard	1
4	STAR 12.1,O-RING FOR FRONT BEZEL-F, L=1159MM,Black	1	12	STAR 10.4",BOTTOM COVER-WP,LF,ADC12,Black	1
5	LCD	1	13	WP-VALVE	1
6	STAR 12.1,O-RING FOR FRONT BEZEL-B, L=1045MM,Black	1	14	M12 CABLE -WP	X
7	STAR 12.1",CHASSIS-WP,LF,AL=4MM,Black	1	15	BATTERY 2S3P	1
8	STAR 10.4,O-RING FOR CHASSIS, L=846MM,Black	1	16	BATTERY BRACKET	1

STAR Waterproof Exploded Drawing

12.1" STAR
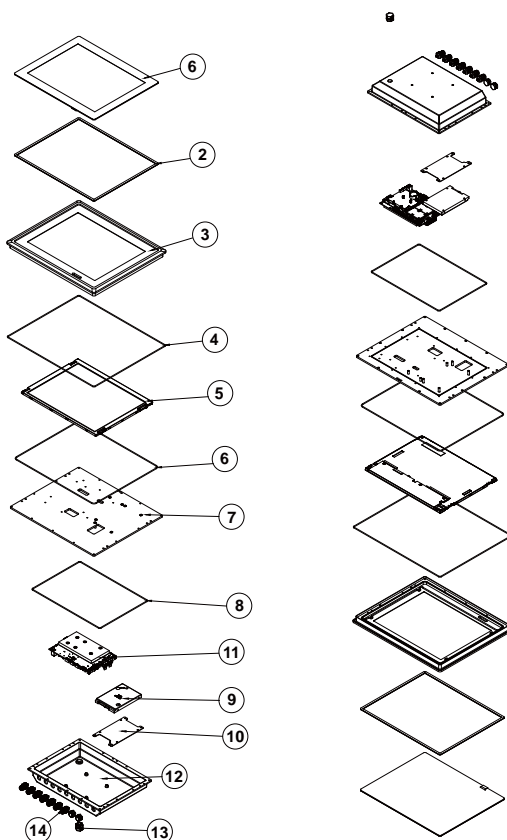
No.	Name	Q'ty	No.	Name	Q'ty
1	12.1" TOUCH 2540	1	8	STAR 10.4,O-RING FOR CHASSIS, L=846MM,Black	1
2	STAR 12.1,Washer for Touch,LF,t=1.2mm	1	9	2.5"HDD	1
3	STAR 12.1",FRONT BEZEL,LF,AL 6063,Black	1	10	STAR 10.4",HDD RACKET,LF,SECC=1.0,MATERIAL	1
4	STAR 12.1,O-RING FOR FRONT BEZEL-F, L=1159MM,Black	1	11	3I Mainboard	1
5	LCD	1	12	STAR 10.4",BOTTOM COVER-WP,LF,ADC12,Black	1
6	STAR 12.1,O-RING FOR FRONT BEZEL-B, L=1045MM,Black	1	13	WP-VALVE	1
7	STAR 12.1",CHASSIS-WP,LF,AL=4MM,Black	1	14	M12 CABLE -WP	X

STAR Waterproof Exploded Drawing

1.1" STAR
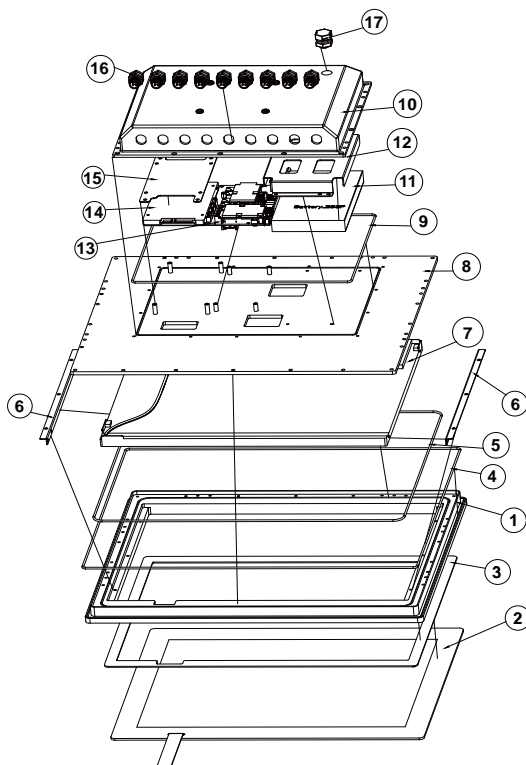
No.	Name	Q'ty	No.	Name	Q'ty
1	Front Cover	1	10	Back Cover	1
2	Touch	1	11	Battery	1
3	Tape	1	12	Battery Bracket	1
4	O-ring Wall Mount	1	13	2I Mainboard	1
5	O-ring Front Cover	1	14	HDD	1
6	Screen Bracket	2	15	HDD Bracket	1
7	Panel	1	16	Waterproof Cable	9
8	Chassis	1	17	WP Valve	1
9	O-ring Back Cover	1			

STAR Waterproof Exploded Drawing

15.1" STAR
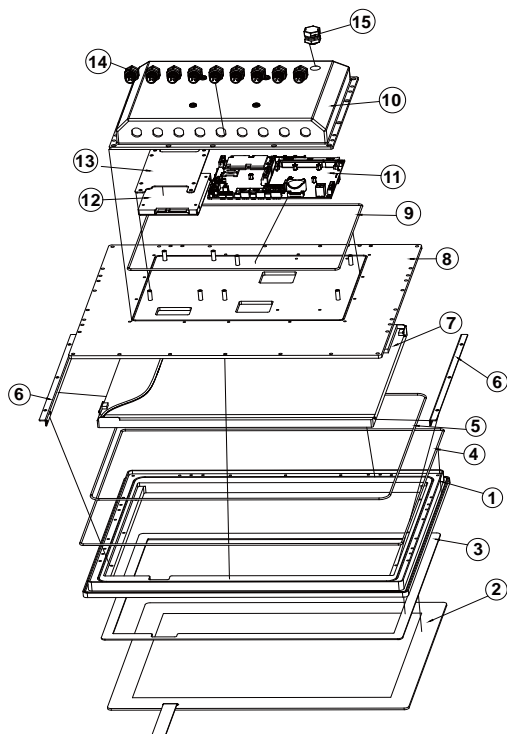
No.	Name	Q'ty	No.	Name	Q'ty
1	Front Cover	1	9	O-ring Back Cover	1
2	Touch	1	10	Back Cover	1
3	Tape	1	11	3I Mainboard	1
4	O-ring Wall Mount	1	12	HDD	1
5	O-ring Front Cover	1	13	HDD Bracket	1
6	Screen Bracket	2	14	Waterproof Cable	9
7	Pane	1	15	WP Valve	1
8	Chassis	1			

IP (International Protection) code- Levels of Protection

IP XX
First digit "X", Protection against solids.

Protection against the contact of external solid bodies and the access to dangerous par

Image	Level	Dimensions of the test material	Description of test condition
	0	—	No protection
	1	>50 mm.	Protect against the access with any large surface of the body, such as the back of a hand, but no protection against deliberate contact with a body part.
	2	>12.5 mm.	Protect against the access with fingers or similar objects.
	3	>2.5 mm.	Protect against the access with tools, thick wires, etc.
	4	>1 mm.	Protect against the access with most wires, screws, etc.
	5	Dust protected	Ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment; omplete protection against contact
	6	Dust tight	No ingress of dust; complete protection against contact

Second digit "X", protection against liquids.
Protection of the equipment inside the enclosure against
harmful ingress of water.

Image	Level	Protected against	Description of protection	Description of test condition
	0	No protection	—	—
	1	Dripping water	Dripping water (vertically falling drops) shall have no harmful effect.	. Test duration: 10 minutes . Water equivalent to 1mm rainfall per minute
	2	Dripping water when tilted up to 15°	Vertically dripping water shall have no harmful effect when the enclosure is tilted at an angle up to 15° from its normal position.	. Test duration: 10 minutes . Water equivalent to 3-5 mm rainfall per minute
	3	Spraying water	Water falling as a spray at any angle up to 60° from the vertical shall have no harmful effect.	. Test duration: 5 minutes . Water volume: 0.7 Litre per minute . Pressure: 80–100 kN/m²
	4	Splashing water	Water splashing against the enclosure from any direction shall have no harmful effect.	. Test duration: 5 minutes . Water volume: 10 litres per minute . Pressure: 80–100 kN/m²

| Image	Level	Protected against	Description of protection	Description of test condition
	5	Water jets	Water projected by a nozzle (6.3mm) against enclosure from any direction shall have no harmful effects.	. Test duration: at least 3 minutes . Water volume: 12.5 litres per minute . Pressure: 30 kN/m² at distance of 3m
	6	Powerful water jets	Water projected in powerful jets (12.5mm nozzle) against the enclosure from any direction shall have no harmful effects.	. Test duration: at least 3 minutes . Water volume: 100 litres per minute . Pressure: 100 kN/m² at distance of 3m
	7	Immersion up to 1 m	Ingress of water in harmful quantity shall not be possible when the enclosure is immersed in water under defined conditions of pressure and time (up to 1 m of submersion).	Test duration: 30 minutes Immersion at depth of 1m
	8	Immersion beyond 1 m	The equipment is suitable for continuous immersion in water under conditions, which shall be specified by the manufacturer. Normally, this will mean that the equipment is hermetically sealed. However, with certain t ypes of equipment, it can mean that water can enter butonly in such a manner that it produces no harmful effects.	. Test duration: continuous immersion in water . Depth specified by manufacturer

Introduction of necessary tools

Adjustable ratcheting wrench (No. 21)		Purpose
		If the waterproof connectors are damaged, oxidized or obsoleted, vse it to unfasten them.
Torque wrench		**Purpose**
		To examine if the torque of each waterproof connectors, are more than 5kgf-cm.
Torque screwdriver		**Purpose**
		To examine the torque of each upper cover screws are more than 5kgf-cm.

IP66 Packing list
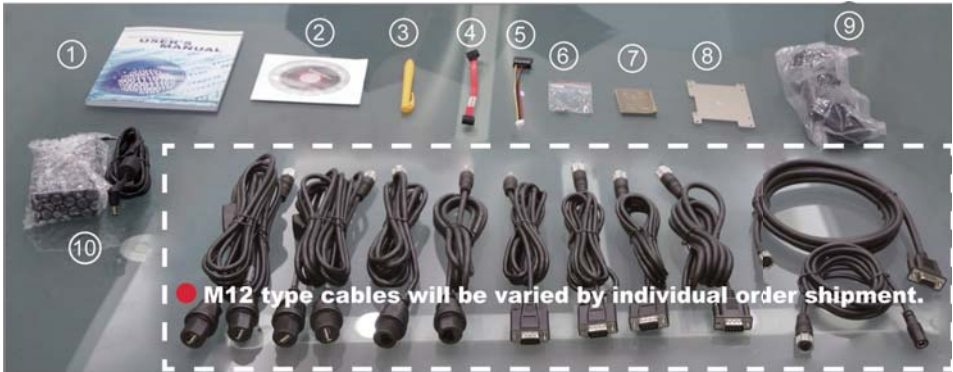
● M12 type cables will be varied by individual order shipment.

	Material Code	Description	Detail Specification
1	by order	Manual	LF,M/B
2	6G8006-2349-0100	DVD-R	
3	6G9053-0001-0100	Touch Pen	LF,#9011
4	6G6001-2202-0100	SATA DATA Cable (Red,90°)	LF,L=15cm
5	6G6003-1006-0100	SATA Power Cable	LF,L=15cm,SATA to 2.0/1*4
6	Z0028-0004	Screw Package	S3*4 SIO NI*10
7	6G7800-6042-0100	Thermal Pad	LF,60*42.5*3mm
8	6G3623-3501-0000	Waterproof P-PC,HDD Kit	LF,AL=1.6,Material
9	6G6005-3901-0100	Power Cord	LF,King Cord
10	6G5212-0603-0200	60W Power Adapter,12V/5A,2.5Ø	LF,L Type(B043),FSP

IP67 Packing list

|	Material Code	Description	Detail Specification
1	by order	Manual	LF,M/B
2	6G8006-2349-0100	DVD-R	
3	6G9053-0001-0100	Touch Pen	LF,#9011
4	6G6005-3901-0100	Power Cord	LF,King Cord
5	6G5212-0603-0200	60W Power Adapter,12V/5A,2.5Ø	LF,L Type(B043),FSP

Difference of Waterproof cables

4 PIN	**POWER**	
8 PIN	**USB**	**LAN**
12 PIN	**COM**	**VGA**
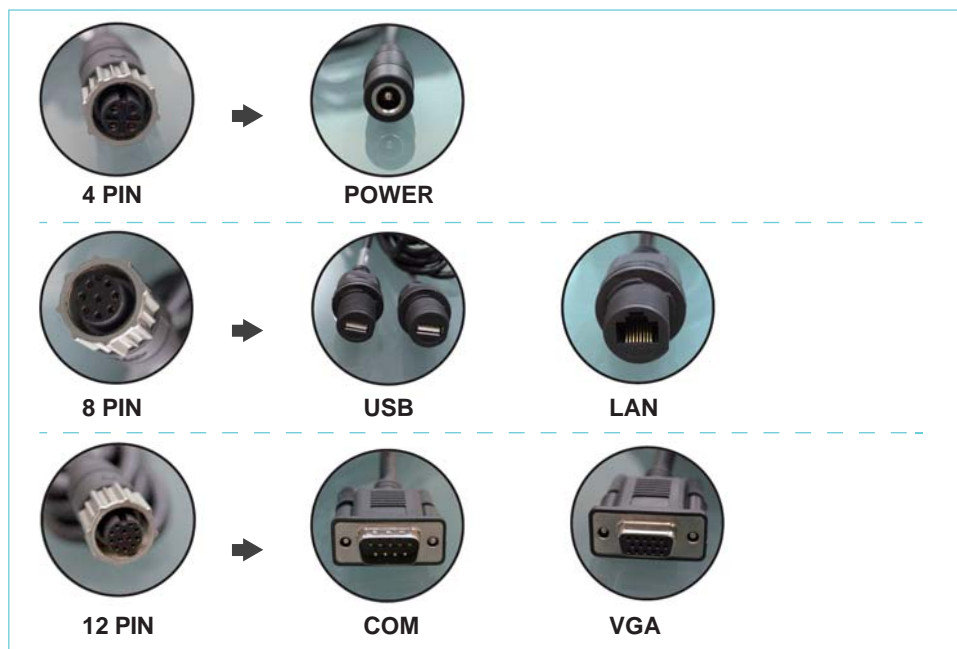
I/O Connector Pinouts

LAN Connector

PIN NO.	Description	PIN NO.	Description
1	TR0-/TX-	5	TR1-/RX+
2	TR0+/TX+	6	TR2-/NC-
3	TR2+/NC	7	TR3-/NC
4	TR1+/RX-	8	TR3+/NC
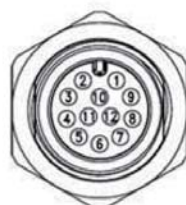
Pin Assignments Front View

VGA Connector

PIN NO.	Description	PIN NO.	Description
1	BULE	2	GND
3	GND	4	DDC CLOCK
5	GREEN	6	V-SYNC
7	GND	8	H-SYNC
9	RED	10	DDC DATA

Pin Assignments Front View

COM Connector

PIN NO.	Description	PIN NO.	Description
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RI/VOLTAGE	10	+5V
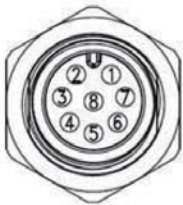
Pin Assignments Front View

USB Connector

Pin Assignments Front View

PIN NO.	Description	PIN NO.	Description
1	+5V	5	+5V
2	USB DATA -	6	USB DATA -
3	USB DATA +	7	USB DATA +
4	GND	8	GND

PW Connector

Pin Assignments Front View

PIN NO.	Description
1	DC-IN(12V)
2	GND
3	DC-IN(12V)
4	GND

STAR

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