

Alpha-4L

Direct Thermal

Mobile Barcode Printers



Service Manual

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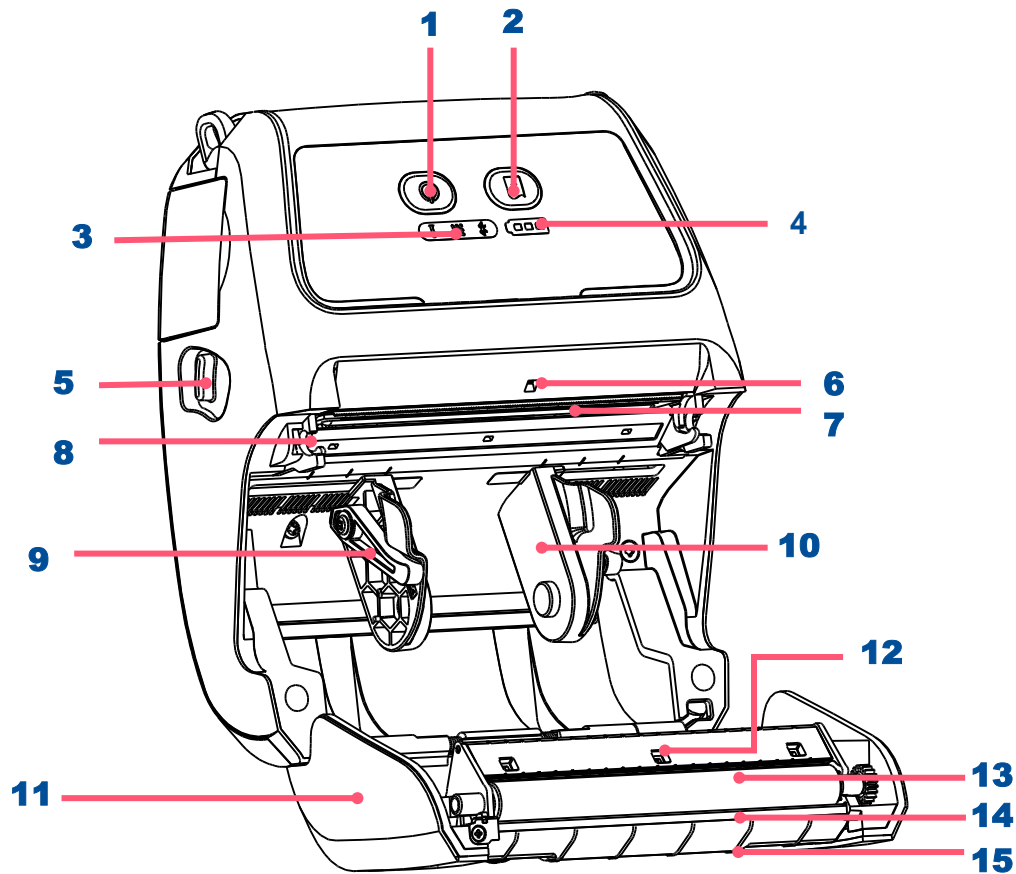
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1. Fundamental of the System

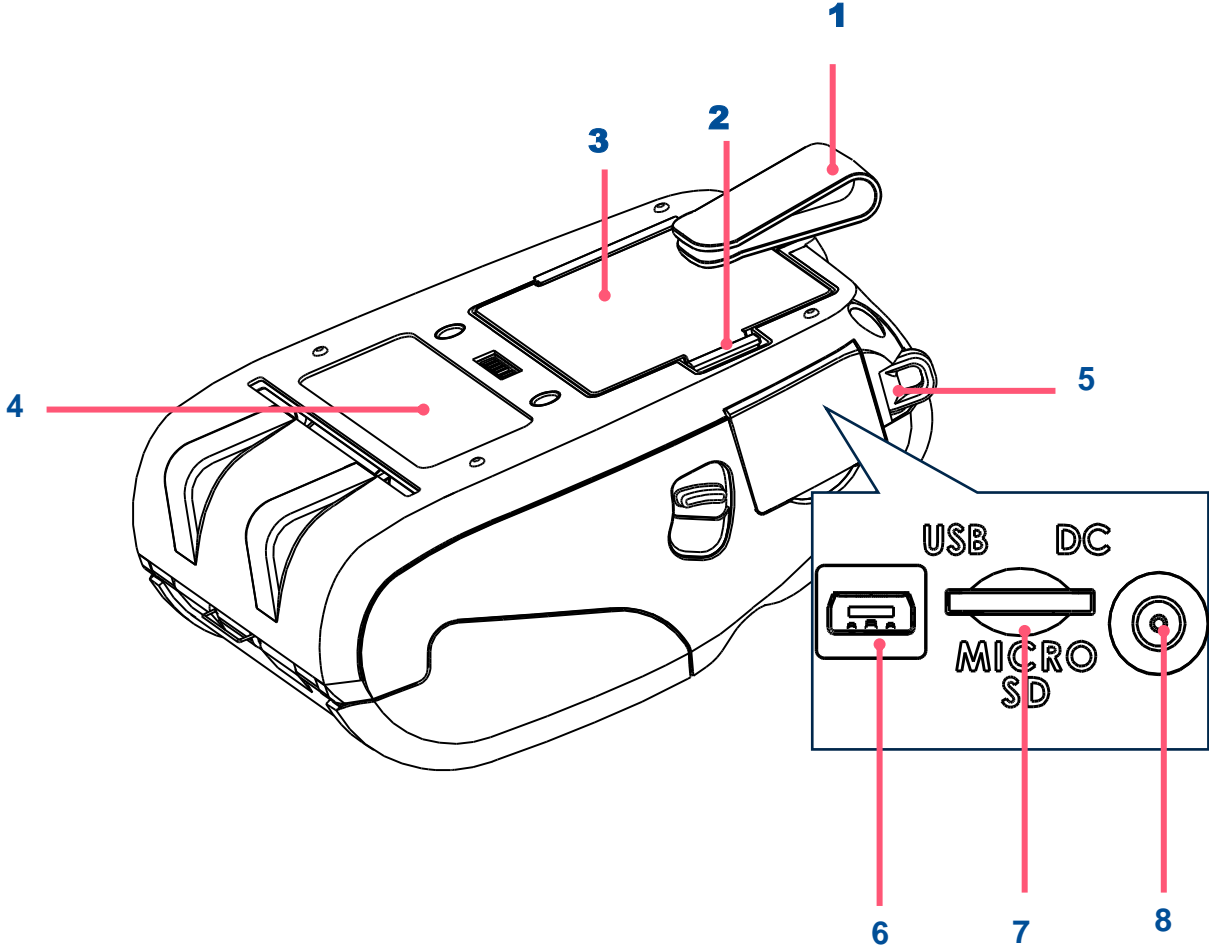
1.1 Printer Overview

Front View



1. Power on/off button
2. Feed button
3. Printer status LED indicator
4. Battery status LED indicator
5. Media cover release button
6. Peel-off sensor (Without for linerless model)
7. Print head
8. Transmissive sensor – Gap sensor
9. Media holder lock switch
10. Media holder
11. Media cover
12. Reflective sensor – Black mark sensor
13. Platen roller
14. Tear/Peeler bar (Without for linerless model)
15. Peeler module

Rear View

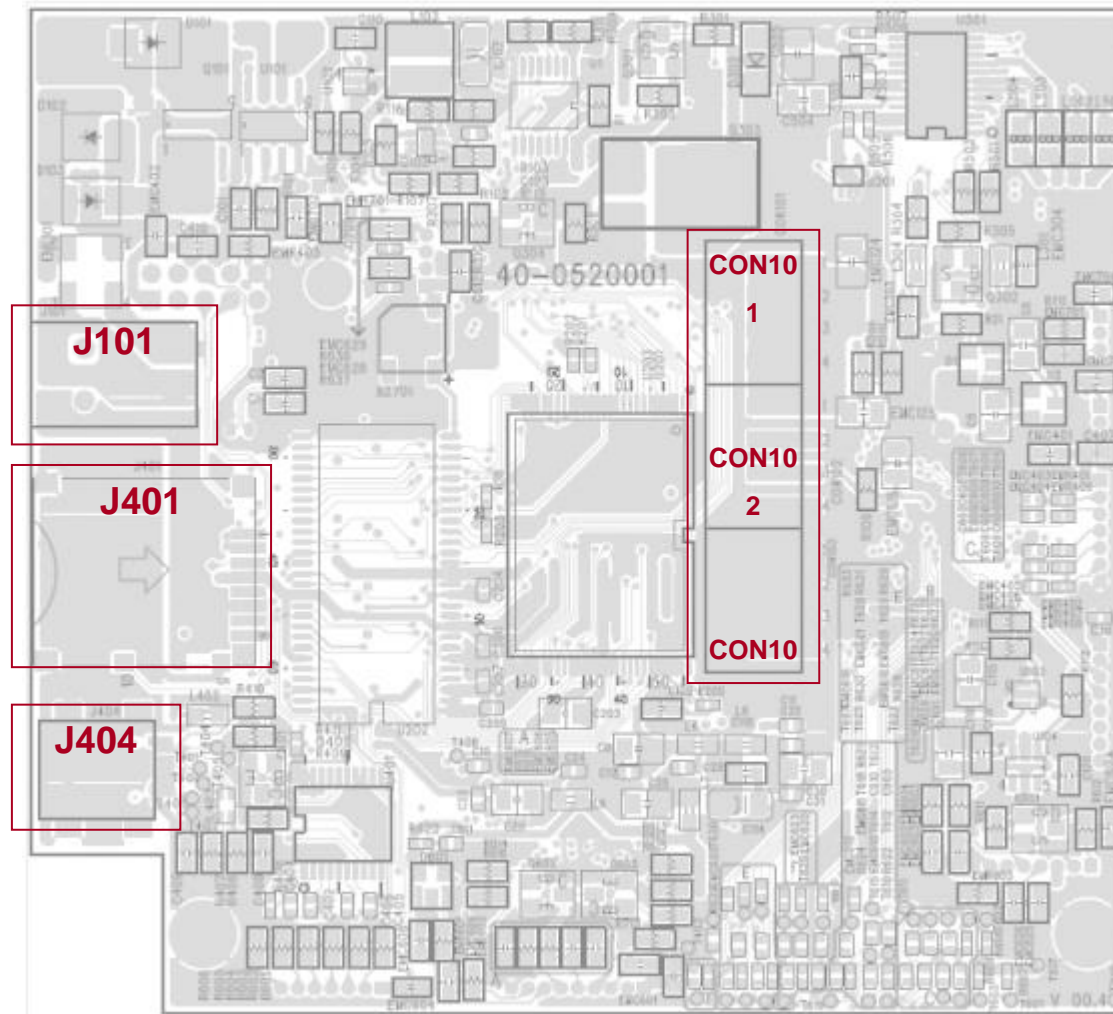


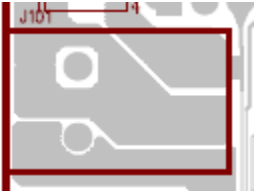
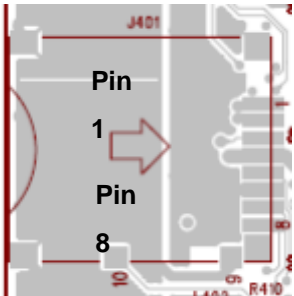
- 1. Belt clip
- 2. Battery open clasp
- 3. Li-ion battery
- 4. External label entrance chute
- 5. Hanger for shoulder strap
- 6. USB interface
- 7. * MicroSD card socket
- 8. Power jack

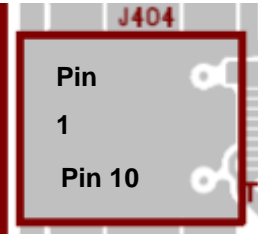
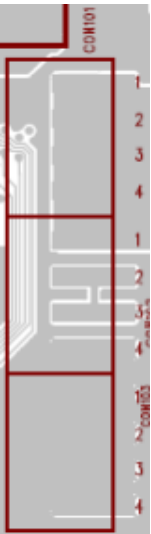
2. Electronics

2.1 Summary of the Board Connectors

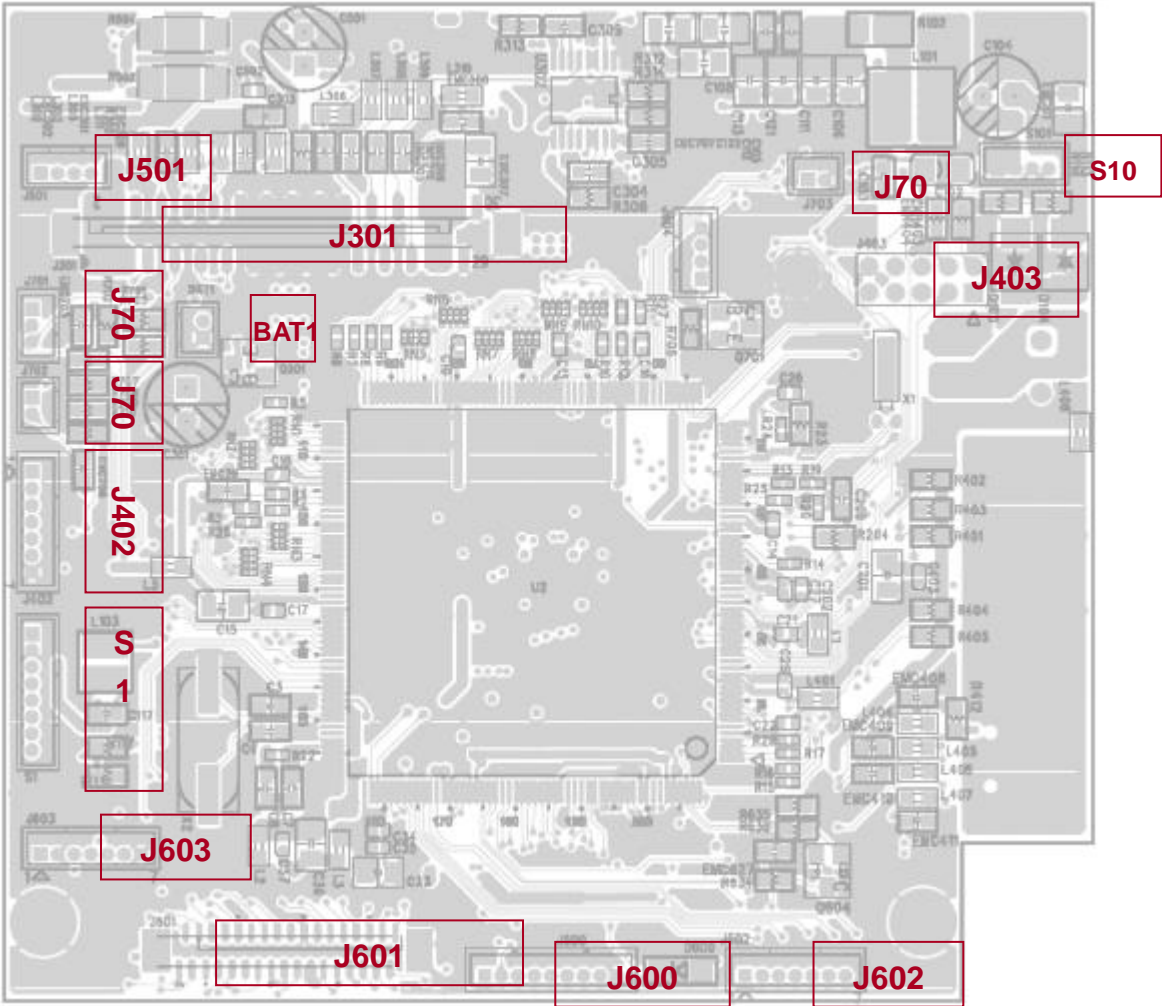
Main board top

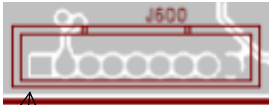
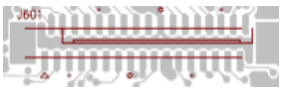


Connector	Description																							
J101	DC Jack  12V DC IN																							
J401	Micro SD connector 	<table border="1"> <thead> <tr> <th data-bbox="1310 603 1429 651">Pin</th> <th data-bbox="1429 603 1803 651">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="1310 651 1429 699">1</td> <td data-bbox="1429 651 1803 699">SD_Data2</td> </tr> <tr> <td data-bbox="1310 699 1429 746">2</td> <td data-bbox="1429 699 1803 746">SD_Data3</td> </tr> <tr> <td data-bbox="1310 746 1429 794">3</td> <td data-bbox="1429 746 1803 794">SD_CMD</td> </tr> <tr> <td data-bbox="1310 794 1429 842">4</td> <td data-bbox="1429 794 1803 842">3.3V</td> </tr> <tr> <td data-bbox="1310 842 1429 890">5</td> <td data-bbox="1429 842 1803 890">SD_CLK</td> </tr> <tr> <td data-bbox="1310 890 1429 938">6</td> <td data-bbox="1429 890 1803 938">GND</td> </tr> <tr> <td data-bbox="1310 938 1429 986">7</td> <td data-bbox="1429 938 1803 986">SD_Data0</td> </tr> <tr> <td data-bbox="1310 986 1429 1034">8</td> <td data-bbox="1429 986 1803 1034">SD_Data1</td> </tr> <tr> <td data-bbox="1310 1034 1429 1082">9</td> <td data-bbox="1429 1034 1803 1082">GND</td> </tr> <tr> <td data-bbox="1310 1082 1429 1158">10</td> <td data-bbox="1429 1082 1803 1158">GND</td> </tr> </tbody> </table>	Pin	Description	1	SD_Data2	2	SD_Data3	3	SD_CMD	4	3.3V	5	SD_CLK	6	GND	7	SD_Data0	8	SD_Data1	9	GND	10	GND
Pin	Description																							
1	SD_Data2																							
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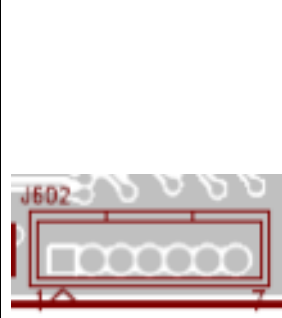
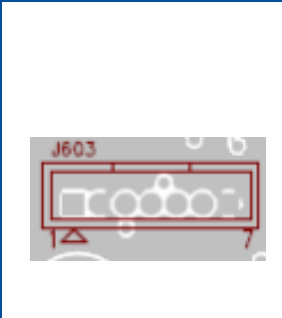
<p>J404</p>	<p>Micro USB</p>		<table border="1"> <thead> <tr> <th>Pin</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>NC</td> </tr> <tr> <td>2</td> <td>VBUS</td> </tr> <tr> <td>3</td> <td>TX</td> </tr> <tr> <td>4</td> <td>D+</td> </tr> <tr> <td>5</td> <td>RX</td> </tr> <tr> <td>6</td> <td>D-</td> </tr> <tr> <td>7</td> <td>RTS</td> </tr> <tr> <td>8</td> <td>GND</td> </tr> <tr> <td>9</td> <td>CTS</td> </tr> <tr> <td>10</td> <td>GND</td> </tr> </tbody> </table>	Pin	Description	1	NC	2	VBUS	3	TX	4	D+	5	RX	6	D-	7	RTS	8	GND	9	CTS	10	GND
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9	CTS																								
10	GND																								
<p>CON101 CON102 CON103</p>	<p>Battery</p>		<ul style="list-style-type: none"> • CON101 pin1~4 & CON102 pin1 for battery positive • CON103 pin1~4 & CON102 pin4 for battery negative • CON102 pin2~3 for NTC 																						

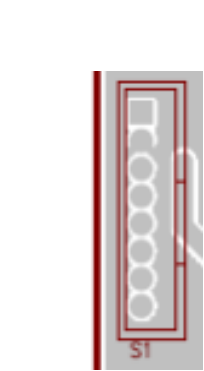
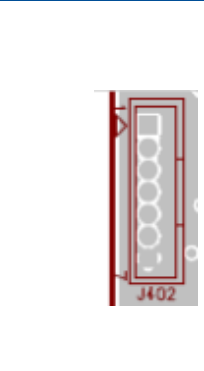
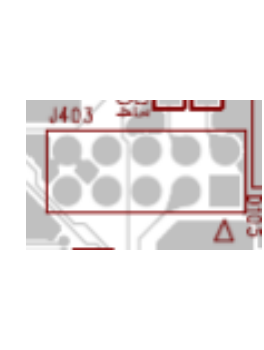
Main board bottom



Connector	Description																										
J600	For LCD & LED board	 <p data-bbox="824 598 891 630">Pin 1</p>	<table border="1"> <thead> <tr> <th>Pin</th> <th>Description</th> </tr> </thead> <tbody> <tr><td>1</td><td>3.3V</td></tr> <tr><td>2</td><td>PEEL_E</td></tr> <tr><td>3</td><td>PEEL_R</td></tr> <tr><td>4</td><td>8V battery</td></tr> <tr><td>5</td><td>LED_Charging off & low battery</td></tr> <tr><td>6</td><td>LED_Charging</td></tr> <tr><td>7</td><td>Power KEY</td></tr> <tr><td>8</td><td>Feed KEY</td></tr> <tr><td>9</td><td>GND</td></tr> </tbody> </table>	Pin	Description	1	3.3V	2	PEEL_E	3	PEEL_R	4	8V battery	5	LED_Charging off & low battery	6	LED_Charging	7	Power KEY	8	Feed KEY	9	GND				
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		6	LED_Charging																								
		7	Power KEY																								
		8	Feed KEY																								
9	GND																										
J601	LCD	 <p data-bbox="833 1220 900 1252">Pin 1</p>	<table border="1"> <thead> <tr> <th>Pin</th> <th>Description</th> </tr> </thead> <tbody> <tr><td>1</td><td>IRS</td></tr> <tr><td>2</td><td>/HPM</td></tr> <tr><td>3</td><td>PS</td></tr> <tr><td>4</td><td>C86</td></tr> <tr><td>5</td><td>NC</td></tr> <tr><td>6</td><td>V0</td></tr> <tr><td>7</td><td>V1</td></tr> <tr><td>8</td><td>V2</td></tr> <tr><td>9</td><td>V3</td></tr> <tr><td>10</td><td>V4</td></tr> <tr><td>11</td><td>NC</td></tr> </tbody> </table>	Pin	Description	1	IRS	2	/HPM	3	PS	4	C86	5	NC	6	V0	7	V1	8	V2	9	V3	10	V4	11	NC
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		7	V1																								
		8	V2																								
		9	V3																								
10	V4																										
11	NC																										

12	NC
13	CAP2-
14	CAP2+
15	CAP1+
16	CAP1-
17	CAP3+
18	NC
19	VOUT
20	GND
21	3.3V
22	LCM_D7
23	LCM_D6
24	LCM_D5
25	LCM_D4
26	LCM_D3
27	LCM_D2
28	LCM_D1
29	LCM_D0
30	LCM_RD
31	LCM_WR
32	LCM_A0
33	/LCM_RST
34	/LCM_CS


J602	<p>For LED Board</p>  <table border="1" data-bbox="985 159 1366 654"> <thead> <tr> <th>Pin</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3.3V</td> </tr> <tr> <td>2</td> <td>LED_STATUS</td> </tr> <tr> <td>3</td> <td>LED_ERROR</td> </tr> <tr> <td>4</td> <td>LED_FULL BATTERY</td> </tr> <tr> <td>5</td> <td>LED_HALF BATTERY</td> </tr> <tr> <td>6</td> <td>LED_BT</td> </tr> <tr> <td>7</td> <td>LED_WIFI</td> </tr> </tbody> </table>	Pin	Description	1	3.3V	2	LED_STATUS	3	LED_ERROR	4	LED_FULL BATTERY	5	LED_HALF BATTERY	6	LED_BT	7	LED_WIFI
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6	LED_BT																
7	LED_WIFI																
J603	<p>For LCD board</p>  <table border="1" data-bbox="985 710 1366 1101"> <thead> <tr> <th>Pin</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>A+</td> </tr> <tr> <td>2</td> <td>K-</td> </tr> <tr> <td>3</td> <td>GND</td> </tr> <tr> <td>4</td> <td>3.3V</td> </tr> <tr> <td>5</td> <td>LED_ERROR</td> </tr> <tr> <td>6</td> <td>MANUAL KEY</td> </tr> <tr> <td>7</td> <td>INFO KEY</td> </tr> </tbody> </table>	Pin	Description	1	A+	2	K-	3	GND	4	3.3V	5	LED_ERROR	6	MANUAL KEY	7	INFO KEY
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2	K-																
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4	3.3V																
5	LED_ERROR																
6	MANUAL KEY																
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S1	<p>Download port</p>  <table border="1" data-bbox="987 159 1368 603"> <thead> <tr> <th>Pin</th> <th>Description</th> </tr> </thead> <tbody> <tr><td>1</td><td>3.3V</td></tr> <tr><td>2</td><td>GND</td></tr> <tr><td>3</td><td>/RESET</td></tr> <tr><td>4</td><td>BMS</td></tr> <tr><td>5</td><td>/CS</td></tr> <tr><td>6</td><td>MISO</td></tr> <tr><td>7</td><td>MOSI</td></tr> <tr><td>8</td><td>CLK</td></tr> </tbody> </table>	Pin	Description	1	3.3V	2	GND	3	/RESET	4	BMS	5	/CS	6	MISO	7	MOSI	8	CLK
Pin	Description																		
1	3.3V																		
2	GND																		
3	/RESET																		
4	BMS																		
5	/CS																		
6	MISO																		
7	MOSI																		
8	CLK																		
J402	<p>WiFi connector</p>  <table border="1" data-bbox="987 655 1368 1050"> <thead> <tr> <th>Pin</th> <th>Description</th> </tr> </thead> <tbody> <tr><td>1</td><td>3.3V</td></tr> <tr><td>2</td><td>/WIFI_RST</td></tr> <tr><td>3</td><td>WIFI_RXD</td></tr> <tr><td>4</td><td>WIFI_RST</td></tr> <tr><td>5</td><td>WIFI_TXD</td></tr> <tr><td>6</td><td>WIFI_CTS</td></tr> <tr><td>7</td><td>GND</td></tr> </tbody> </table>	Pin	Description	1	3.3V	2	/WIFI_RST	3	WIFI_RXD	4	WIFI_RST	5	WIFI_TXD	6	WIFI_CTS	7	GND		
Pin	Description																		
1	3.3V																		
2	/WIFI_RST																		
3	WIFI_RXD																		
4	WIFI_RST																		
5	WIFI_TXD																		
6	WIFI_CTS																		
7	GND																		
J403	<p>Bluetooth connector</p>  <table border="1" data-bbox="987 1114 1368 1465"> <thead> <tr> <th>Pin</th> <th>Description</th> </tr> </thead> <tbody> <tr><td>1</td><td>3.3V</td></tr> <tr><td>2</td><td>BT_RST</td></tr> <tr><td>3</td><td>BT_RXD</td></tr> <tr><td>4</td><td>BT_RTS</td></tr> <tr><td>5</td><td>BT_TXD</td></tr> <tr><td>6</td><td>BT_CTS</td></tr> </tbody> </table>	Pin	Description	1	3.3V	2	BT_RST	3	BT_RXD	4	BT_RTS	5	BT_TXD	6	BT_CTS				
Pin	Description																		
1	3.3V																		
2	BT_RST																		
3	BT_RXD																		
4	BT_RTS																		
5	BT_TXD																		
6	BT_CTS																		

7	BT_DISCON
8	BT_CON
9	NC
10	GND


Stepping motor



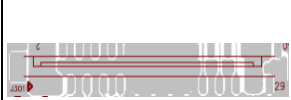
J501

	Pin	Description
	1	AOUT1
	2	AOUT2
	3	BOUT1
	4	BOUT2

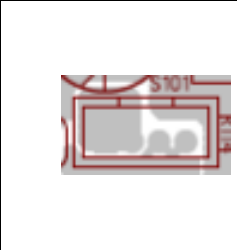

Black mark sensor

J701

	Pin	Description
	1	3.3V
	2	BM_E
	3	BM_R

J702	<p>Gap sensor</p>  <table border="1" data-bbox="981 248 1368 443"> <thead> <tr> <th>Pin</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>3.3V</td> </tr> <tr> <td>2</td> <td>GAP_R</td> </tr> </tbody> </table>	Pin	Description	1	3.3V	2	GAP_R												
Pin	Description																		
1	3.3V																		
2	GAP_R																		
J703	<p>Hand open sensor</p>  <table border="1" data-bbox="981 699 1368 847"> <thead> <tr> <th>Pin</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>HEAD</td> </tr> <tr> <td>2</td> <td>GND</td> </tr> </tbody> </table>	Pin	Description	1	HEAD	2	GND												
Pin	Description																		
1	HEAD																		
2	GND																		
J301	<p>Print head</p>  <table border="1" data-bbox="981 1011 1368 1468"> <thead> <tr> <th>Pin</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>VH</td> </tr> <tr> <td>2</td> <td>VH</td> </tr> <tr> <td>3</td> <td>VH</td> </tr> <tr> <td>4</td> <td>NC</td> </tr> <tr> <td>5</td> <td>/LAT</td> </tr> <tr> <td>6</td> <td>TPH_CLK</td> </tr> <tr> <td>7</td> <td>3.3V_TPH</td> </tr> <tr> <td>8</td> <td>STB1</td> </tr> </tbody> </table>	Pin	Description	1	VH	2	VH	3	VH	4	NC	5	/LAT	6	TPH_CLK	7	3.3V_TPH	8	STB1
Pin	Description																		
1	VH																		
2	VH																		
3	VH																		
4	NC																		
5	/LAT																		
6	TPH_CLK																		
7	3.3V_TPH																		
8	STB1																		

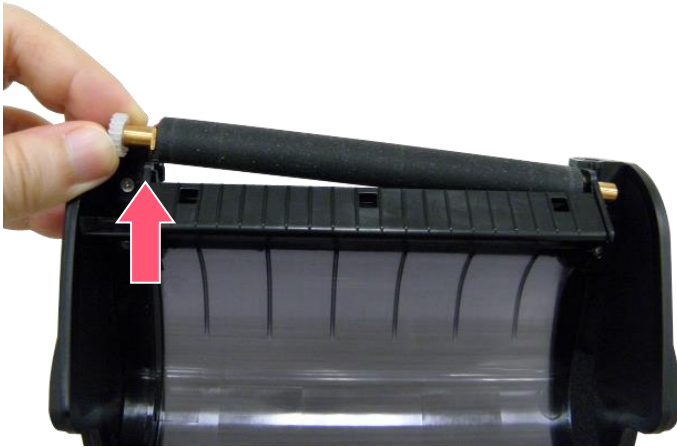
			9	STB2	
			10	STB3	
			11	TM	
			12	GND	
			13	GND	
			14	GND	
			15	GND	
			16	GND	
			17	GND	
			18	GND	
			19	GND	
			20	GND	
			21	STB4	
			22	STB5	
			23	STB6	
			24	STB7	
			25	DI	
			26	VH	
			27	VH	
			28	VH	
			29	GND	
			30	GND	

S101	<p>Charger station</p>  <table border="1" data-bbox="985 220 1366 470"> <thead> <tr> <th>Pin</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>12V_IN</td> </tr> <tr> <td>2</td> <td>12V_IN</td> </tr> <tr> <td>3</td> <td>GND</td> </tr> <tr> <td>4</td> <td>GND</td> </tr> </tbody> </table>	Pin	Description	1	12V_IN	2	12V_IN	3	GND	4	GND
Pin	Description										
1	12V_IN										
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3	GND										
4	GND										
BAT1	<p>RTC battery</p>  <table border="1" data-bbox="985 699 1366 845"> <thead> <tr> <th>Pin</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>GND</td> </tr> <tr> <td>2</td> <td>3V</td> </tr> </tbody> </table>	Pin	Description	1	GND	2	3V				
Pin	Description										
1	GND										
2	3V										

3. Mechanism

3.1 Replacing the Platen Roller

1. Open the printer cover. Use a tool to take the platen roller off. Replace the platen roller.



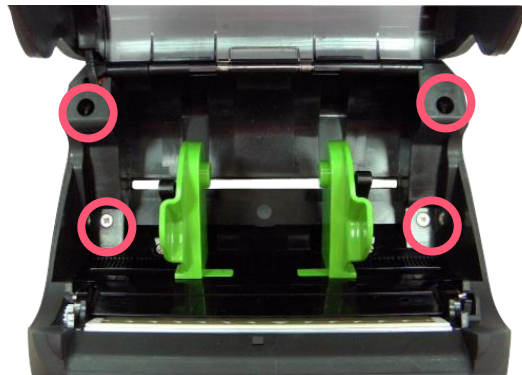
2. Reassemble the parts in the reverse procedures.

3.2 Replacing the Print Head Assembly

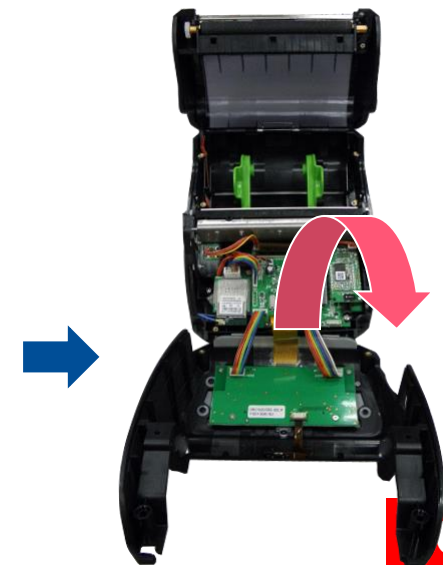
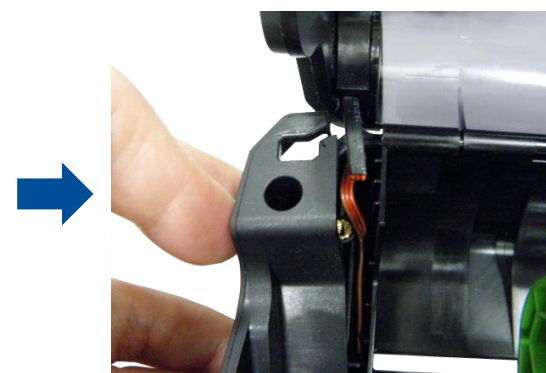
1. Refer to section 3.1 to remove the printer top cover.
2. Use hex wrench (#2.5) to remove two screws on lower cover.



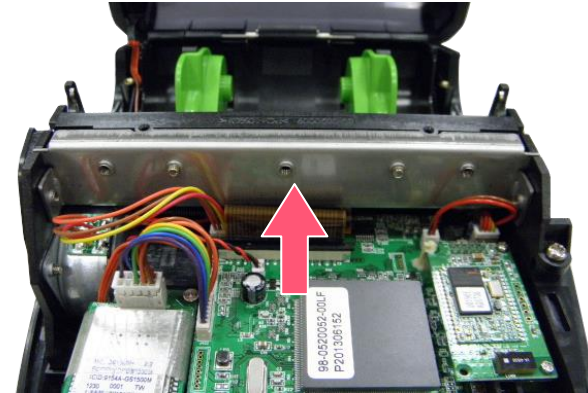
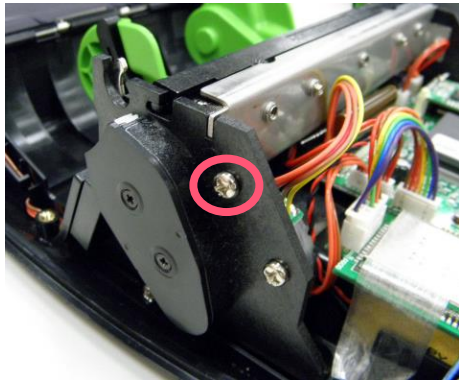
3. Open the printer cover and remove 4 screws on lower inner cover.



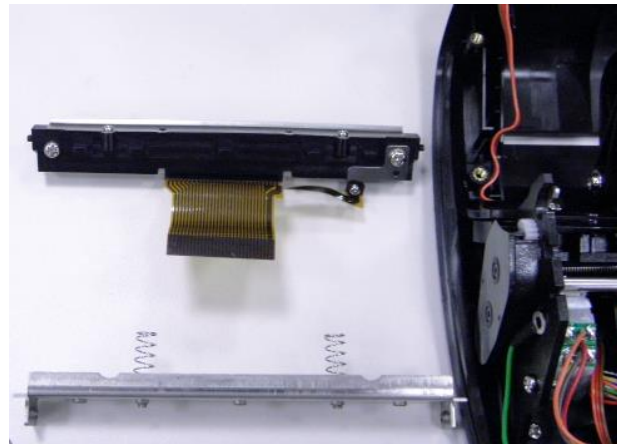
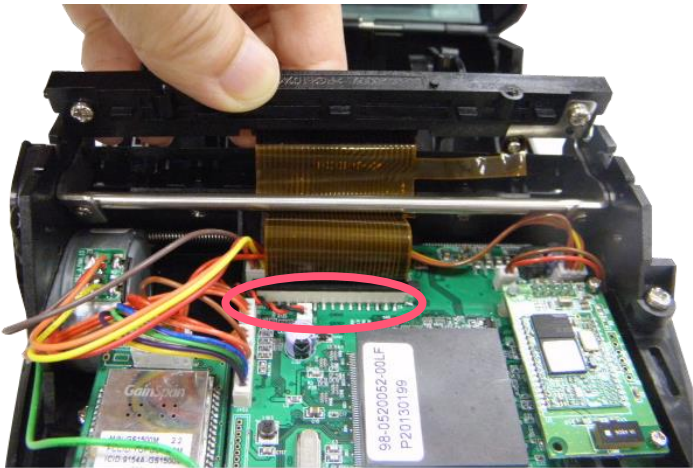
4. Remove the upper cover carefully.



5. Remove 2 screws on the each side of lower inner cover to remove the print head spring fixture.



6. Loosen the connector lock (black) then disconnect the flat cable from the main board. Remove the print head assembly.

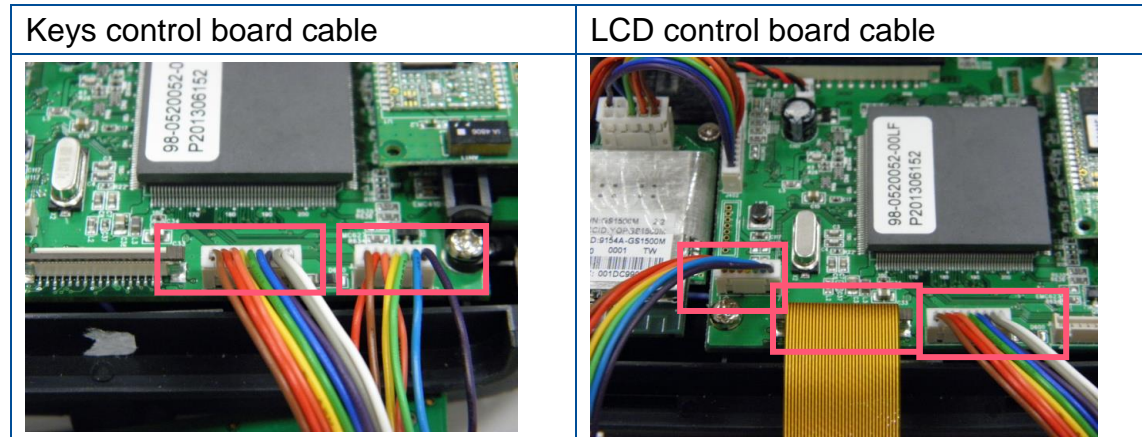


7. Reassemble the parts in the reverse procedures.

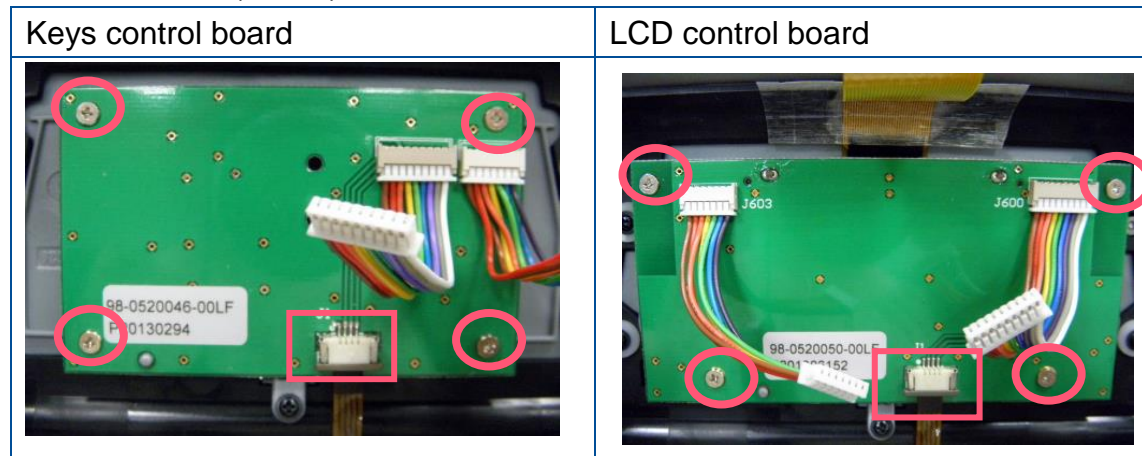
3.3 Replacing the Bluetooth Module (Option)

1. Refer to section 3.2 to remove the upper cover and disconnect the cables from the main board.

Note: For the flat cable (LCD control board), please loosen the connector lock (brown) then disconnect the cable.



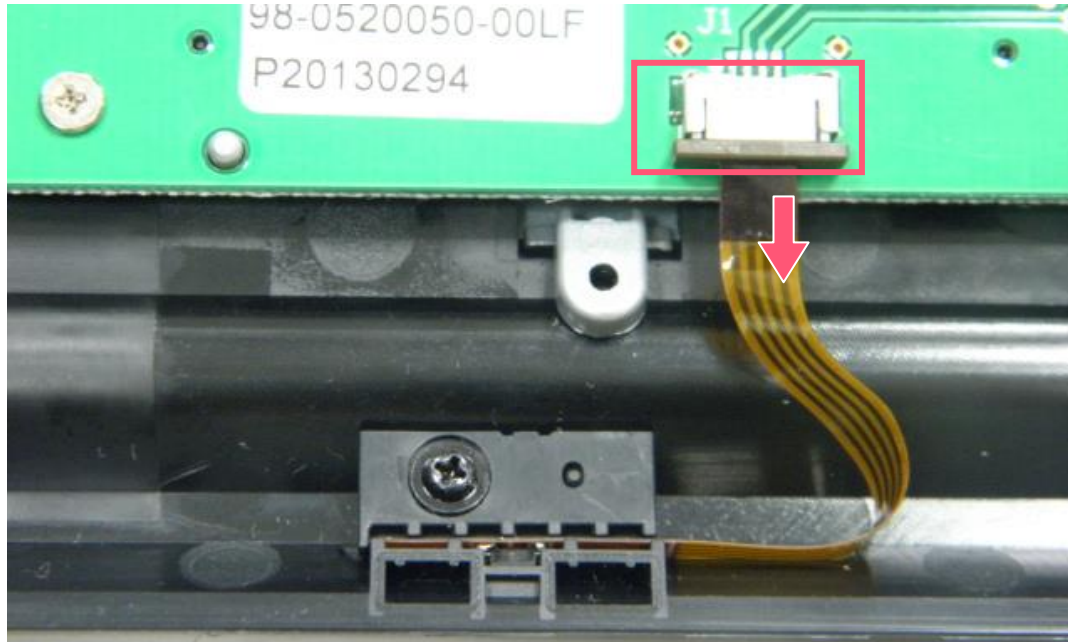
2. Remove 4 screws on the keys control board/ LCD control board and disconnect the peel-off sensor connector by loosening the connector lock (brown).



3. Replace the keys control board/ LCD control board assembly.
4. Reassemble the parts in the reverse procedures.

3.4 Replacing the Peel-off Sensor Module

1. Refer to section 3.2 to remove the upper cover.
2. Disconnect the peel-off sensor connector by loosen the connector lock for panel board. Remove 1 screw.



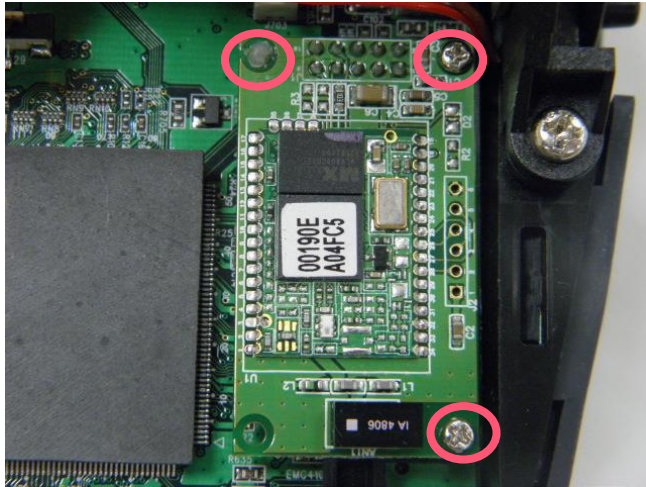
3. Replace the peel-off sensor module.



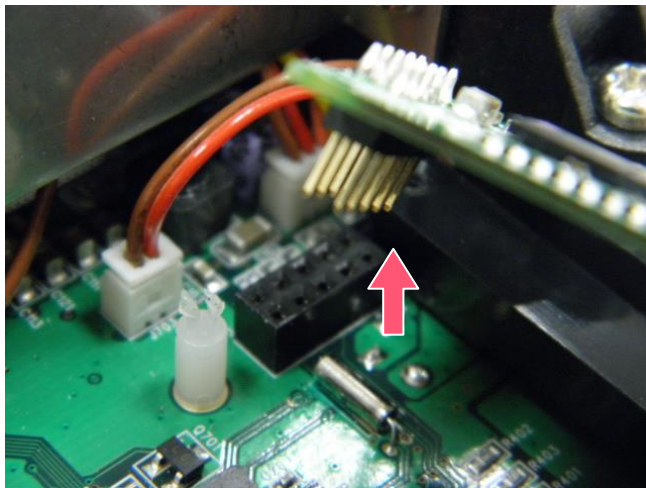
4. Reassemble the parts in the reverse procedures.

3.5 Replacing the Bluetooth Module

1. Refer to section 3.2 to remove the upper cover.
2. Remove 2 screws on the Bluetooth control board. Use a tool to remove the spacer support on the Bluetooth control board.



3. Disconnect the connector on the board. Replace the Bluetooth module.



4. Reassemble the parts in the reverse procedures.

3.6 Replacing the Main Board Assembly

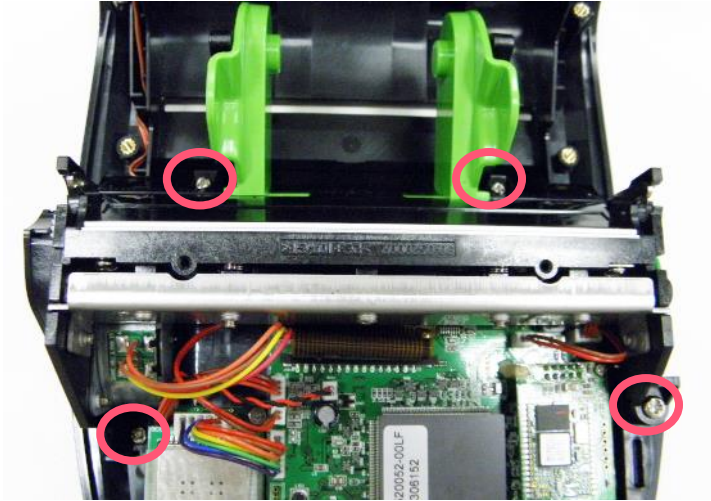
1. Refer to section 3.5 to remove the upper cover and Bluetooth control board.
2. Remove 2 screws on the main board. Disconnect all the connectors on the main board. Replace the main board.



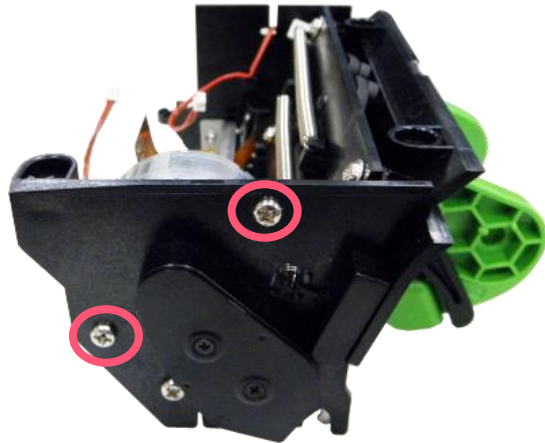
3. Reassemble the parts in the reverse procedures.

3.7 Replacing the Stepping Motor

1. Refer to section 3.2 to remove the upper cover.
2. Remove 5 screws. Disconnect the connectors on main board to take out the internal mechanism.



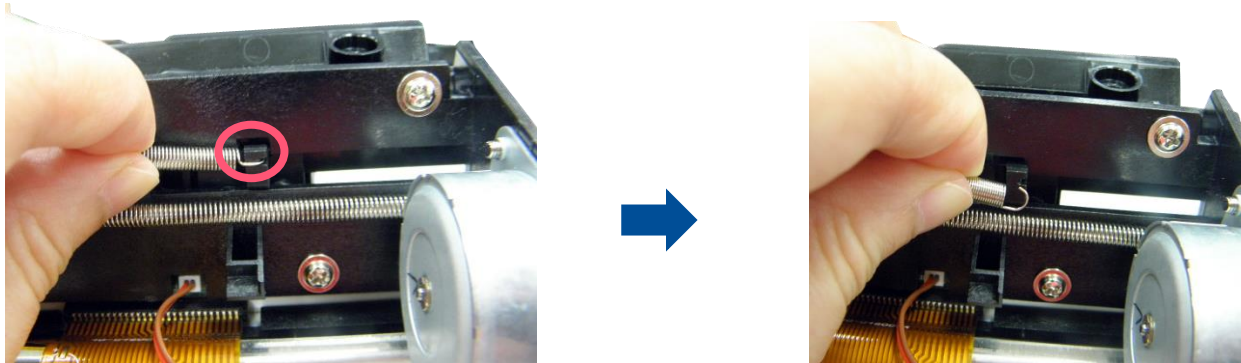
3. Remove 2 screws to replace the stepping motor.



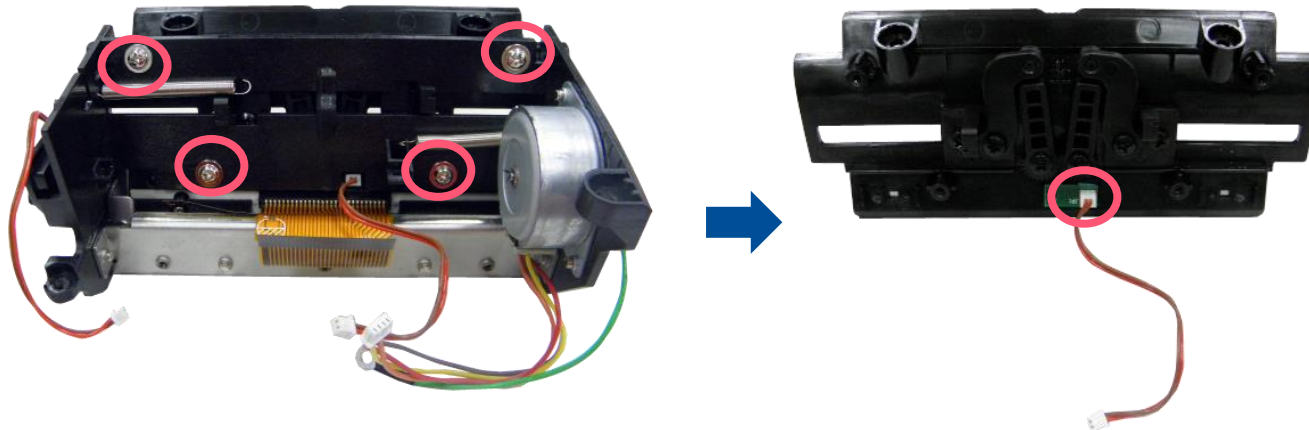
4. Reassemble the parts in the reverse procedures.

3.8 Replacing the Gap Sensor Assembly

1. Refer to section 3.7 to take out the internal mechanism.
2. Loosen 2 springs.



3. Remove 4 screws on the internal mechanism to replace the gap sensor assembly.



4. Reassemble the parts in the reverse procedures.

3.9 Replacing the Media Holder Assembly

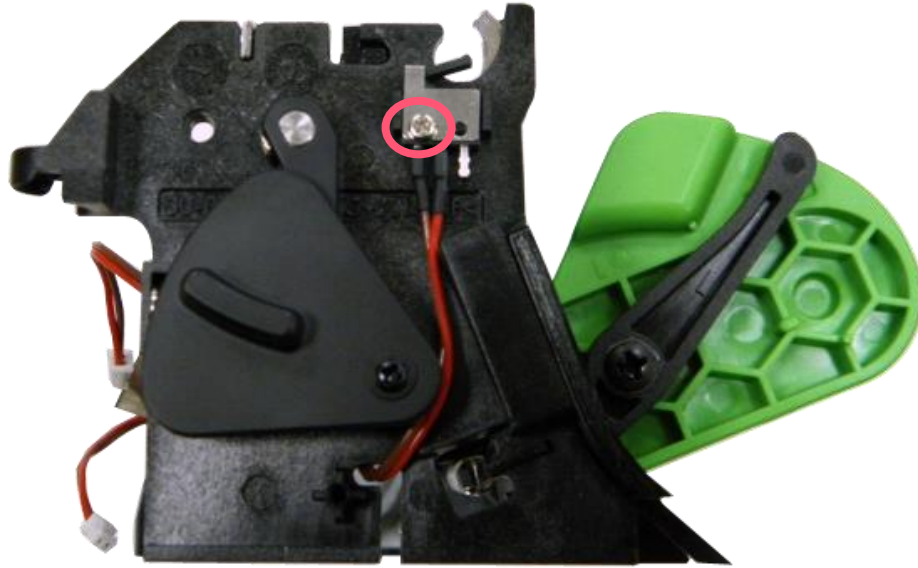
1. Refer to section 3.8 to remove the gap sensor assembly.
2. Replace the media holder assembly.



3. Reassemble the parts in the reverse procedures.

3.10 Replacing the Hand Open Sensor Assembly

4. Refer to section 3.7 to take out the internal mechanism.
5. Remove 1 screw to replace the hand open sensor assembly.



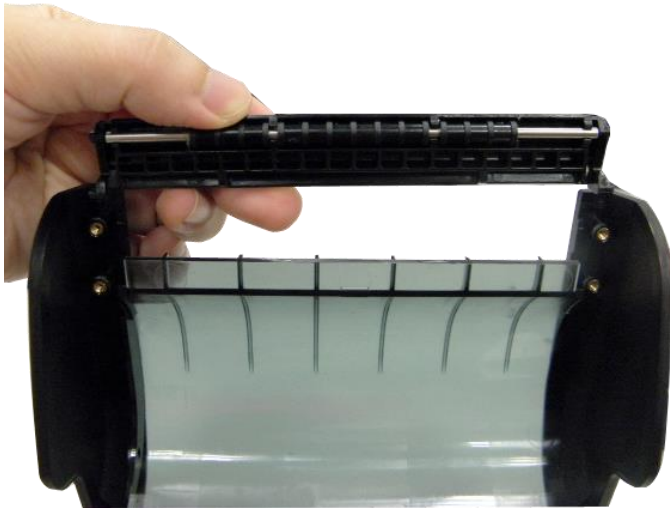
6. Reassemble the parts in the reverse procedures.

3.11 Replacing the Peel-off Module

1. Refer to sections 3.1 and 3.7 to remove the platen roller and take out the internal mechanism.
2. Remove 4 screws on upper cover to take out the black mark sensor module.



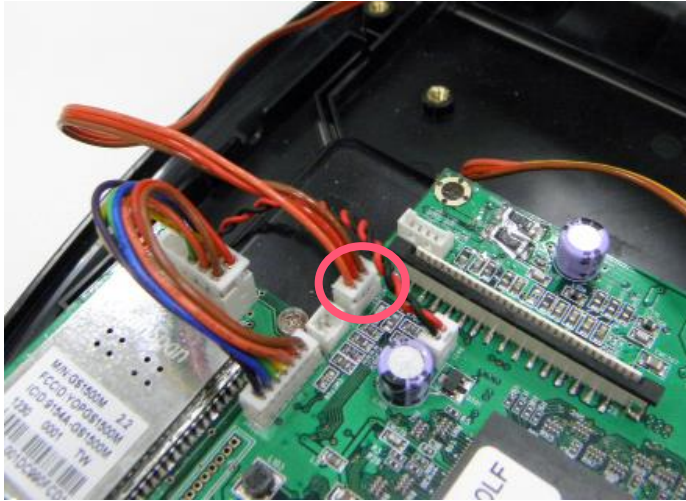
3. Replacing the Peel-off cover.



4. Reassemble the parts in the reverse procedures.

3.12 Replacing the Black Mark Sensor Assembly

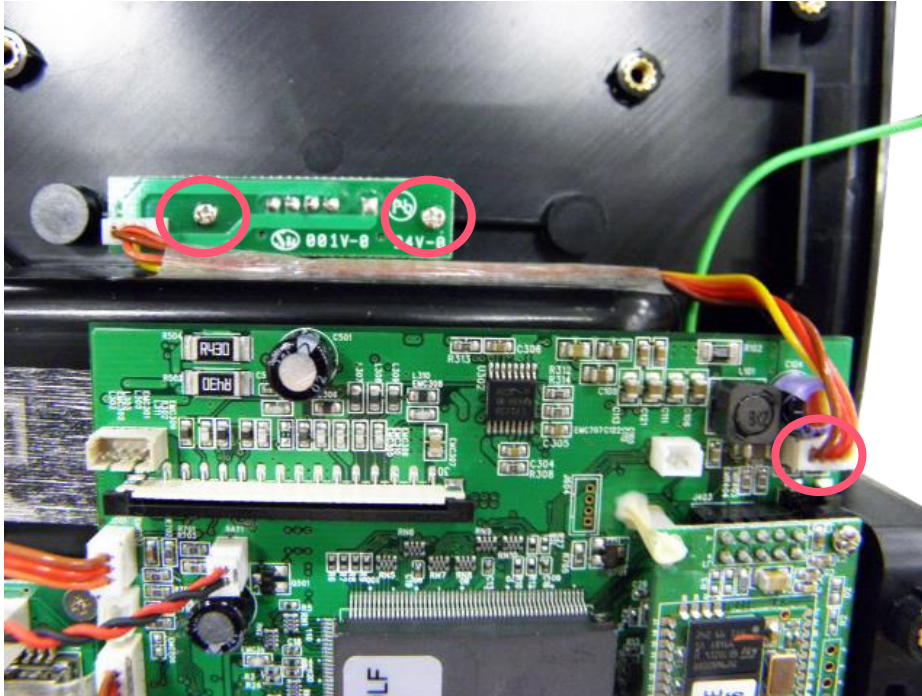
1. Refer to sections 3.11 to take out the black mark sensor assembly. Disconnect the black mark sensor connector from main board.



2. Reassemble the parts in the reverse procedures.

3.13 Replacing the Charger Board Assembly

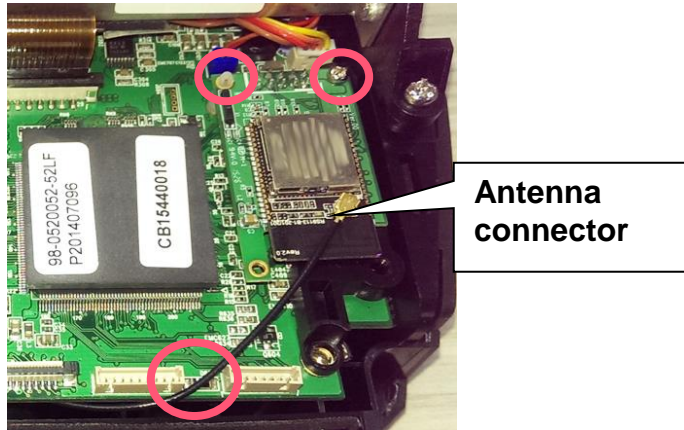
1. Refer to the section 3.7 to take out the internal mechanism.
2. Disconnect the connector on the main board. Remove 2 screws to replacing the charger board assembly.



3. Reassemble the parts in the reverse procedures.

3.14 Replacing the Wi-Fi Module

1. Refer to section 3.2 to remove the upper cover.
2. Disconnect the antenna connector gently.
3. Remove the screw and loose the spacer support on the Wi-Fi module.



4. Replace the Wi-Fi module board.
5. Arrange cable of antenna as indicated.
6. Reassemble the parts in the reverse procedures.

Note:

- This is the new Wi-Fi module's replacing instruction. It should work with the main board that is -30LF version. (or later version)
- If you replace the main board, please check the Wi-Fi signal band on configuration page for your using region. If any questions, please contact the Customer Service Department of your purchased reseller or distributor for assistance.

US	EUR
<pre> ***** WIFI VERSION: 1.3.1e WIFI MAC ADDRESS: 00-23-A7-65-19-30 WIFI Region: US WIFI MODE: INFRASTRUCTURE WIFI SSID: RD_AP24 WIFI DHCP ENABLED: YES WIFI IP ADDRESS: 0.0.0.0 WIFI SUBNET MASK: 0.0.0.0 WIFI DEFAULT GATEWAY: 0.0.0.0 WIFI PRINTER NAME: PS-651930 WIFI RAW PORT: 9100 ***** </pre>	<pre> ***** WIFI VERSION: 1.3.1e WIFI MAC ADDRESS: 00-23-A7-65-19-30 WIFI Region: EUR WIFI MODE: INFRASTRUCTURE WIFI SSID: RD_AP24 WIFI DHCP ENABLED: YES WIFI IP ADDRESS: 0.0.0.0 WIFI SUBNET MASK: 0.0.0.0 WIFI DEFAULT GATEWAY: 0.0.0.0 WIFI PRINTER NAME: PS-651930 WIFI RAW PORT: 9100 ***** </pre>

3.15 Replacing the RTC Battery (Option)

1. Please refer to section 3.1 take the printer top cover off and replace a new one with platen roller.
2. Refer to section 3.14 to remove the WiFi module.



3. Disconnect the connector on the main board.



4. Replace the RTC battery.
5. Reassemble the parts in the reverse procedures.

4. Troubleshooting

Problem	Possible Cause	Recovery Procedure
Power indicator does not illuminate	<ul style="list-style-type: none"> * The battery is not properly installed. * The battery is dead. 	<ul style="list-style-type: none"> * Reinstall the battery. * Switch the printer on. * Charge the battery.
- The printer status from TSC Console shows " Head Open ".	<ul style="list-style-type: none"> * The printer carriage is open. 	<ul style="list-style-type: none"> * Please close the print carriage.
- The printer status from TSC Console shows " Out of Paper ".	<ul style="list-style-type: none"> * Running out of media roll. * The media is installed incorrectly. * Black mark sensor is not calibrated. 	<ul style="list-style-type: none"> * Supply a new media roll. * Please reinstall the media roll. * Calibrate the black mark sensor.
- The printer status from DiagTool shows " Paper Jam ".	<ul style="list-style-type: none"> * Black mark sensor is not set properly. * Make sure media size is set properly. * Media may be stuck inside the printer mechanism. 	<ul style="list-style-type: none"> * Calibrate the black mark sensor. * Set media size correctly.
Memory full (FLASH / DRAM)	<ul style="list-style-type: none"> * The space of FLASH/DRAM is full. 	<ul style="list-style-type: none"> * Delete unused files in the FLASH/DRAM. * The max. numbers of DRAM is 256 files. * The max. user addressable memory space of DRAM is 256KB. * The max. numbers of file of FLASH is 256 files. * The max. user addressable memory space of FLASH is 2560KB.
Poor Print Quality	<ul style="list-style-type: none"> * Media is loaded incorrectly * Dust or adhesive accumulation on the print head. * Print density is not set properly. * Printhead element is damaged. 	<ul style="list-style-type: none"> * Reload the supply. * Clean the print head. * Clean the platen roller. * Adjust the print density and print speed. * Run printer self-test and check the print head test pattern if there is dot missing in the pattern. * Change proper media roll.

Missing printing on the left or right side of label	* Wrong label size setup.	* Set the correct label size.
Gray line on the blank label	* The print head is dirty. * The platen roller is dirty.	* Clean the print head. * Clean the platen roller.
Irregular printing	* The printer is in Hex Dump mode. * The RS-232 setting is incorrect.	* Turn off and on the printer to skip the dump mode. * Re-set the Rs-232 setting.

5. Maintenance

This session presents the clean tools and methods to maintain the printer.

■ For Cleaning

Depending on the media used, the printer may accumulate residues (media dust, adhesives, etc.) as a by-product of normal printing. To maintain the best printing quality, you should remove these residues by cleaning the printer periodically. Regularly clean the print head and supply sensors once change a new media to keep the printer at the optimized performance and extend printer life.

■ For Disinfecting

Sanitize your printer to protect yourself and others and can help prevent the spread of viruses.

■ Important

- Set the printer power switch to O (Off) prior to performing any cleaning or disinfecting tasks. Leave the power cord connected to keep the printer grounded and to reduce the risk of electrostatic damage.
- Do not wear rings or other metallic objects while cleaning any interior area of the printer.
- Use only the cleaning agents recommended in this document. Use of other agents may damage the printer and void its warranty.
- Do not spray or drip liquid cleaning solutions directly into the printer. Apply the solution on a clean lint-free cloth and then apply the dampened cloth to the printer.
- Do not use canned air in the interior of the printer as it can blow dust and debris onto sensors and other critical components.
- Only use a vacuum cleaner with a nozzle and hose that are conductive and grounded to drain off static build up.
- All reference in these procedures for use of isopropyl alcohol requires that a 99% or greater isopropyl alcohol content be used to reduce the risk of moisture corrosion to the printhead.
- Do not touch printhead by hand. If you touch it carelessly, please use 99% Isopropyl alcohol to clean it.
- Always taking personal precaution when using any cleaning agent.

Cleaning Tools

- Cotton swab
- Lint-free cloth
- Brush with soft non-metallic bristles
- Vacuum cleaner
- 75% Ethanol (for disinfecting)
- 99% Isopropyl alcohol (for printhead and platen roller cleaning)
- Genuine printhead cleaning pen
- Mild detergent (without chlorine)

Cleaning Process:

Printer Part	Method	Interval
Print Head	<ol style="list-style-type: none"> I. Always turn off the printer before cleaning the printhead. II. Allow the printhead to cool for at least one minute. III. Use a cotton swab and 99% Isopropyl Alcohol or genuine print head cleaning pen to clean the print head surface. 	Clean the print head when changing a new label roll.
Platen Roller	<ol style="list-style-type: none"> I. Turn off the printer. II. Rotate the platen roller and wipe it thoroughly with the lint-free 99% Isopropyl Alcohol. 	Clean the platen roller when changing a new label roll
Peel Bar	Use the lint-free cloth with 99% Isopropyl Alcohol to wipe it.	As needed
Sensor	Use brush with soft non-metallic bristles or a vacuum cleaner, to remove paper dust. Clean upper and lower media sensors to ensure reliable Top of Form and Paper Out sensing.	Monthly
Exterior	Clean the exterior surfaces with a clean, lint-free cloth (water-dampened cloth). If necessary, use a mild detergent or desktop cleaning solution then use the 75% Ethanol to wipe it.	As needed
Interior	Clean the interior of the printer by removing any dirt and lint with a vacuum cleaner, as described above, or use a brush with soft non-metallic bristles then use the 75% Ethanol to wipe it.	As needed

Revise History

Date	Content	Editor
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