# Stainless Panel PC
## Assembly Guide

# 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,
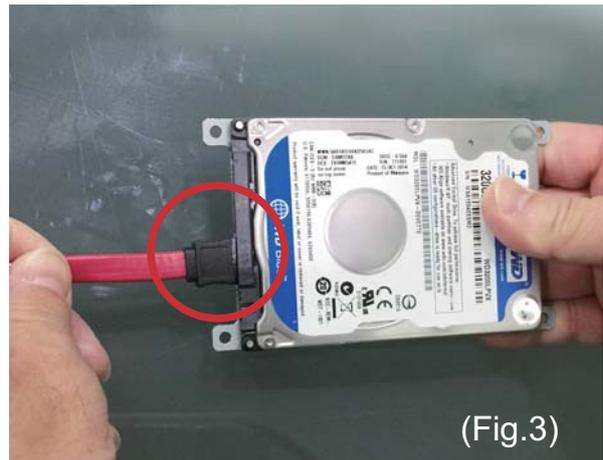    using the standard tools are requested.

# 1-1 Stainless Waterproof Panel PC Assembly for SATA HDD Version
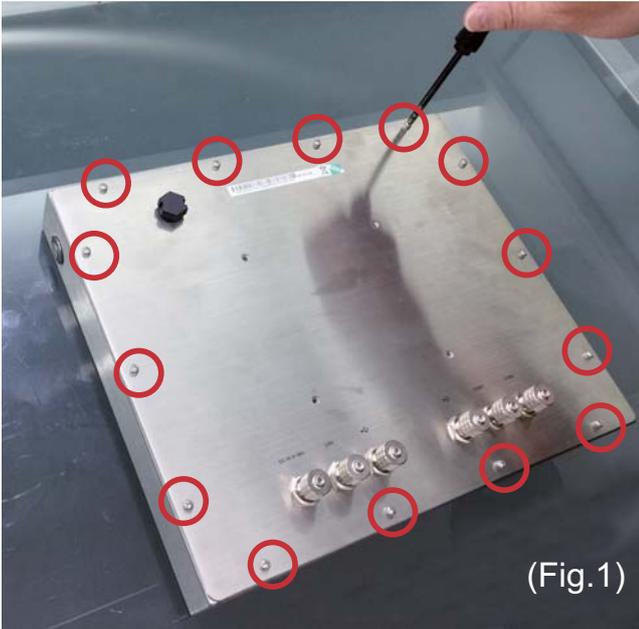

(Fig.1)

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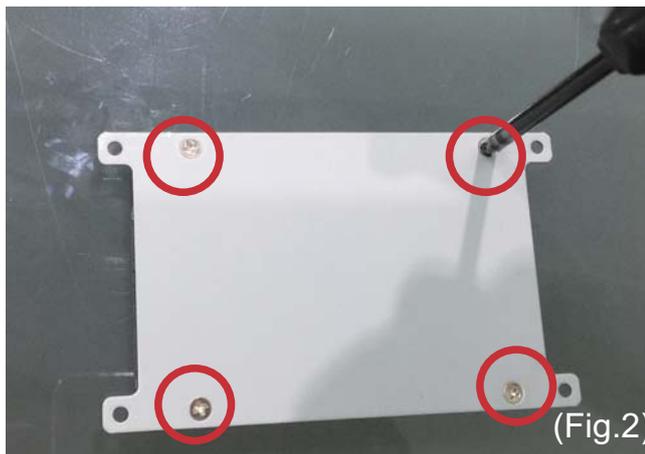

(Fig.2)


(Fig.3)

2. Fasten the HDD on HDD KIT with four (M3*4) screws. (Fig.2)
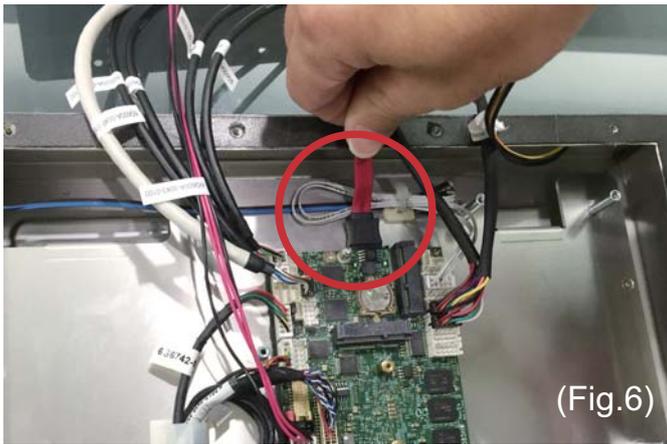
3. Connect the SATA DATA cable with HDD(Fig.3)


(Fig.4)


(Fig.5)
heat-dissipating holes

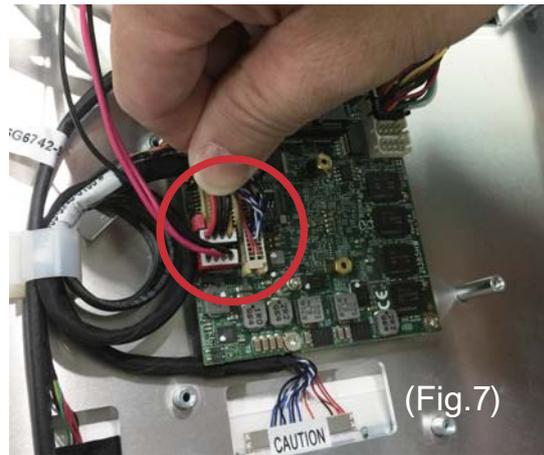4. Connect the SATA Power cable with HDD. (Fig.4)

5. Attach the thermal pad on the HDD and avoid the heat-dissipating holes at the same time. (Fig.5)

(Fig.6)

6. Connect the SATA DATA cable with motherboard. (Fig.6)


(Fig.7)

7. Connect the SATA Power cable with motherboard. (Fig.7)
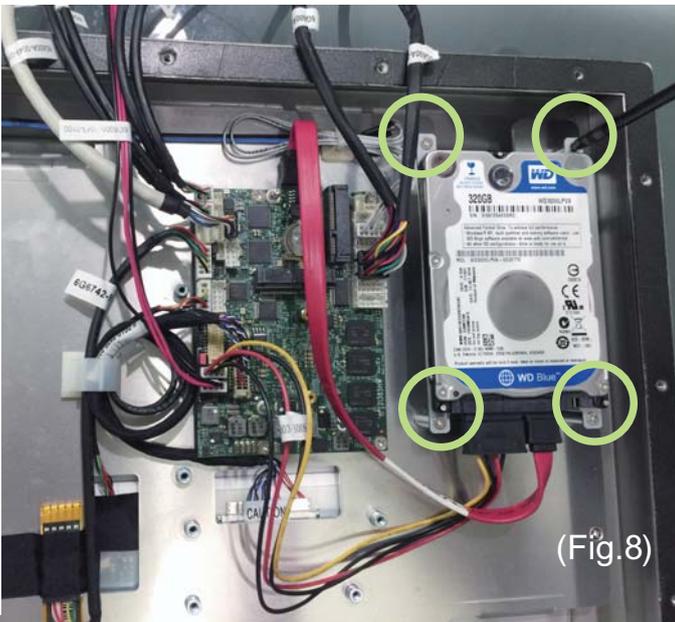

(Fig.8)

8. Screw the HDD KIT back to the system with four (M3*4) screws. (Fig.8)

# 1-2 Installing for Mini PCI-e Card


(Fig.9)

9. Unscrew the(M2*6) screw from the screw thread on motherboard. (Fig.9)


(Fig.10)

10. Install the mSATA into the connector slot at a 45 degree angle. (Fig.10)
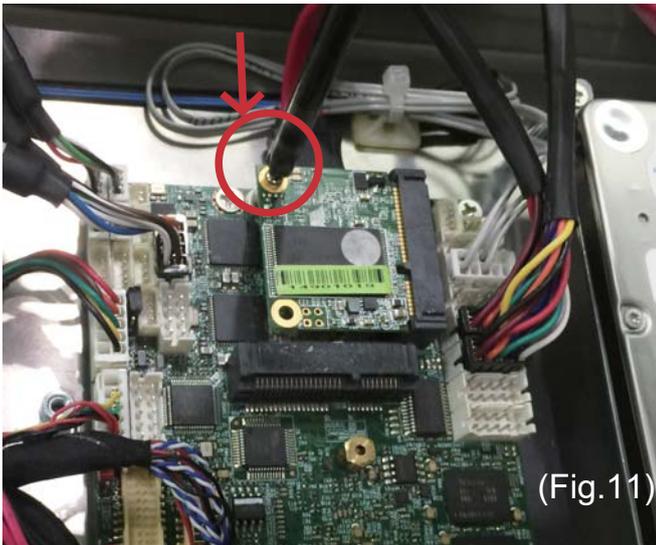

(Fig.11)

11. Push the mSATA down to the motherboard Fasten mSATA with the (M2*6) screw.  (Fig.11)

# 1-3 Installing for Mini PCI-e Card (Full Size)


(Fig.12)

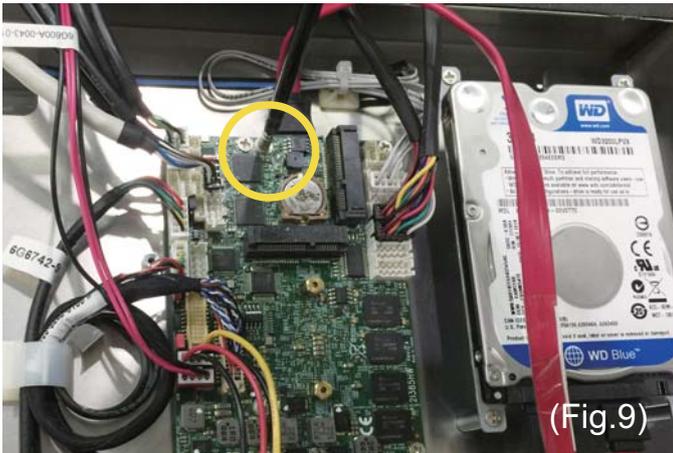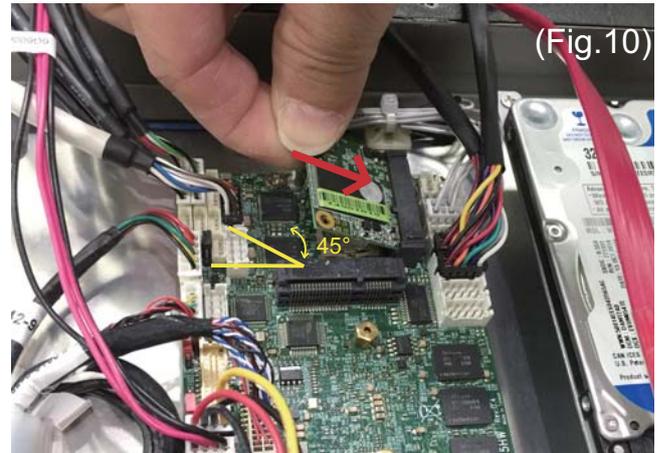12. Unscrew the(M2*6) screw from the screw thread on motherboard. (Fig.12)
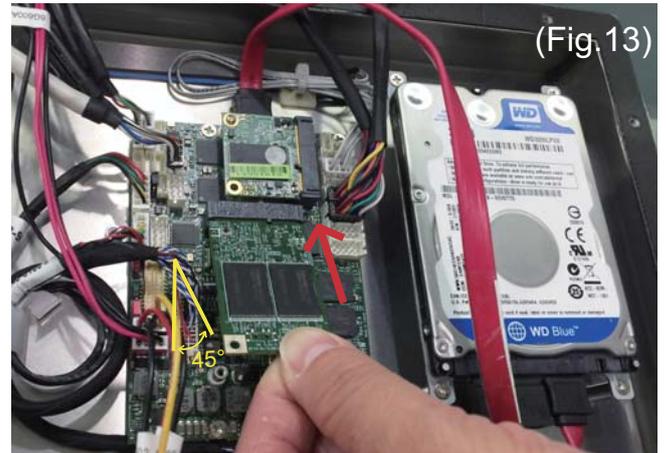

(Fig.13)

13. Install the mSATA into the connector slot at a 45 degree angle. (Fig.13)


(Fig.14)

14. Push the mSATA down to the motherboard Fasten mSATA with the (M2*6) screw.(Fig.14)
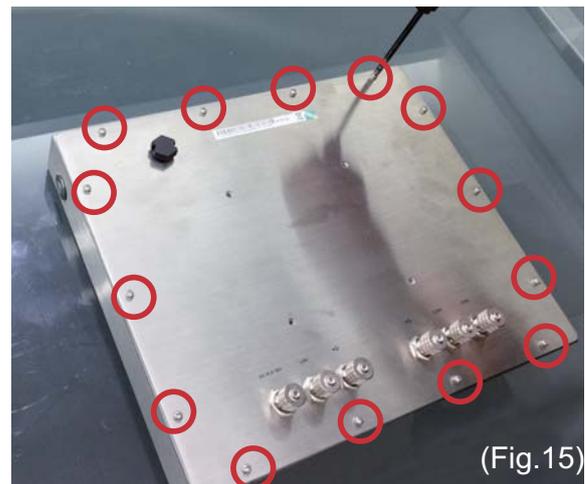

(Fig.15)

15. fasten fourteen flat-headed (M2.5*4)screws to the bottom cover. (Fig.15)


(Fig.16)

16. Remove the waterproof caps. (Fig.16)


(Fig.17)

17. Plug in the waterproof cables. (Fig.17)

# Stainless 10.4" Waterproof Panel PC Exploded Drawing

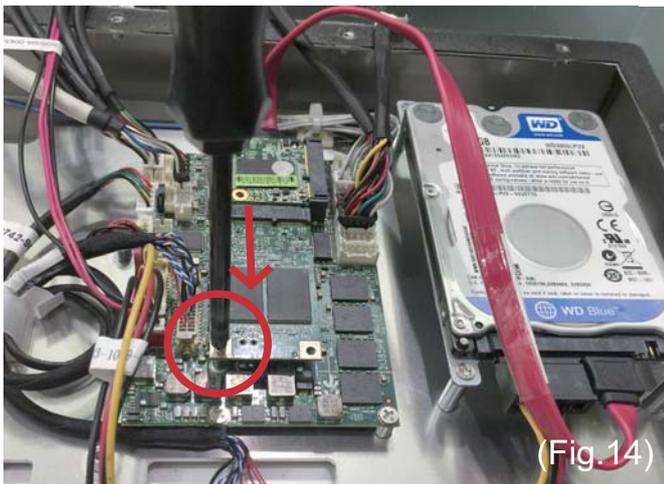| No. | Name | Q'ty |
|-----|------|------|
| 1 | 10.4_TOUCH_MBKT226 | 1 |
| 2 | SPONGE_10-4_MBKT226 | 1 |
| 3 | G104X1-L03 | 1 |
| 4 | SHARK-S_10-4_FC-TBSOR_ASSY | 1 |
| 5 | S57M-9018X | 1 |
| 6 | VESA MOUNT KIT(OPTION) | 1 |
| 7 | SPONGE_SHARK-S_10-4_BT-COVER | 1 |
| 8 | SPONGE_G104X1-L03 | 3 |
| 9 | SHARK-S_10-4_CHASSIS | 1 |

| No. | Name | Q'ty |
|-----|------|------|
| 10 | 10-1_PPC_HDD_BKT_SMALL (OPTION) | 1 |
| 11 | 2.5"HDD (OPTION) | 1 |
| 12 | 2.5" MB | 1 |
| 13 | PW405 (OPTION) | 1 |
| 14 | BATTERY (OPTION) | 1 |
| 15 | BATTERY BRACKET (OPTION) | 1 |
| 16 | SHARK-S_10-4_BT-COVER-TBSOR-NUT | 1 |
| 17 | WATERPROOF VALVE Black.A-IVD12B110A-(M12*1.5) | 1 |
| 18 | M12 CABLE WATER PROOF(OPTION) | 6 |
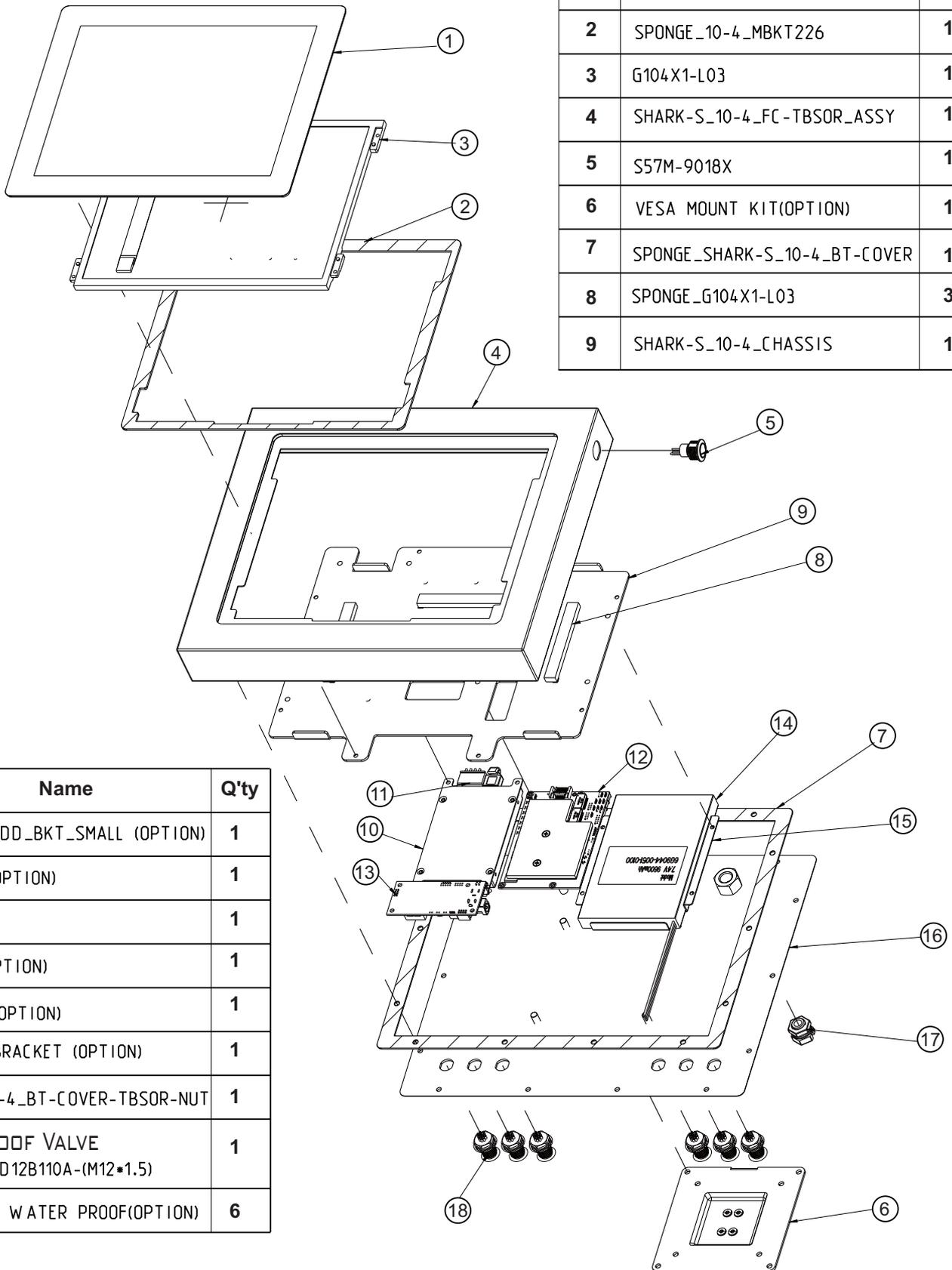
# Stainless 15.1" Waterproof Panel PC Exploded Drawing

| No. | Name | Q'ty |
|-----|------|------|
| 1 | 15_TOUCH_MBKT227 | 1 |
| 2 | SPONGE_15_MBKT227 | 1 |
| 3 | G150XTN06V0 | 1 |
| 4 | SHARK-S_15_FC-TBSOR_ASSY | 1 |
| 5 | S57M-9018X | 1 |
| 6 | SPONGE_SHARK-S_15_BT-COVER | 1 |
| 7 | SPONGE_G1150XTN06V0 | 3 |
| 8 | SHARK-S_15_CHASSIS | 1 |

| No. | Name | Q'ty |
|-----|------|------|
| 9 | 10-1_PPC_HDD_BKT_SMALL (OPTION) | 1 |
| 10 | 2.5"HDD (OPTION) | 1 |
| 11 | 3.5" MB | 1 |
| 12 | 2.5" MB | 1 |
| 13 | PW405 (OPTION) | 1 |
| 14 | BATTERY (OPTION) | 1 |
| 15 | BATTERY BRACKET (OPTION) | 1 |
| 16 | SHARK-S_15_BT-COVER-TBSOR-9HOLE | 1 |
| 17 | WATERPROOF VALVE Black.A-IVD12B110A-(M12*1.5) | 1 |
| 18 | M12 CABLE WATER PROOF(OPTION) | 9 |
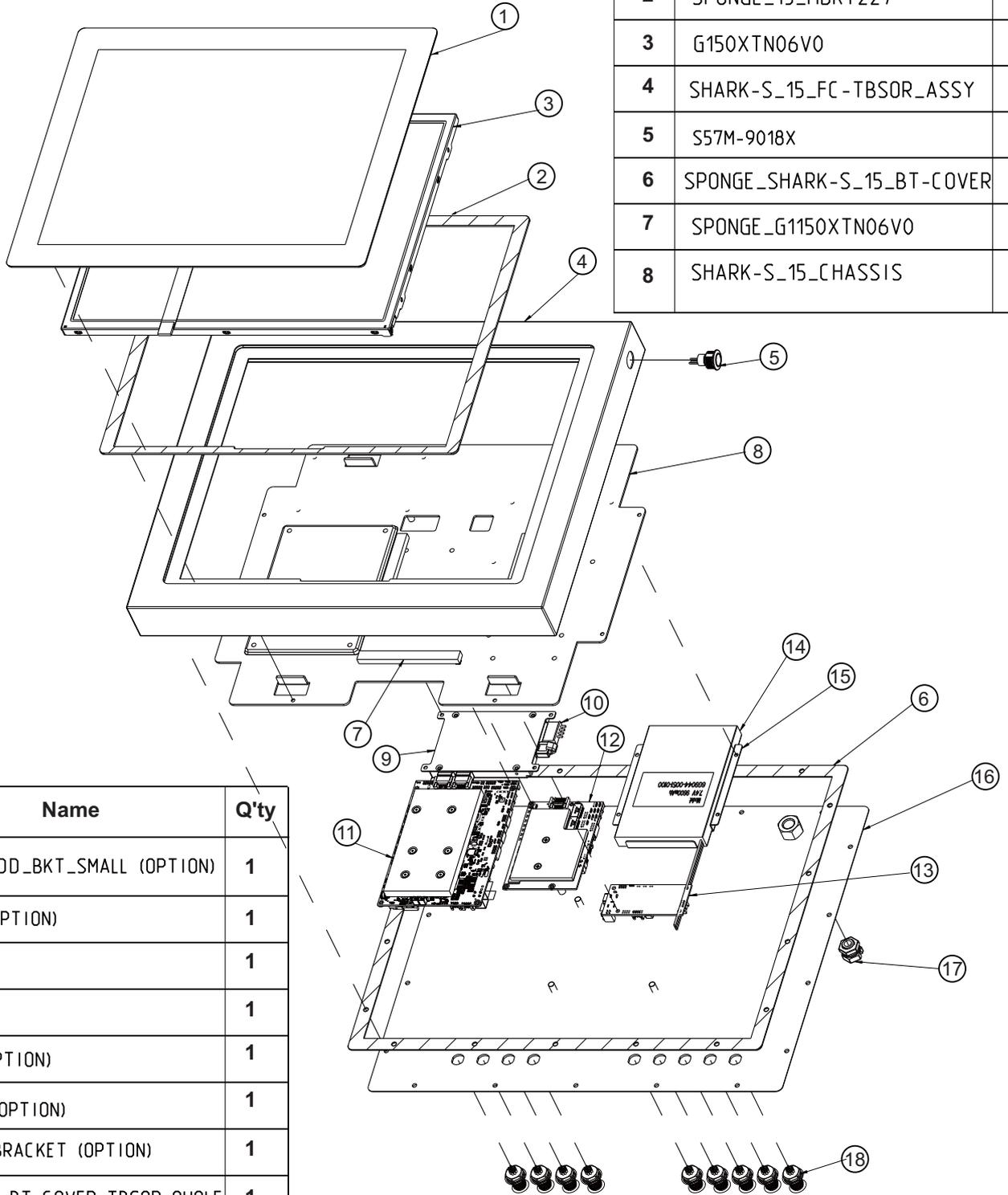
# Stainless 19" Waterproof Panel PC
# Exploded Drawing
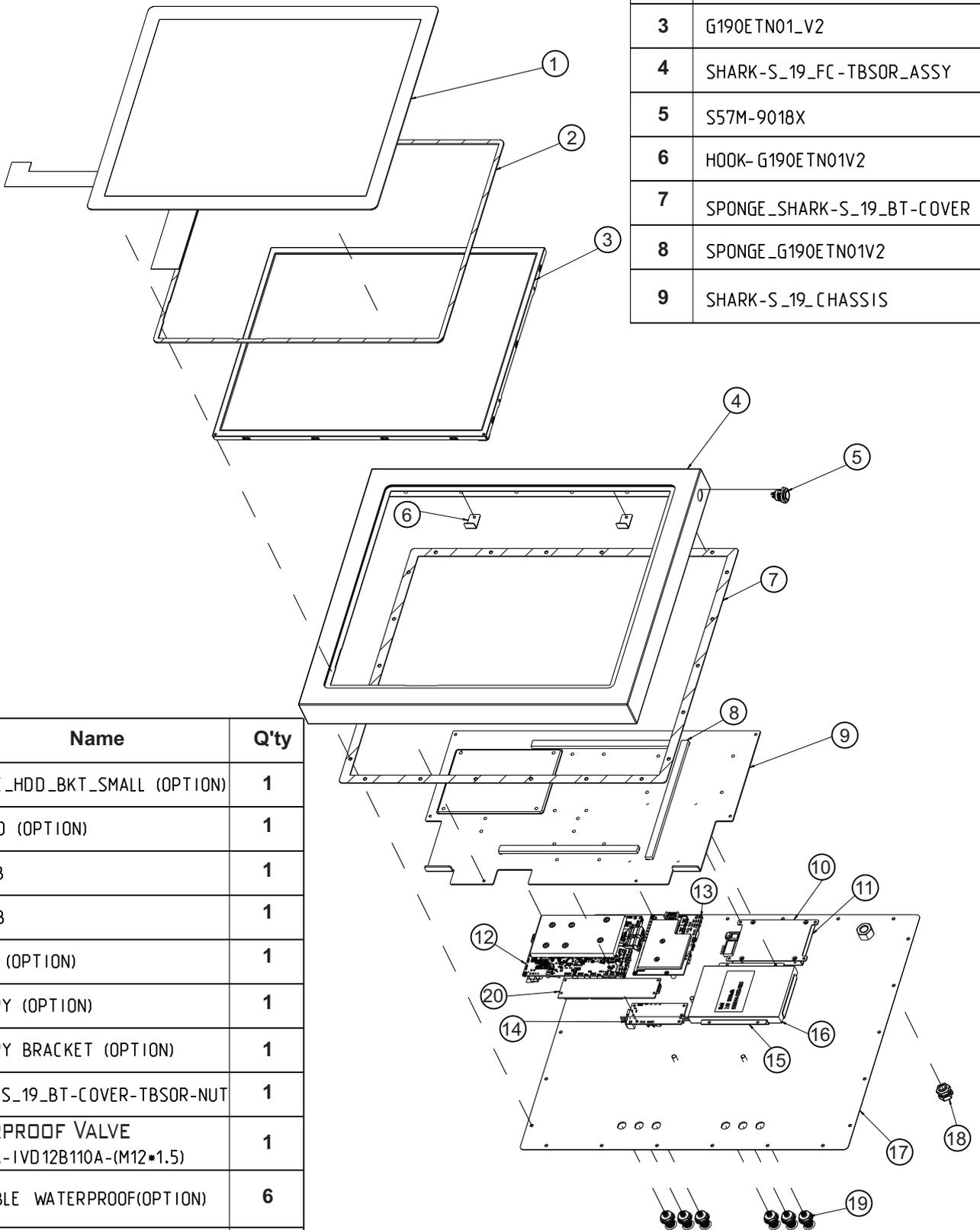
| No. | Name | Q'ty |
|---|---|---|
| 1 | 19_TOUCH JMT190BM | 1 |
| 2 | SPONGE_19_JMT190BM | 1 |
| 3 | G190ETN01_V2 | 1 |
| 4 | SHARK-S_19_FC-TBSOR_ASSY | 1 |
| 5 | S57M-9018X | 1 |
| 6 | HOOK-G190ETN01V2 | 2 |
| 7 | SPONGE_SHARK-S_19_BT-COVER | 1 |
| 8 | SPONGE_G190ETN01V2 | 3 |
| 9 | SHARK-S_19_CHASSIS | 1 |

| No. | Name | Q'ty |
|---|---|---|
| 10 | 10-1_PPC_HDD_BKT_SMALL (OPTION) | 1 |
| 11 | 2.5"HDD (OPTION) | 1 |
| 12 | 3.5" MB | 1 |
| 13 | 2.5" MB | 1 |
| 14 | PW405 (OPTION) | 1 |
| 15 | BATTERY (OPTION) | 1 |
| 16 | BATTERY BRACKET (OPTION) | 1 |
| 17 | SHARK-S_19-BT-COVER-TBSOR-NUT | 1 |
| 18 | WATERPROOF VALVE Black.A-IVD12B110A-(M12*1.5) | 1 |
| 19 | M12 CABLE WATERPROOF(OPTION) | 6 |
| 20 | JMT_TOUCH_BOARD_215BE-003 | 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 |
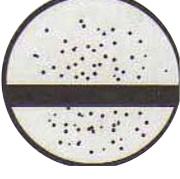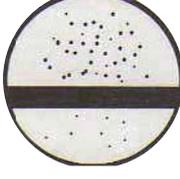
**Second digit "X", protection against liquids.**
**Protection of the equipment inside the enclosure against**
**harmful ingress of water.**

| 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<br>. 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<br>. 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<br>. Water volume: 0.7 Litre per minute<br>. 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<br>. Water volume: 10 litres per minute<br>. 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<br>. Water volume: 12.5 litres per minute<br>. 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<br>. Water volume: 100 litres per minute<br>. 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<br>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<br>. 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. |

# Packing list



● **M12 type cables will be varied by individual order shipment.**
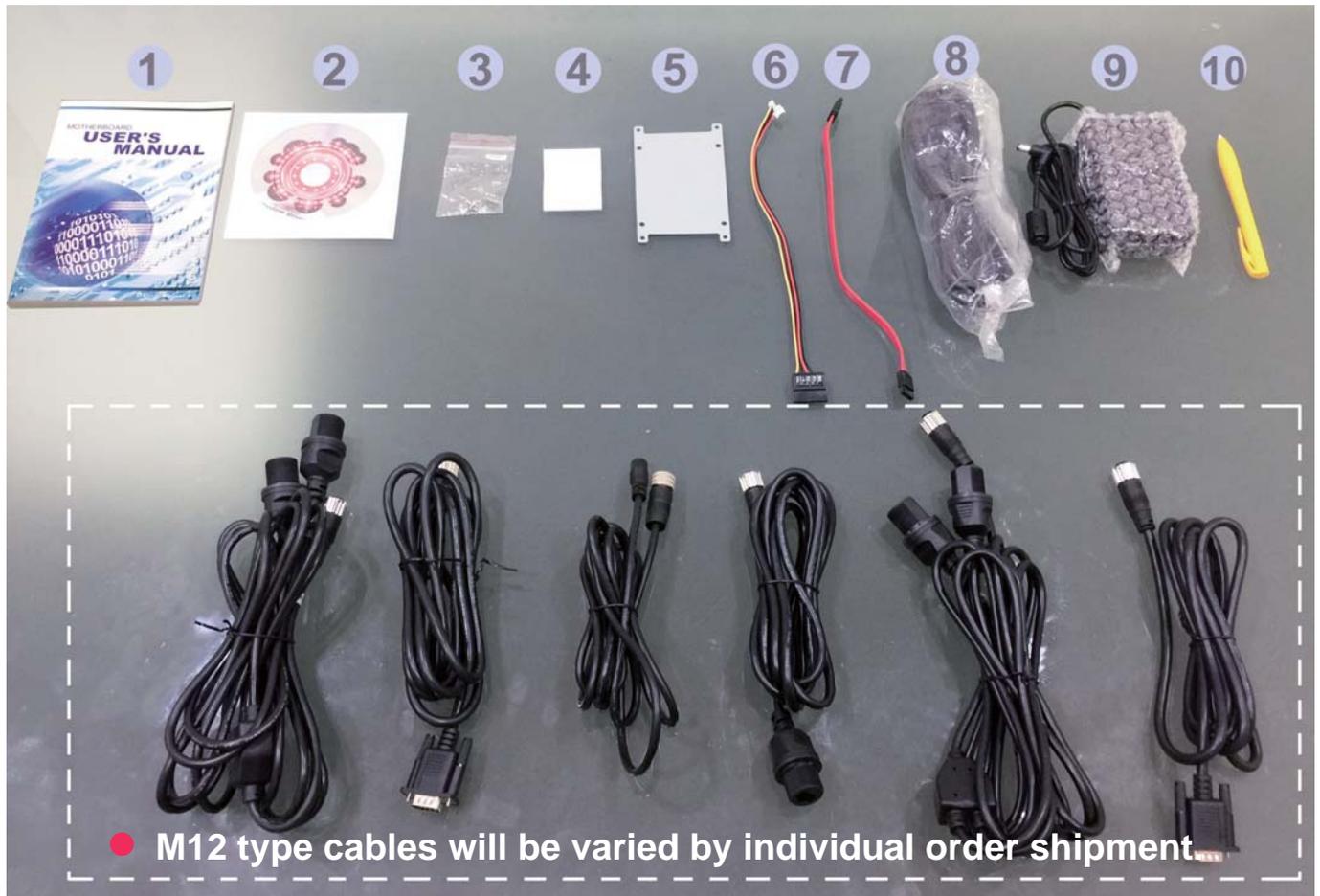
| | Material Code | Description | Detail Specification |
|---|---|---|---|
| 1 | by order | Manual | LF,M/B |
| 2 | 6G8006-2349-0100 | DVD-R | |
| 3 | Z0028-0006 | Screw Package | S3*4 SIO NI*4 |
| 4 | 6G7800-3045-0100 | Thermal Pad | LF,30*45*5mm |
| 5 | 6G3A64-3001-0000 | STAR10.4",HDD Bracket, | LF,SECC=1.0,Material |
| 6 | 6G6003-1009-0100 | SATA Power Cable | LF,L=25cm,1*5/2.0 to 180° SATA 15p |
| 7 | 6G6001-2203-0100 | SATA DATA Cable (Red | LF,L=25cm |
| 8 | KG000-0001 | Power Cord | LF,Feature |
| 9 | 6G5212-0620-0100 | 60W Power Adapter,12V/5A,2.5Ø | LF,L Type,FSP060-DIBAN2,FSP |
| 10 | 6G9053-0001-0100 | Touch Pen | LF,#9011 |

# Difference of Waterproof cables



| 4 PIN | ➡ | POWER | | |
| 8 PIN | ➡ | USB | | LAN |
| 12 PIN | ➡ | COM | | VGA |
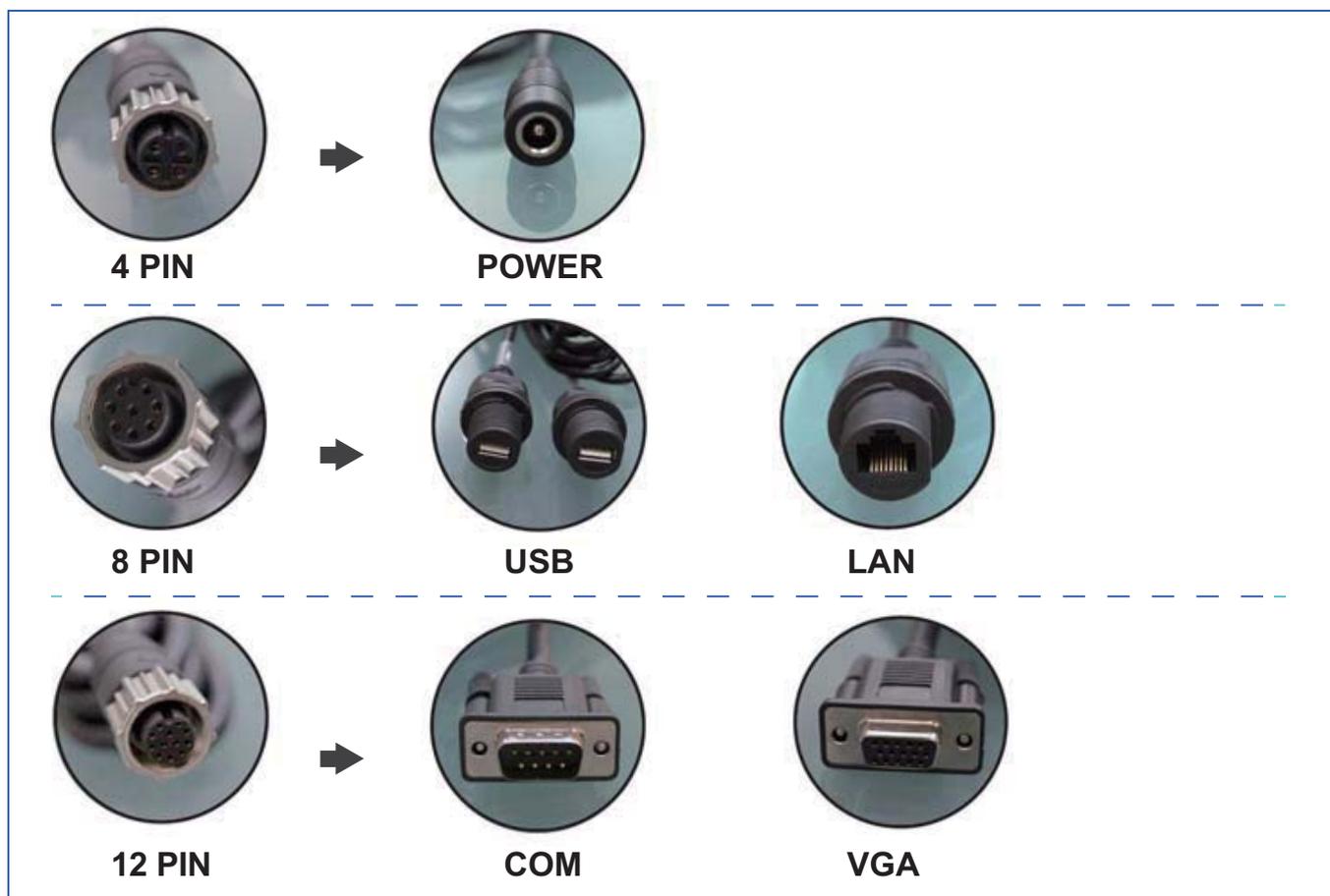
# I/O Connector Pinouts
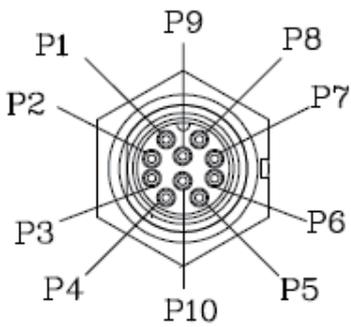






## LAN Connector

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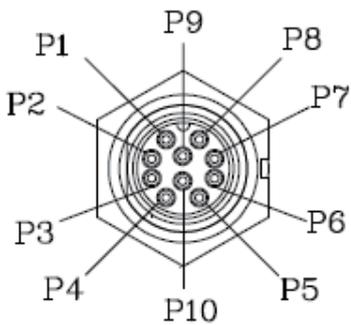


## VGA Connector

| 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 |
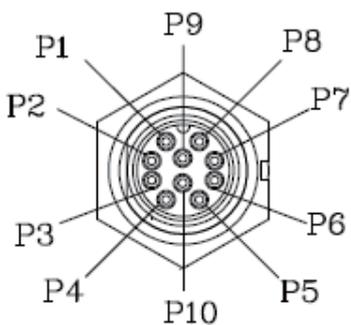


## COM Connector

| 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 |
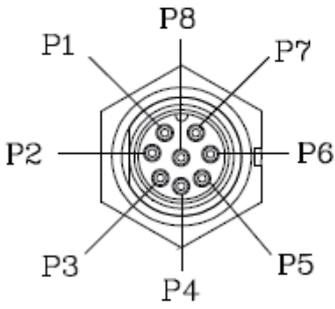
## USB Connector



| PIN NO. | Description | PIN NO. | Description |
|---------|-------------|---------|-------------|
| 1 | +5V | 1 | +5V |
| 2 | USB DATA - | 2 | USB DATA - |
| 3 | USB DATA + | 3 | USB DATA + |
| 4 | GND | 4 | GND |
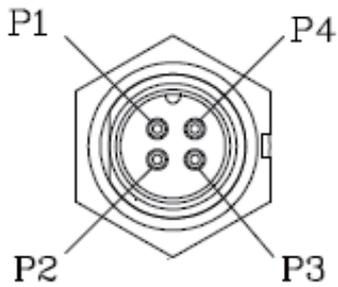
## PW Connector



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