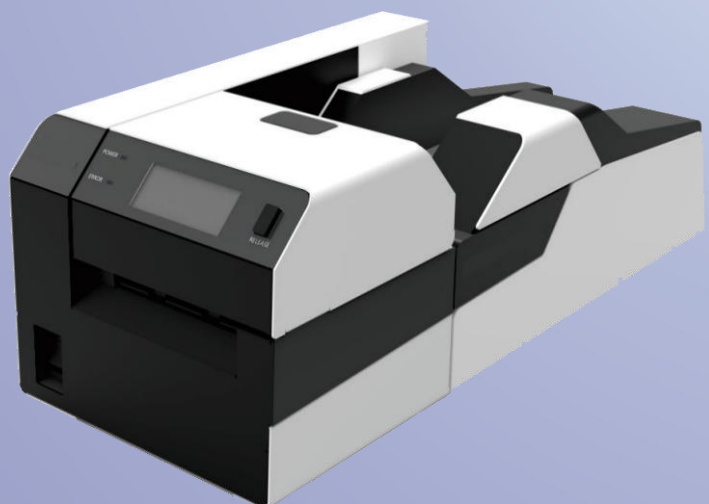




# User Manual      DL-2100 Professional Thermal Printer



## Important Safety Instructions (English)

Read the following instructions thoroughly before starting up your printer.

- Never carry out maintenance or repair work yourself. Always contact a qualified service technician.
- Keep this Operator's Manual in a place which is easily accessible at all times.
- Place the printer on a solid and even base so that it cannot fall.
- Never place the printer in the vicinity of inflammable gas or explosive substances.
- Ensure the printer is connected to a socket with the correct mains voltage.
- Always disconnect the printer from the mains before opening the device to perform maintenance work or remedy errors.
- Do not expose the printer to high temperatures, direct sunlight or dust.
- Keep all liquids away from the printer.
- Protect the printer from shock, impact and vibration.
- Make sure that the printer and computer are switched off before connecting the data cable.
- The print head will become very hot during printing; avoid contact with the print head after printing has finished.
- Do not perform any operation or action in any way other than those provided in this manual. When in doubt, contact your dealer or your customer support.



The device and mains-socket must all times be easily accessible.

---

## Wichtige Sicherheitshinweise (German)

Lesen Sie bitte diese Sicherheitshinweise durch, bevor sie den Drucker in Betrieb nehmen.

- Führen Sie Wartungsarbeiten und Reparaturen keinesfalls selbst aus, sondern verständigen Sie immer einen qualifizierten Servicetechniker.
  - Bewahren Sie diese Dokumentation an einem jederzeit zugänglichen Ort auf.
  - Den Drucker auf stabilem und ebenem Untergrund so aufstellen, dass er nicht zu Boden fallen kann.
  - Stellen Sie den Drucker keinesfalls in der Nähe von leicht entzündlichen Gasen oder explosiven Stoffen auf.
  - Den Drucker nur an eine Steckdose mit der richtigen Spannung anschließen.
  - Wenn Sie den Drucker vom Netz trennen wollen, den Drucker ausschalten und immer den Netzstecker an der Steckdose ziehen.
  - Den Drucker weder hohen Temperaturen noch direktem Sonnenlicht und Staub aussetzen.
  - Keine Flüssigkeiten mit dem Drucker in Berührung bringen.
  - Den Drucker keinen Erschütterungen, Stößen oder Vibrationen aussetzen.
  - Sicherstellen, dass der Drucker und der Computer ausgeschaltet sind, bevor das Datenkabel angeschlossen wird.
  - Der Druckkopf wird während des Druckens heiß. Vor dem Berühren deshalb einige Zeit abkühlen lassen.
  - Weichen Sie bei der Bedienung des Druckers nicht von den Anweisungen in der Dokumentation ab.
- Bei Unklarheiten wenden Sie sich bitte an Ihren Händler oder Ihren Kundendienst.
- Maschinenlärminformationen – Verordnung – 3.GPSGV, der höchste Schalldruckpegel beträgt 70 dB(A) oder weniger gemäß EN ISO 7779.



Das Gerät und die Netzsteckdose müssen jeder Zeit leicht zugänglich sein.

---

## Consignes importantes de sécurité (French)

Lire attentivement les instructions suivantes avant de mettre l'imprimante en service.

- Ne jamais effectuer soi-même les travaux d'entretien et de réparations. Contacter toujours un dépanneur qualifié.
- Placer l'imprimante sur un support stable de façon à ce qu'elle ne puisse pas tomber.
- Ne jamais placer l'imprimante à proximité de sources de gaz aisément inflammables ou de substances explosives.
- Ne connecter l'imprimante à une prise que lorsque la tension est correcte.
- Pour déconnecter l'imprimante de l'alimentation principale, mettre l'imprimante hors tension et toujours débrancher le connecteur secteur de la prise murale.
- Ne pas exposer l'imprimante à des températures élevées, à la lumière directe du soleil ou à la poussière.
- Ne pas mettre l'imprimante en contact avec des liquides.
- Ne pas exposer l'imprimante à des chocs, impacts ou vibrations.
- S'assurer que l'imprimante et l'ordinateur sont hors tension avant de connecter le câble de données.
- La tête d'impression est brûlante pendant l'impression. C'est pourquoi laissez-la refroidir quelques instants avant d'y toucher.
- N'exécutez aucune opération ni action d'une autre manière que celle indiquée dans ce manuel. En cas de doute, veuillez contacter votre distributeur ou service après-vente.



Le dispositif et la prise principale doivent toujours être accessibles facilement.

---

## Indicazioni di sicurezza importanti (Italian)

Prima di mettere in funzione la stampante, leggere attentamente le seguenti indicazioni.

- Non eseguire mai da sé gli interventi di manutenzione e riparazione, ma rivolgersi sempre a un tecnico di assistenza qualificato.
- Conservare le presenti istruzioni per l'uso in un luogo sempre accessibile.
- Collocare la stampante su una superficie stabile, per evitare che cada a terra.
- Non collocare la stampante in prossimità di gas facilmente infiammabili o di sostanze esplosive.
- Collegare la stampante a una presa di corrente con tensione adeguata.
- Per scollegare la stampante dalla rete di alimentazione, spegnere la stampante e disinserire sempre il connettore di rete dalla presa.
- Non esporre la stampante ad elevate temperature né alla luce solare diretta e alla polvere.
- Evitare il contatto della stampante con liquidi.
- Non esporre la stampante a colpi, scosse o vibrazioni.
- Verificare che la stampante e il computer siano spenti prima di collegare il cavo di trasmissione dati.
- Durante la stampa, la testina si surriscalda notevolmente. Prima di toccarla, se necessario opportuno quindi lasciarla raffreddare qualche istante.
- Non eseguire alcuna operazione o azione se non nella maniera descritta nel presente manuale. In caso di dubbio, contattare il rivenditore o dalla società incaricata dell'assistenza.



Il dispositivo e la presa di corrente devono essere sempre facilmente accessibili.

---

## Instrucciones de seguridad importantes (Spanish)

Lea las siguientes instrucciones con esmero antes de poner la impresora en servicio.

- Nunca lleve a cabo trabajos de mantenimiento o reparación Ud. mismo, sino consulte a un técnico de servicio calificado.
- Guarde las presentes instrucciones de servicio en un lugar de fácil acceso en cualquier momento.
- Ponga la impresora sobre un base estable de manera que no pueda caer al suelo.
- Nunca coloque la impresora en la vecindad de gases de fácil inflamabilidad o sustancias explosivas.
- Asegure conectar la impresora sólo a un enchufe con un voltaje correcto.
- Cuando quiera desconectar la impresora de la red, apague la impresora y siempre tire la clavija de alimentación del enchufe.
- No exponga la impresora a temperaturas altas, a la luz solar directa y al polvo.
- No ponga la impresora en contacto con fluidos.
- Nunca exponga la impresora a sacudidas, choques o vibraciones.
- Asegúrese de que la impresora y el ordenador estén apagados antes de conectar el cable de datos.
- La cabeza de impresión se pone muy caliente durante la impresión. Por lo tanto, deje enfriarlo algún tiempo antes de tocarla.
- No permita que se realice cualquier operación o acción de una forma diferente a lo que se señala en el manual. En caso de duda, póngase en contacto con su comerciante o con su servicio post-venta.



El dispositivo y la toma de corriente deben estar ubicados de forma que sea fácil acceder a ellos.

---

## Правила по технике безопасности. (Russian)

Прочитайте, пожалуйста, инструкцию по технике безопасности перед включением в работу принтера.

- Не выполняйте технические работы и ремонт техники самостоятельно, но сообщайте о неисправностях квалифицированным сервисным техникам.
- Данная инструкция должна быть всегда доступна каждому пользователю.
- Установите принтер на ровном и стабильном месте так, чтобы он не смог упасть на пол.
- Ни в коем случае не ставьте принтер вблизи легко воспламеняющихся газов и взрывчатых веществ.
- Включайте принтер в розетку только с соответствующим напряжением.
- Если Вы хотите отключить принтер от напряжения, сначала выключите принтер сам и затем выньте штекер из розетки.
- Берегите принтер от нагревания, от попадания на него прямых солнечных лучей и пыли.
- Не допускайте попадания жидкости на принтер.
- Нельзя подвергать принтер тряске, ударам и вибрации.
- Убедитесь, что принтер и компьютер выключены, только после этого соедините принтер с компьютером.
- Печатающая головка нагревается во время работы принтера. Поэтому подождите какое-то время, прежде чем дотронуться до нее.
- Пользуйтесь принтером так, как это написано в документации. Если у Вас возникают неясности, обращайтесь с вопросами к Вашим продавцам или в сервисный центр.



Устройство и розетка должны быть всегда легко доступна.

---

## Instruções Importantes sobre Segurança (Portuguese)

Leia as instruções de segurança antes de usar a impressora.

- Consulte sempre um técnico qualificado para executar uma reparação .
- Coloque a impressora sobre uma base sólida e nivelada, para que ela não sofra quedas.
- Jamais instale a impressora nas proximidades de lugares onde haja gás inflamável ou substâncias explosivas.
- Assegure-se de conectar a impressora à tomada elétrica com a voltagem apropriada.
- Quando desligar a impressora da rede, desligue sempre a impressora e retire o cabo da tomada.
- Não exponha a impressora a temperaturas altas ou luz solar direta.
- Não aproxime substâncias líquidas da impressora.
- Proteja a impressora de choques, impactos e vibrações.
- Desligue a impressora e o computador antes de conectar o cabo da rede.
- A cabeça da impressora pode ficar muito quente . Portanto, espere algum tempo antes de tocá-la.
- Não faça nenhuma operação ou ação além das recomendadas neste manual. Em caso de dúvida, contate seu revendedor ou companhia de serviço.



A impressora e a tomada devem ser facilmente em todos os momentos acessíveis.

---

## ÖnemliGüvenlik Talimatları (Turkish)

Lütfen, yazıcıyı işleme geçirmeden önce bu güvenlik talimatlarını bütünüyle dikkatleokuyun.

- Bakım ve tamir çalışmalarını kesinlikle ve hiçbir surette kendi başınıza yapmayın; her zaman kalifiye bir uzman servis-teknisyenine haber verin.
- Yazıcıyı, üzerinden yere düşmesimümkün olmayacak sabit ve düz bir zemine yerleştirin.
- Yazıcıyı kesinlikle ve hiçbir surette kolayca yanabilecek gaz veya patlayıcı maddeler içeren nesnelerin yakınına koymayın.
- Yazıcı kablolarını sadece doğru gerilime sahip bir prize takın.
- Yazıcıyı şebeke ağından ayırmak istediğinizde, yazıcıyı kapatın ve ağ-fişini her zaman prizden çıkartın.
- Yazıcıyı ne yüksek ısı ne de doğrudan güneş ışığına ve toza mâruz kalan mekânlarda bulundurun.
- Yazıcı hiçbir sıvı maddeyle temasta olmamalıdır.
- Yazıcı hiçbir sarsıntıya, darbeye veya titreşime mâruz kalmamalıdır.
- Veri kablosu bağlanmadan önce hem yazıcının hem de bilgisayarın kapalı olduklarından emin olmalısınız.
- Yazıcının başı basma esnasında yüksek ısıya ulaşıyor. Bu yüzden lütfen dokunmadan önce kısa süre soğumasını bekleyin.
- Yazıcının işletimi ve kullanımında bu dokümantasyondaki talimatların hiç dışına çıkmayın. Sorunlu görülen hususlarda lütfen imalatçınıza veya müşteri hizmetleri servisinize başvurun.



Cihaz ve elektrik prizinin her zaman kolayca erişilebilir olması gerekir.

## TRADEMARK ACKNOWLEDGEMENTS

“IBM” is a trademark of International Business Machines Corporation.

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“SAP” is a trademark of SAP AG.

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All other product names and company names appearing in this manual are the registered trademarks or trademarks of the individual companies.

## APPROVALS



This device fulfils the European standards requirements by complying with the Directive relating to electromagnetic compatibility and relating to low-voltage electrical equipment. Furthermore, it fulfils the requirements for RoHS and RED if applicable.

Conformity with the above-mentioned Directives is indicated by the CE symbol attached to the device.

Note: Conformity may be affected by:

- using interface cables not complying with the specifications
- non-observance of important instructions in the operator's manual
- installing components not approved for this device by the manufacturer
- unauthorized manipulation



Dieses Gerät erfüllt die Anforderungen der Europäischen Normen durch Einhaltung der Richtlinien bezüglich der Elektromagnetischen Verträglichkeit sowie bezüglich Elektrischer Betriebsmittel mit Niederspannung. Des Weiteren werden die Anforderungen bezüglich RoHS und falls anwendbar RED erfüllt.

Die Konformität zu den oben angeführten Richtlinien ist durch das am Gerät angebrachte CE-Zeichen gekennzeichnet.

Hinweis: Die Konformität kann beeinflusst werden durch:

- Benutzung von nicht spezifizierten Schnittstellen
- Nichtbeachtung wichtiger Hinweise der Bedienungsanleitung
- Ersetzen von Bauteilen, die nicht vom Hersteller für dieses Gerät freigegeben wurden
- Eingriffe durch Unbefugte



This device complies with the requirements of the United Kingdom (UK) legislation of Electrical Safety Regulations, Electromagnetic Compatibility Regulations, if applicable the Radio Regulations and the Restriction of the Hazardous Substances in Electrical and Electronic Equipment Regulations.

---

## FCC STATEMENT

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
  - i. This device may not cause harmful interference.
  - ii. This device must accept any interference received, including interference that may cause undesired operation.
2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.



---

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

---

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with Dascom instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orientate or relocate the receiving antenna.
- Increase the separation between the equipment (printer) and receiver.
- Connect the equipment into an electrical outlet on a circuit different from that to which the receiver is connected.
- Consult your dealer or an experienced radio/TV technician for help.

## RF Exposure

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

## About This Manual

This manual provides information to operators of DL-2100 to describe basic operation to enable safe and correct use of the printer.

## Symbol Description

The symbols in this manual are identified by their level of importance, as defined below. Read the following carefully before handling the product.



CAUTION: Provides information that must be observed to prevent damage to the equipment or data loss.



NOTE: Advises you of information that is essential to complete a task.



CAUTION: Hot ! Do not touch the parts till the printer has been switch off in half hour, otherwise it will hurt your fingers.



CAUTION: Sharp edges, do not touch.

## Related Software and Documents

Related Software and Documents

| Software/document name | Description  |
|------------------------|--------------|
| DL-2100 User Manual    | This manual. |

**This printer could be used in areas below 2000m altitude only.**

**Warning: Do not ingest battery, Chemical Burn Hazard.**

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## CHAPTER 1 INTRODUCTION

Dascom designs this Professional Thermal Printer with the resolution of 203 dpi (dots per inch) printing at 10 ips (inches per second). Multiple emulations supporting ZPL, AEA, best fit for boarding pass, baggage tag application printing.

### 1.1 Product Features

- Provides Dascom professional label software for users, easily realizes various barcode label design and printing under windows system. It is the best solution for barcode label users to improve their work efficiency.
- Upper tear structure design, can correspond to very narrow label tearing, respect the user's habit, more convenient to use.
- Automatic paper grip function, no need to open the print head, directly load the paper from the rear.
- Cutter mode, the paper drops after printing the entire content.
- Grip mode, after printing a complete label, hold the current sheet of paper and remove it manually. Grip time can be set according to actual needs.
- Multiple interfaces are available. Standard USB interface and serial interface, optional Ethernet interface, to meet the user's different device connection requirements.

This user manual provides all the information needed to perform the daily operation of the printer.

## 1.2 Specifications

|                                 |                        |                                                                                                                 |
|---------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------|
| <b>Printer</b>                  | Print mode             | Direct thermal                                                                                                  |
|                                 | Print width(max)       | 80mm                                                                                                            |
|                                 | Media width            | 83mm(max)                                                                                                       |
|                                 | Print resolution       | 203dpi                                                                                                          |
|                                 | Print speed (max)      | 5-10 ips (127 mm/sec.)                                                                                          |
|                                 | Command set            | ZPL、ATB、BTP、BPP command set                                                                                     |
|                                 | Character set          | GB18030, ASCII                                                                                                  |
|                                 | Barcode set            | One-dimensional barcode, two-dimensional barcode                                                                |
|                                 | LED                    | 2 LEDs                                                                                                          |
|                                 | Button                 | 1 Cancel button                                                                                                 |
|                                 | buzzer                 | Yes                                                                                                             |
|                                 | Paper feed mode        | Rear fold paper, rear baggage tag bin                                                                           |
|                                 | Tear mode              | Manual tear (Upper tear)                                                                                        |
|                                 | Convenience function   | Auto grip (rear)                                                                                                |
| <b>Print media</b>              | Type                   | Thermal roll paper (continuous paper, label paper, black mark paper), thermal fold paper                        |
|                                 | Thermal direction      | boarding pass (up)、baggage tag (inward)                                                                         |
|                                 | Thickness              | 0.08~0.254mm                                                                                                    |
|                                 | Core ID                | 76.2mm                                                                                                          |
|                                 | Paper roll OD          | Max. 160mm                                                                                                      |
| <b>Sensor</b>                   | Standard               | Open cover sensor, paper end sensor, label sensor, black mark sensor, paper tear sensor, rear grip paper sensor |
| <b>Memory</b>                   | SDRAM                  | 32M bytes                                                                                                       |
|                                 | Flash                  | 16M bytes                                                                                                       |
| <b>Buffer</b>                   |                        | 256K bytes                                                                                                      |
| <b>Port</b>                     | Standard               | USB 2.0/RS232(9pin)                                                                                             |
|                                 | Optional               | Ethernet interface                                                                                              |
| <b>Environmental parameter</b>  | Operation environment  | 5~40℃ / 30~80%RH (no condensation)                                                                              |
|                                 | Storage environment    | -10~50℃ / 10~90%RH (no condensation)                                                                            |
| <b>Physical characteristics</b> | Dimension              | 168.6mm*145mm*281mm                                                                                             |
|                                 | Weight                 | About 4.8kg                                                                                                     |
| <b>Reliability</b>              | MTBF                   | 10000H                                                                                                          |
| <b>Adapter</b>                  | input                  | AC 100~240V, 50~60Hz, 1.5A Max                                                                                  |
|                                 | output                 | DC 24V 2.5A                                                                                                     |
| <b>Option</b>                   |                        | NA                                                                                                              |
| <b>Certification</b>            |                        | CE, FCC, ETL                                                                                                    |
| <b>Noise</b>                    |                        | Less than 65dB                                                                                                  |
| <b>Software</b>                 | SDK                    | Android, IOS                                                                                                    |
|                                 | DEMO'S                 | Android, IOS                                                                                                    |
|                                 | Driver and Config tool | Windows Vista/XP/7/8/8.1/10 (32bit/64bit)                                                                       |

## 1.3 Consumables Requirements



**Important** reminder: To achieve uninterrupted high-quality printing, we strongly recommend using Dascom branded consumables. Specially designed various types of paper, polyethylene, polyester, and vinyl products can improve the printing performance of printers and prevent premature wear of print heads.

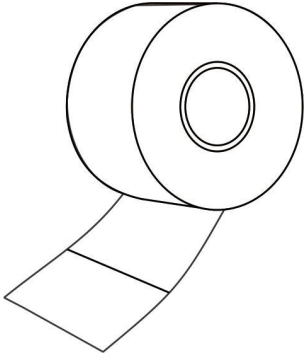
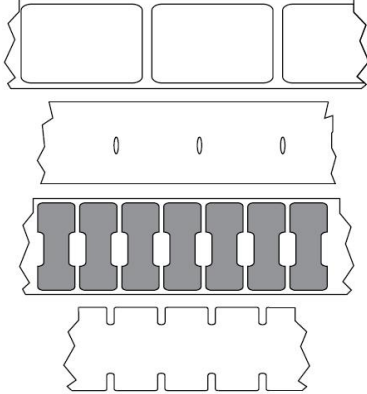
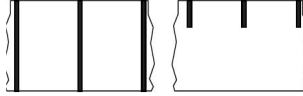
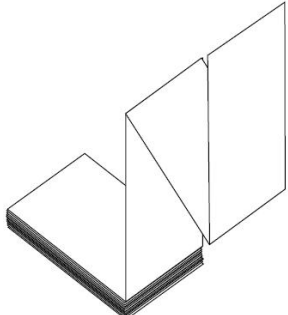
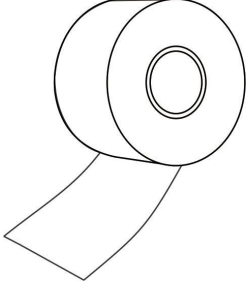
Your printer can use various media types:

- Boarding pass (thermal)
- Baggage tag
- Continuous Rolling Media - Most continuous rolling media are thermally sensitive (similar to fax paper) and suitable for receiving receipts or printing tickets.
- Label Material - Labels are typically made of thick paper (with a maximum thickness of 0.0075 inches/0.19 millimeters). The label material has no stickiness or backing, usually with pre perforations between each label.

For detailed information on basic media types, please refer to the table below.

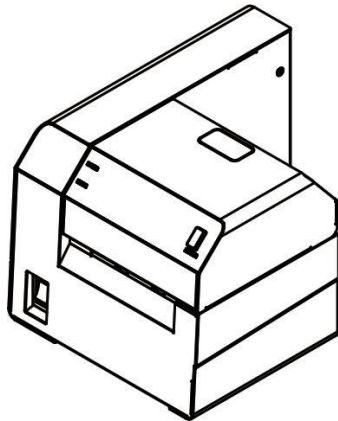
Printers generally use roll media, but foldable media or other continuous media can also be used.

The correct medium must be selected based on the desired printing type, and thermal sensitive media must be used.

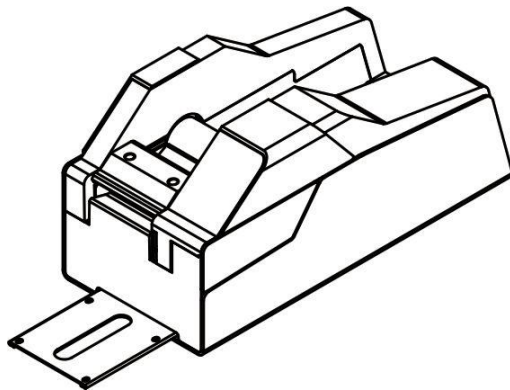
| Media type                         | Appearance                                                                          | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Discontinuous paper roll</b>    |    | <p>The rolling medium can be wound on paper cores with a diameter of 12.7 to 38.1 millimeters (0.5 to 1.5 inches). The label comes with adhesive backing that can be glued onto the lining, and is separated by gaps, notches, cut holes, or black markings. The label is separated by perforations. A single label is separated by one or more of the following methods:</p> <p>Mesh media are separated by gaps, cuts, or notches.</p>  <ul style="list-style-type: none"> <li>• <b>Blackmark media:</b> The pre-printed black mark on the back of the media shows the separating position of the label.</li> </ul>  <ul style="list-style-type: none"> <li>• The pre-perforated media has perforations that allow easy separation between labels. The media may also have a blackmark or other separation between the labels.</li> </ul>  |
| <b>Discontinuous folding paper</b> |  | <p>A folded medium folded in an interlaced manner. Foldable media can have the same segmentation method as discontinuous media rolls. The segmentation position can be located at or near the folding point.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Continuous paper roll</b>       |  | <p>The rolling medium can be wound on paper cores with a diameter of 12.7 to 38.1 millimeters (0.5 to 1.5 inches). Continuous rolling media does not have gaps, cuts, notches, or black markings to indicate the position of label separation. Images can be printed anywhere on the label. You can use a paper cutter to cut individual labels open. If using continuous media, a transmissive (gap) sensor should be used so that the printer can detect the delivery of the media.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## 1.4 Physical Dimension

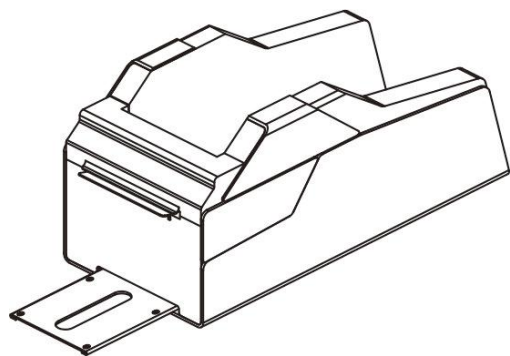
- Printer dimension: 168.6mm\*145mm\*281mm



- baggage tag bin dimension: 168.6mm\*145mm\*407mm



- boarding pass bin dimension: 124mm\*123.2mm\*407mm

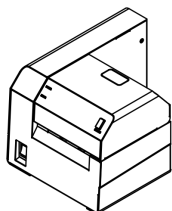


## 1.5 Unpack the Printer

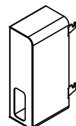
Unpack and inspect if any shipping damage or missing parts compared with the packing list:

- \*Save all packing materials.
- \*Check if any exterior damages.
- \*Open the printer and inspect if any damages in the media compartment.

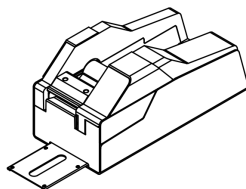
If you find shipping damage, keep the packing materials and notify the re-seller.



Printer

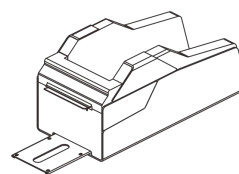


Cable hub

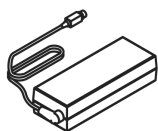


Baggage tag bin

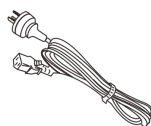
or



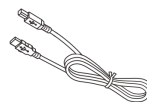
Boarding pass bin



Power adapter



Power cord



USB cable



Serial cable



A screw \* 4



B screw \* 1

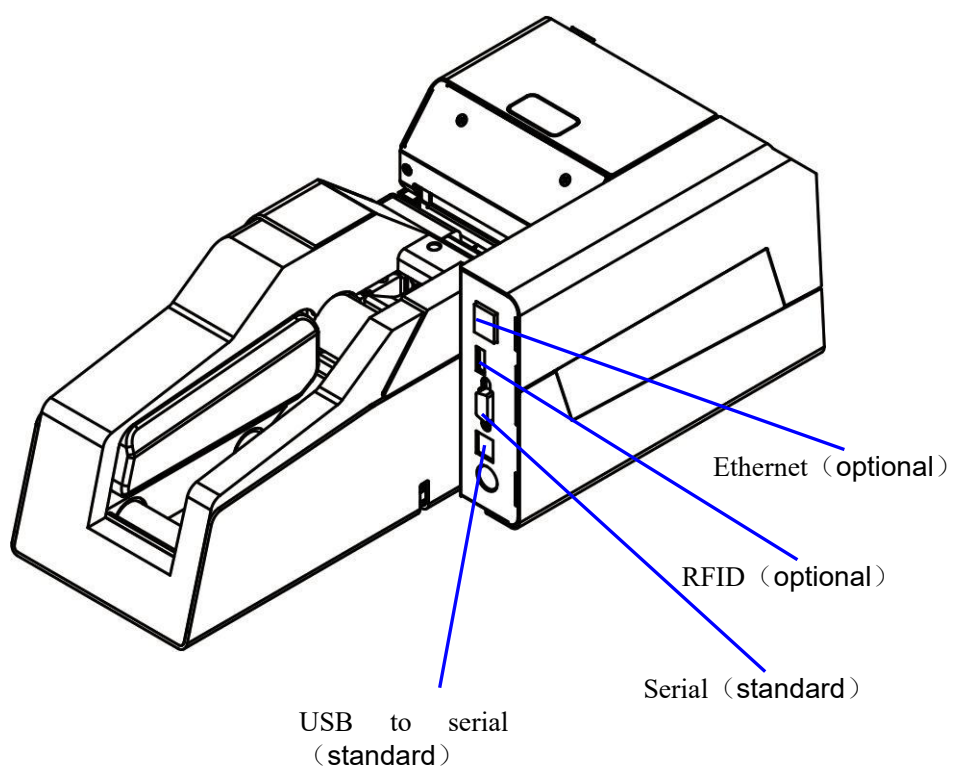


The package contents vary with different customized order requirements.

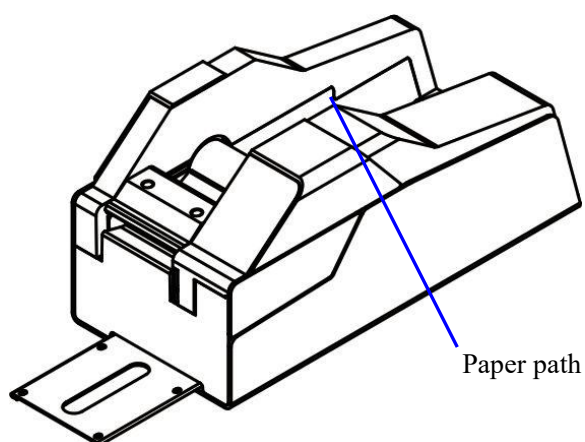
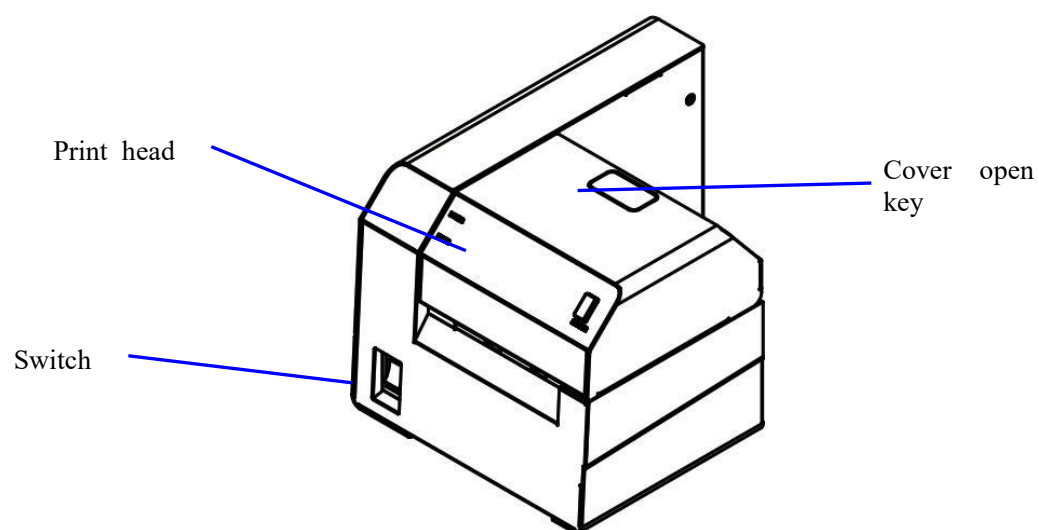
### Package Contents:

|                 | Part name          | Qty      | Remark                               |
|-----------------|--------------------|----------|--------------------------------------|
| <b>Standard</b> | Printer            | 1 unit   |                                      |
|                 | Cable hub          | 1 piece  |                                      |
|                 | Bin                | 1 piece  | baggage tag bin or boarding pass bin |
|                 | Power adapter      | 1 piece  |                                      |
|                 | Power cord         | 1 piece  |                                      |
|                 | USB cable          | 1 piece  |                                      |
|                 | Serial cable       | 1 piece  |                                      |
|                 | A screw            | 4 pieces |                                      |
|                 | B screw            | 1 pieces |                                      |
|                 | Installation guide | 1 pieces |                                      |

interface



## 1.6 Main Components



| Part Names     | Descriptions                  |
|----------------|-------------------------------|
| Print head     | Main part of the printer.     |
| Cover open key | Open print head assy.         |
| Switch         | Switch on or off the printer. |
| Paper path     | Space for media roll.         |

## 1.7 Control Panel Operation

### 1.7.1 LED Indications

| LED    | LED status                                     | Display                             | Description                                            |
|--------|------------------------------------------------|-------------------------------------|--------------------------------------------------------|
| Status | Power LED ON                                   | Online<br>Ready                     | The printer is powered on and in standby state.        |
|        | Power LED OFF                                  | No display                          | Power off or failure.                                  |
|        | Error LED ON                                   | Cover open error<br>Clear the error | Print head component is opened.                        |
|        | Error LED ON                                   | Paper out error<br>Insert paper     | Paper is used up.                                      |
|        | Error LED ON                                   | Sensor jam error<br>Remove media    | No identification bit is detected or paper load error. |
|        | Power LED and Error LED blinks alternatively   | FW upgrade mode                     | Enter the FW upgrade state.                            |
|        | Power LED and Error LED blink at the same time | FW upgrading...                     | FW is upgrading.                                       |

### 1.7.2 Paper Key Operation

1. Label mode while standby, a press feeds the media 1 page.
2. Label mode while standby, holding this button feeds the media until the button is released.
3. Holding this button while power on the printer, may select to print self test page or Hex-dump.

## CHAPTER 2 INSTALLATION

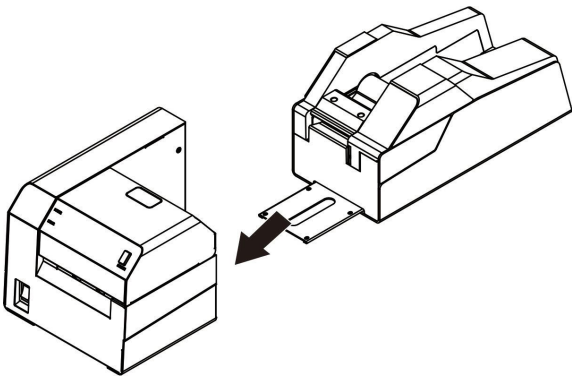
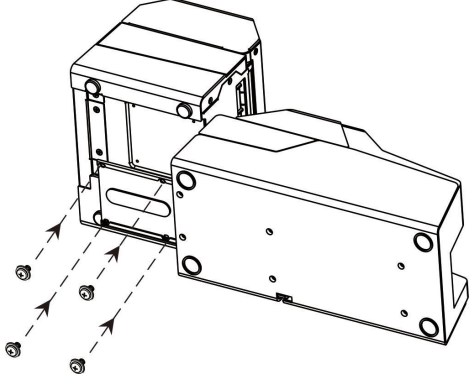
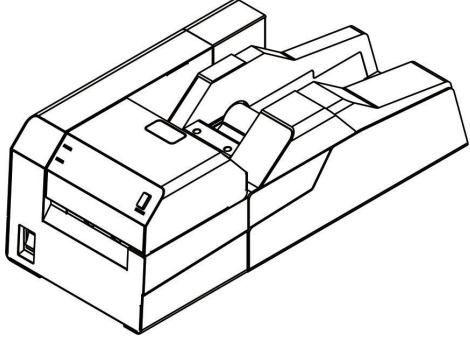
### 2.1 Proper Environment for Installation and Operation

Before installing the printer, first determine a suitable place to put the printer. Place the printer on a stable, flat work platform, ensure that the printer cannot be easily moved, ensure that it is easy to operate the control panel and change the paper roll, and ensure that the printer has enough paper path.

After choosing the location for the printer, please pay attention to following:

- \*The printer should be installed in a smooth and stable place. Horizontal installation is recommended.
- \*When inclined installation, the tilt angle should not exceed 10° (printing and paper feeding direction). \*Do not tilt in other directions.
- \*Keep the printer away from water.
- \*Avoid placing the printer in places where it may vibrate or shock.
- \*Ensure safe grounding of the printer.
- \*When operate and maintain printers, reserve a large enough space to ensure the stable running of printers and easy operation of users.

## 2.2 Installing the Bin

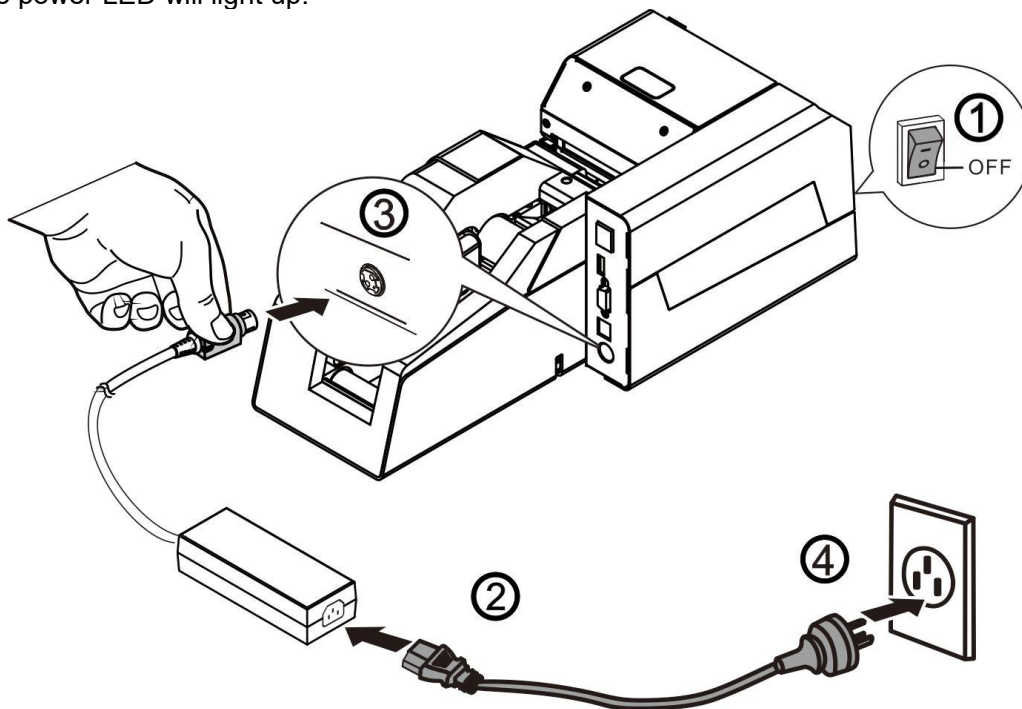
|                                                                                     |                                                                                                                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p>Open the box separately and take out the printer and paper bin. The printer in front, the paper bin in back, put the two together.</p> <p>(Because the installation structure of baggage tag and boarding pass are the same, this section uses the installation of baggage tag as an example.)</p> |
|   | <p>Use 4 screws to fix the printer and paper bin.</p>                                                                                                                                                                                                                                                 |
|  | <p>Install firmly.</p>                                                                                                                                                                                                                                                                                |

## 2.3 Connecting the Power



Important: Check the voltage rating of the power source complies with that of the printer; incorrect voltage of the power source may cause hazard and damage the printer.

1. Switch off both the PC and the printer.
2. Connect the connector of the detachable cable to the printer power socket and adapter.
3. Connect the power plug to the wall socket.
4. If media and ribbon are installed, toggle the power switch to ON position to turn on the printer and the power LED will light up.



Important:

1. Hold the power plug to unplug the power.
2. Pulling the power cord by force to unplug the power may break the power cord causing fire and electric shock.

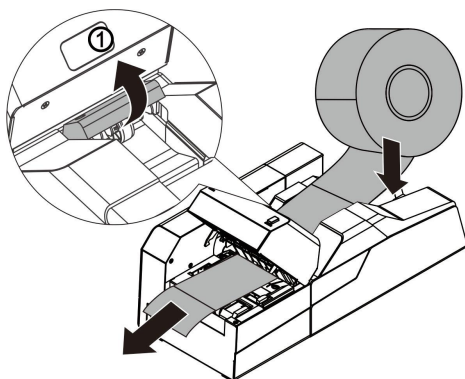
Turn off the power if the printer is not in use for long period.

## 2.4 Loading the Roll Paper



- The correct media for the desired print type must be used. This model must use thermal media.

To determine if the media is heat sensitive, use a fingernail or pen cap to rub the printed surface of the media. If no black marks appear on the media, the media is a heat transfer material and a carbon strip is required. If black marks appear on the media, the media is a heat-sensitive material and no carbon tape is required.

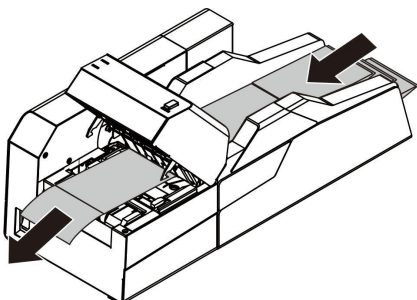


Use printer and baggage tag to print:

- Open the print head assembly and place the roll in the bin.
- ① Open the baggage tag and put the paper in the paper path from back to front.
- Install in place and cover the print head assembly.



Print side up.



Use printer and boarding pass to print:

- Open the print head assembly.
- Put the paper in the paper path from back to front.



Print side up.

In order to make the content accurately printed within the baggage tag, you need to perform media registration:

- First put in the baggage tag, hold down the paper feed key and power on. When the printer prints out the menu function, it enters the menu, release the paper feed key.
- Press the paper key to roll the menu page, until "media registration" page, long press the paper key, start the media registration.



The following situations require media registration:

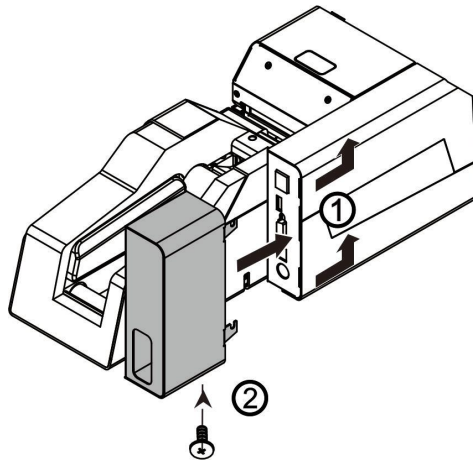
- \* The baggage tag has been printed incorrectly
- \* A blank tag appears in the middle of continuous printing
- \* A baggage tag cannot be correctly identified during continuous printing
- \* A baggage tag cannot be recognized when you replace a baggage tag of another size

If the auto media registration function is enabled, the printer automatically performs label check every time you turn on the machine and open and close the cover.

## 2.5 Installing the Cable Hub

To facilitate the straightening of cables such as power cable and interface cables, you can install a cable hub after installing the cables.

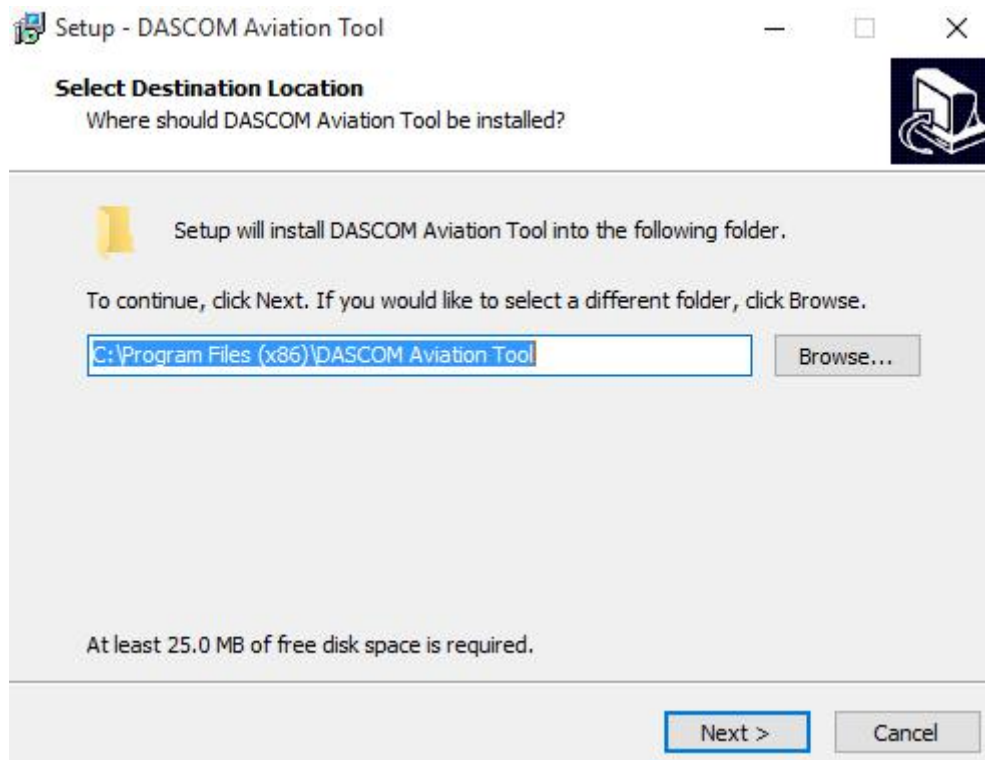
- ① Insert the slot of the cable hub into the corresponding position.
- ② Tighten one screw and install it.



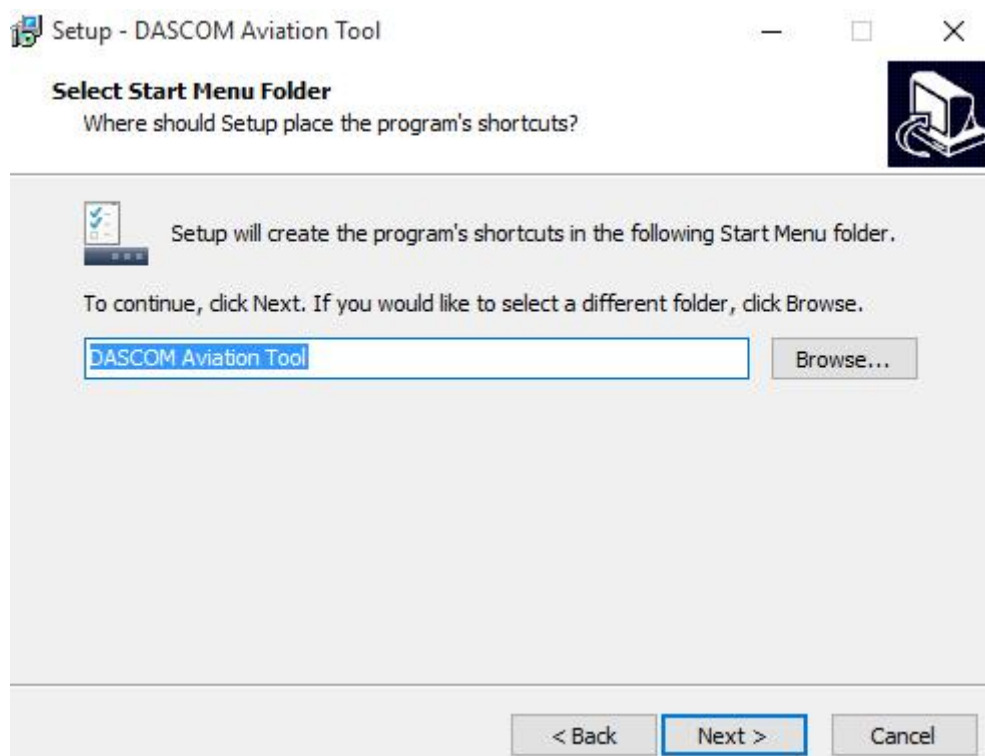
## CHAPTER 3 SOFTWARE APPLICATION

### 3.1 Installing the Aviation Tool

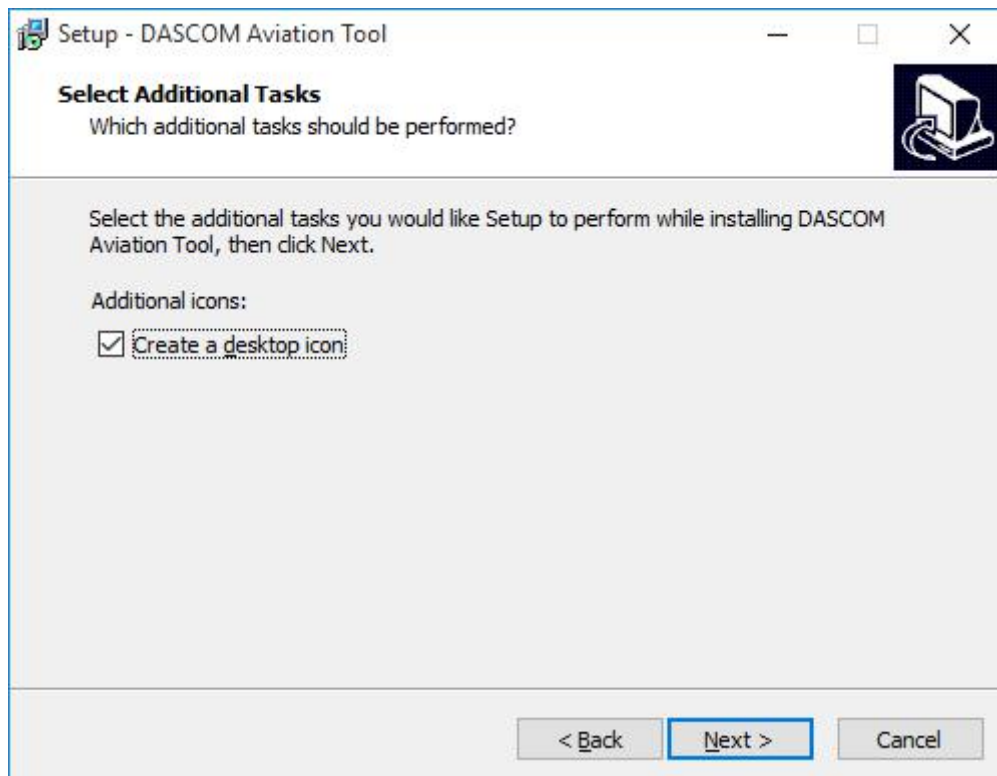
- (1) Double-click the installation package to start the installation wizard.
- (2) Customize the installation path of the aviation tool, click Next.



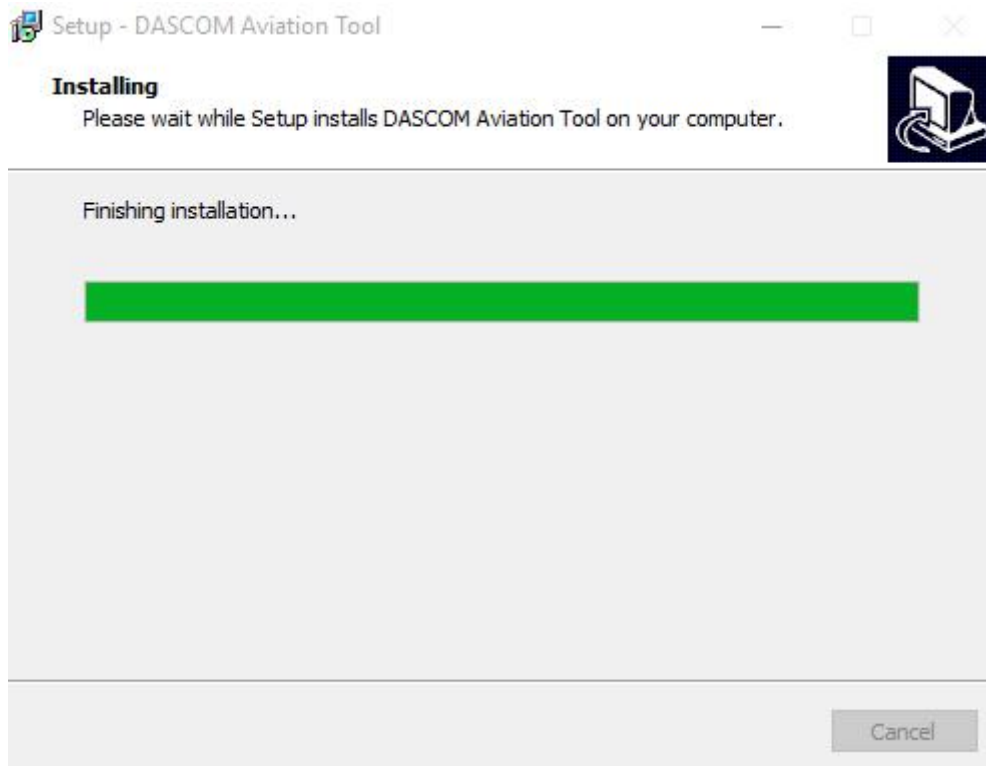
- (3) Customize the Start Menu folder and click Next.



- (4) Select whether to create a desktop shortcut, click Next.



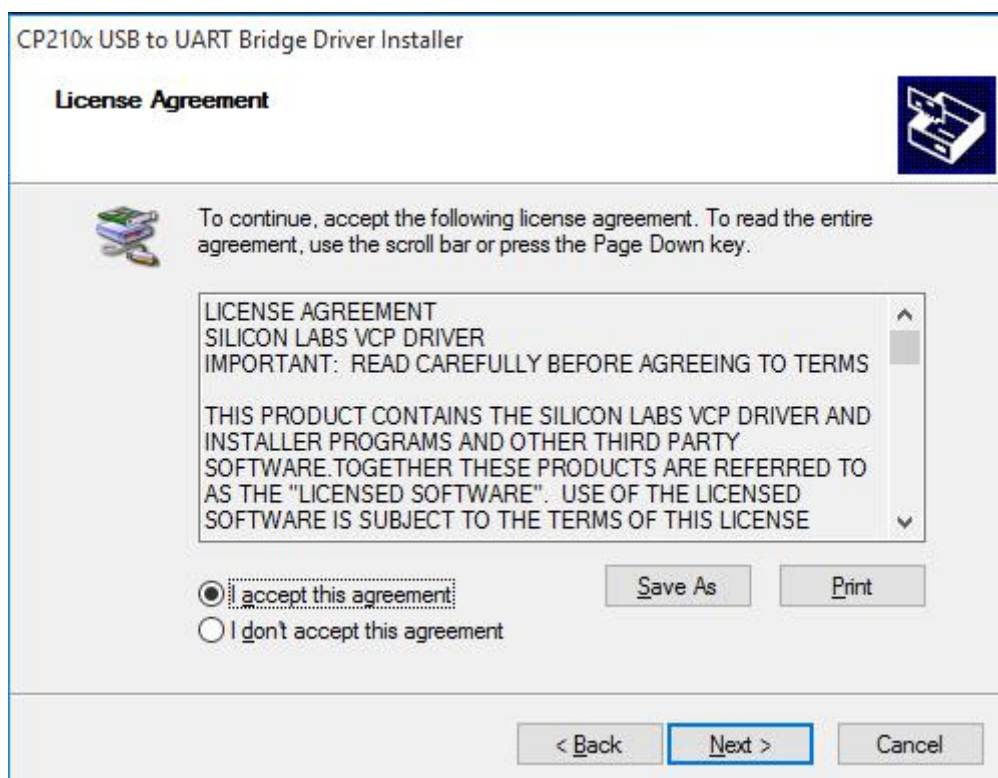
- (5) When the installation window appears, do not close the current program and wait for the installation to finish.



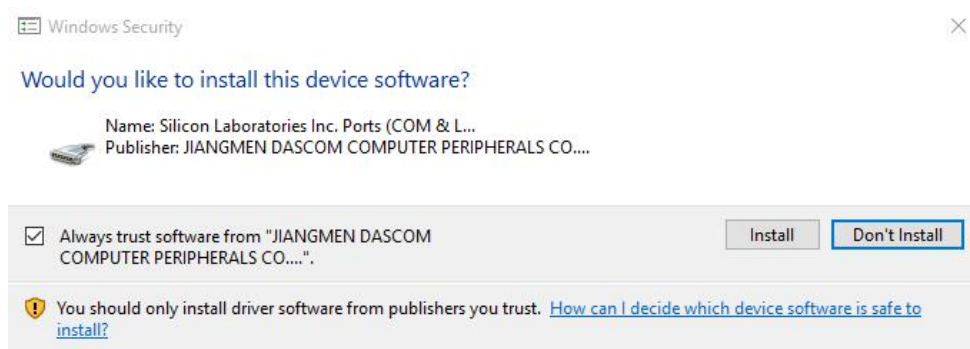
(6) After the installation wizard prompts installation is completed, click Next to complete the installation process for driver.



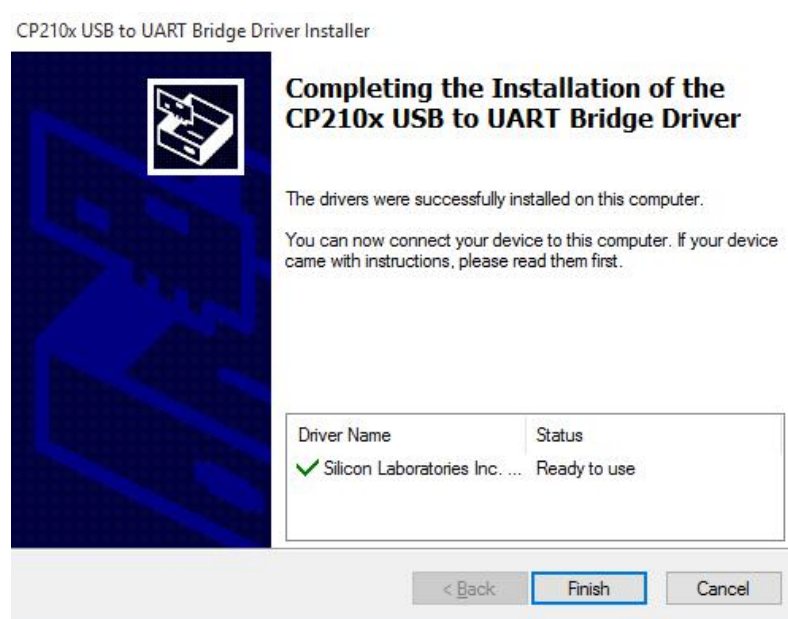
(7) Accept the license agreement to continue.



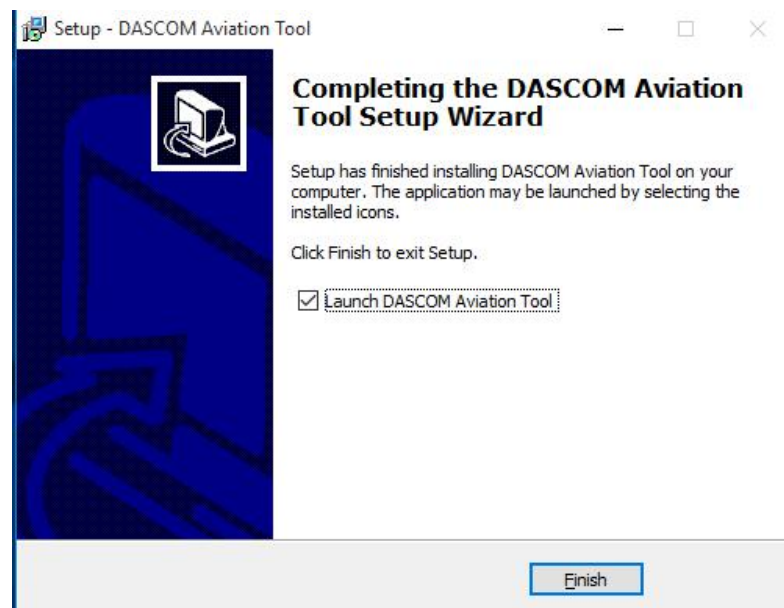
(8) Install USB to UART device.



(9) Click Finish to complete the installation of driver.

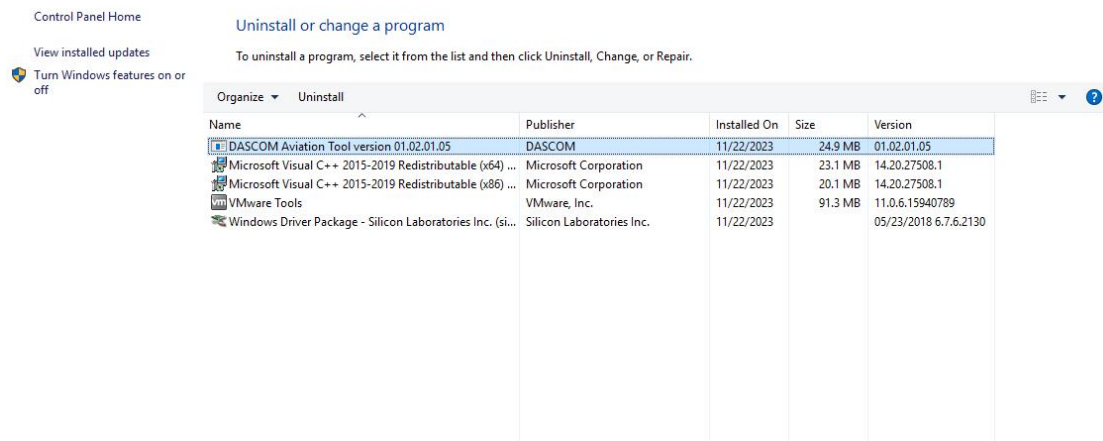


(10) Click Finish to complete the installation of Aviation Tool.

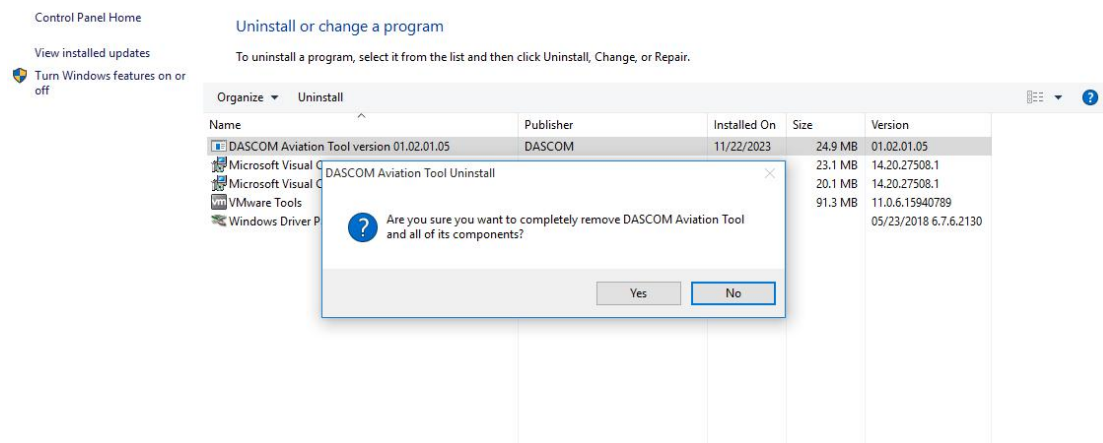


## 3.2 Uninstalling the Aviation Tool

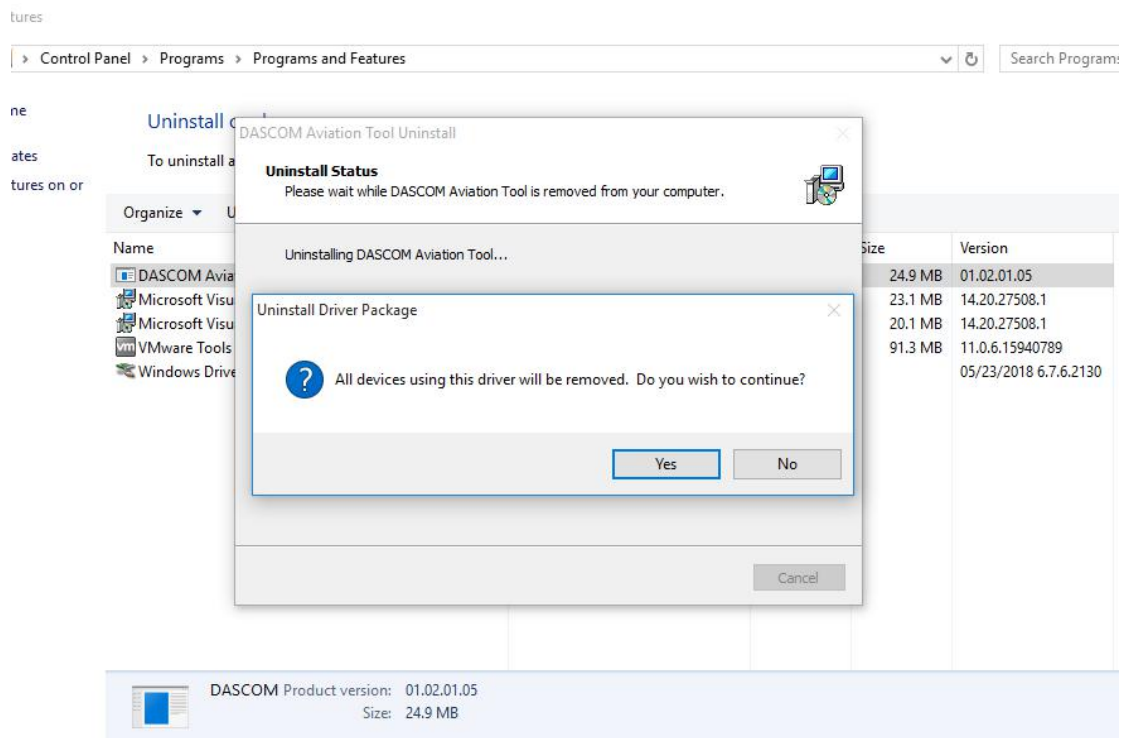
- (1) Open "Control Panel \ Programs \ Programs and Functions" and find the Aviation Tool.



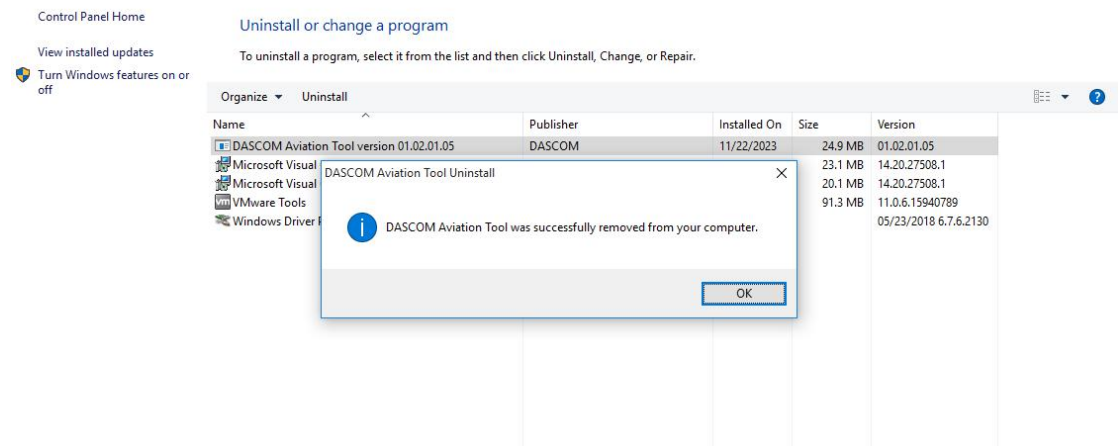
- (2) Double-click Aviation Tool enter the uninstall procedure and click Yes.



(3) Uninstall tool asks again whether to uninstall, click "Yes".



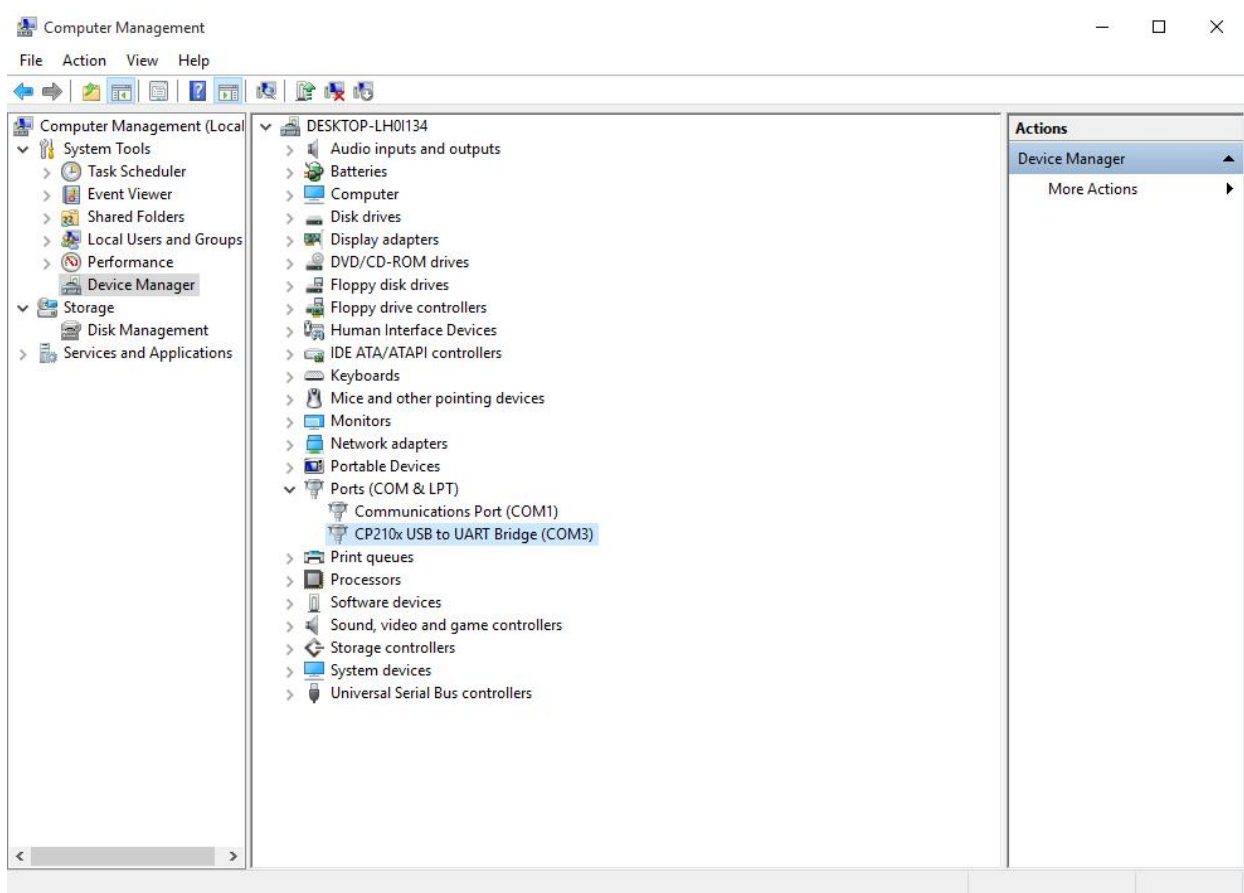
(4) If the uninstallation tool prompts that the uninstallation succeeds, click OK to exit the uninstallation program.



## 3.3 Using the Aviation Tool

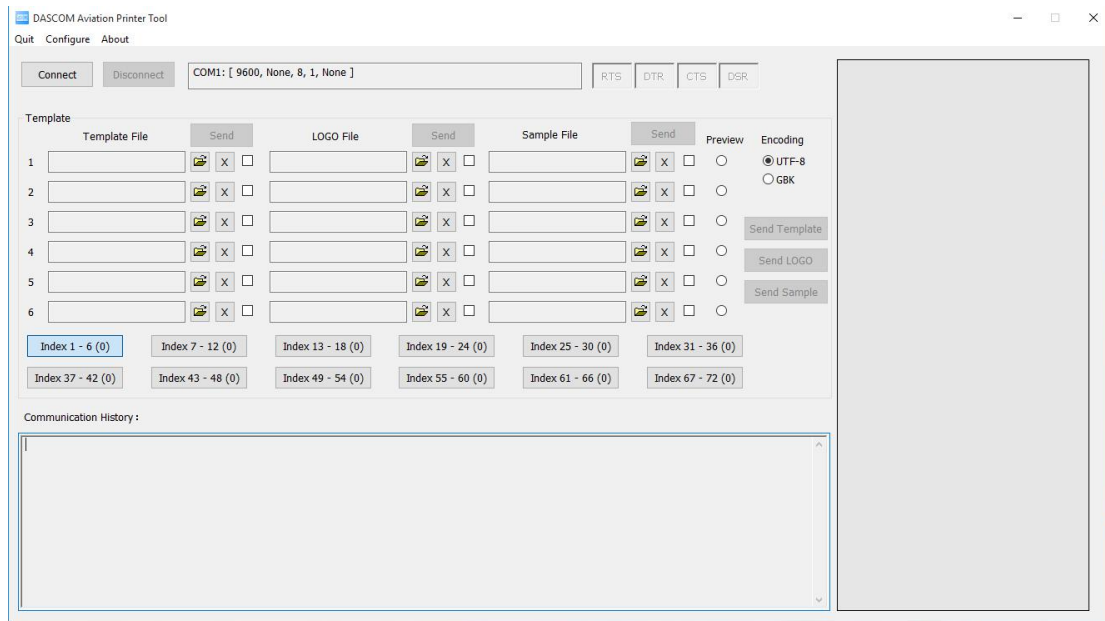
### 3.3.1 Connecting the Printer

- (1) Before officially opening the printer power supply, please connect the power cord and the USB data cable between the printer and the computer.
- (2) Turn on the printer switch and the printer starts.
- (3) After the printer is started, the LCD panel will display "DASCOM DL-2100" and the current printer status information.
- (4) Before printing, please open the device Manager -> Port of the computer to confirm the existence of the following devices: "CP210x USB to UART Bridge(COM?)"
- (5) The COM? in the device name varies according to the port assigned by the operating system. Please select the corresponding port when connecting with the aviation tool.
- (6) If the device manager cannot display the correct port device. Reconnect the printer or reinstall the aviation tool.

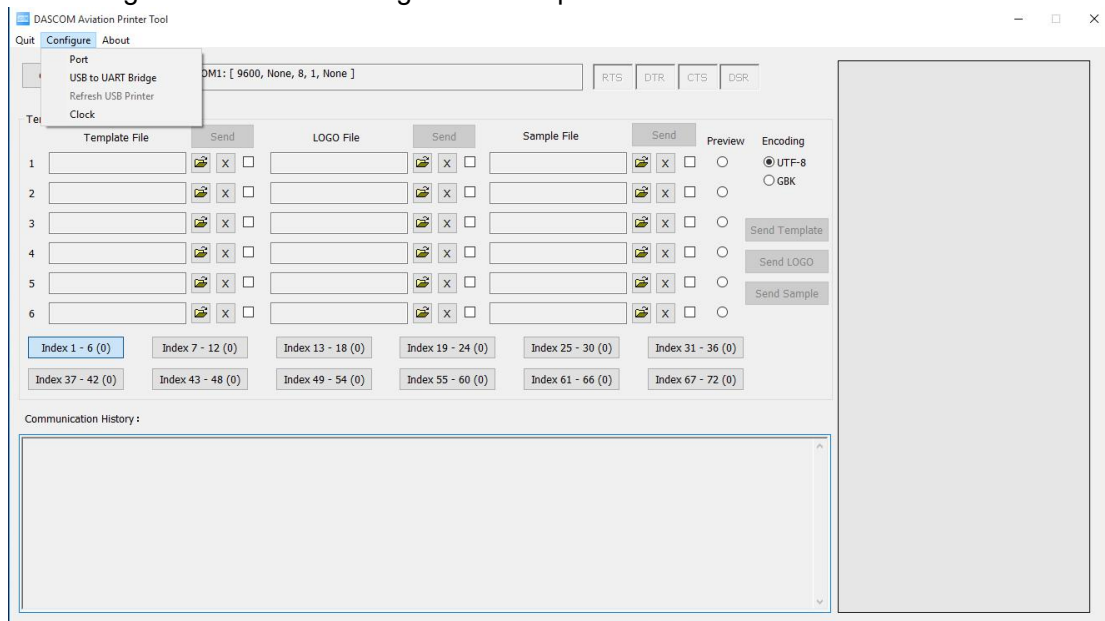


### 3.3.2 Port Setup and Connect

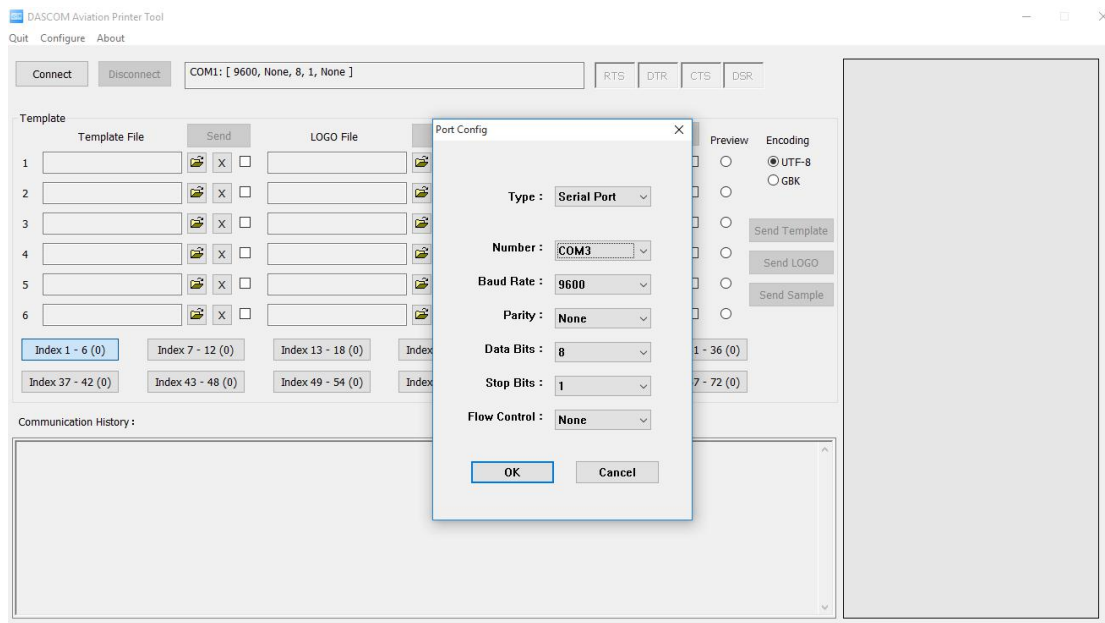
#### (1) Open aviation tool



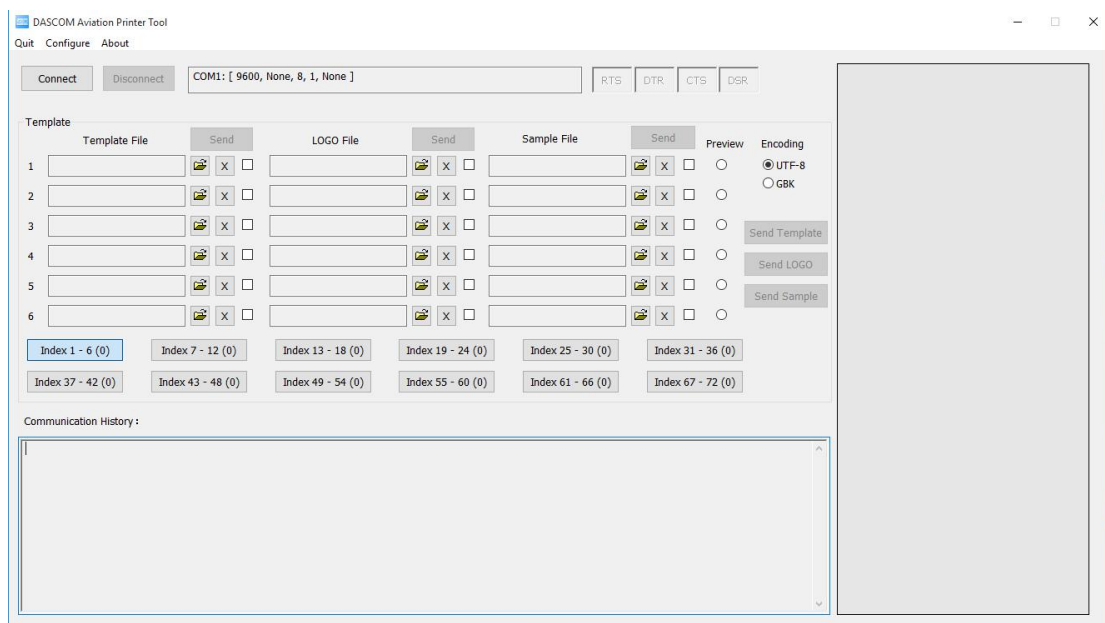
#### (2) Click Configuration -> Port Settings to set the port to be connected.



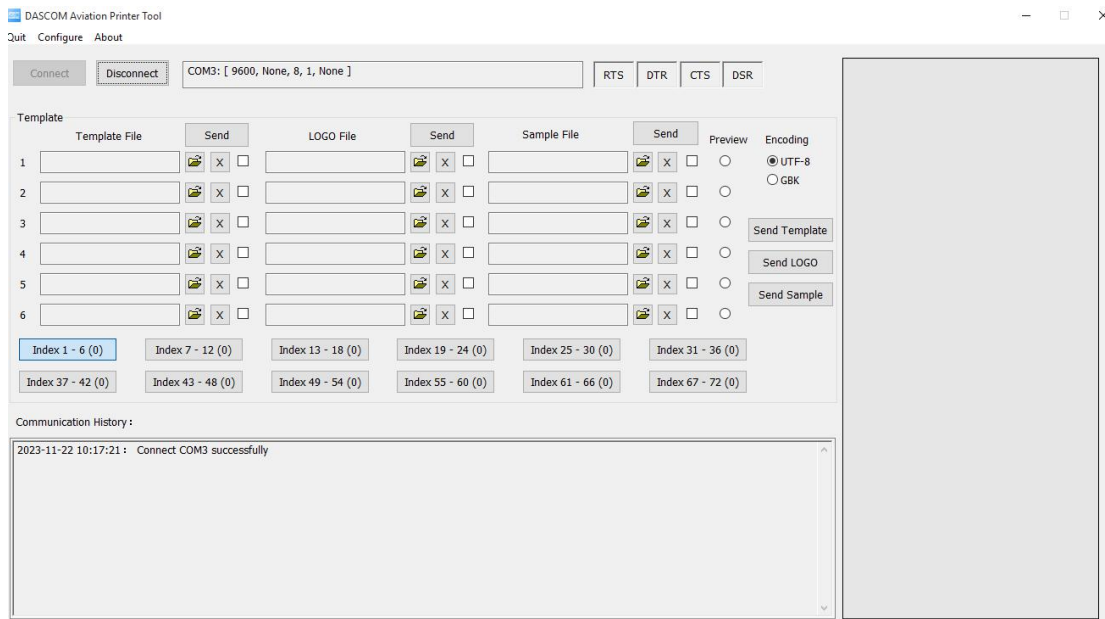
- (3) Set detailed port information in the Port Settings window.



- (4) After the settings are complete, you will see the current port information in the connection button column. Click connect to connect to the specified port.

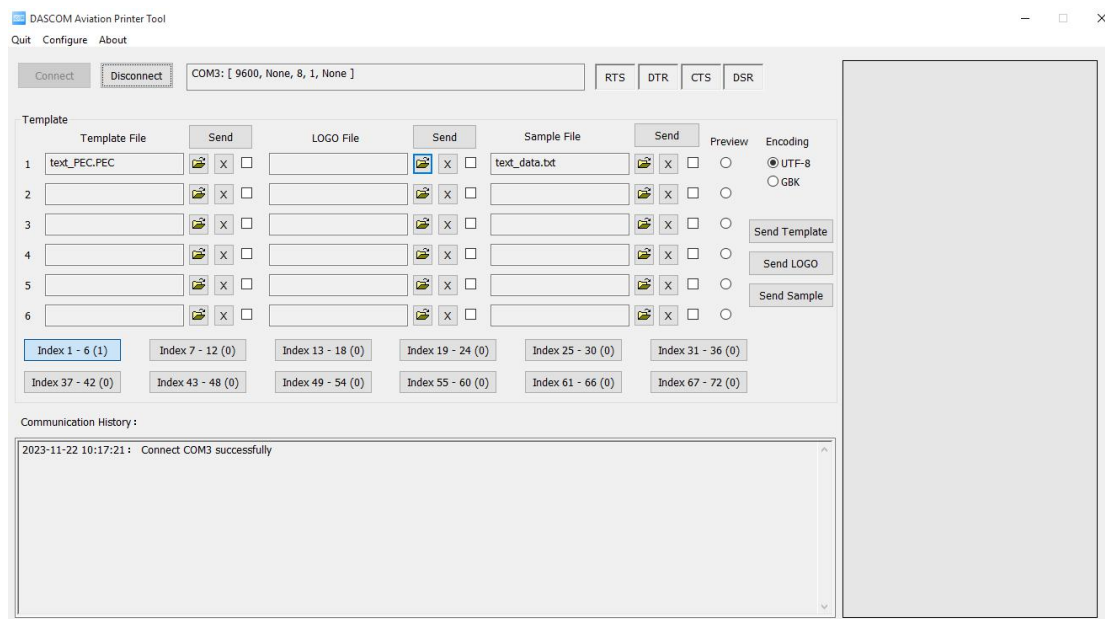


(5) After the connection is successful, the bottom Communication Data generates a Log indicating the connection is successful.



### 3.3.3 Add File

(1) Click  to add templates, logos and sample data files. Click  to delete the files.



### 3.3.4 Data Group

(1) The tool provides you with a data grouping, recording the files of each grouping application for easy management.

(2) The red box area in Figure 1 and Figure 2 is the organizing interface.

(3) The orange boxes in Figures 1 and 2 are the serial numbers of organizing applications

(4) Organizing instructions:

Referring to the orange box area in Figure 1, the button appears with blue background, representing the currently selected group.

Text: Serial number 1-6(2), where Serial number 1-6 indicates the serial number displayed in the group.

(2) indicates the number of template files added to the group.

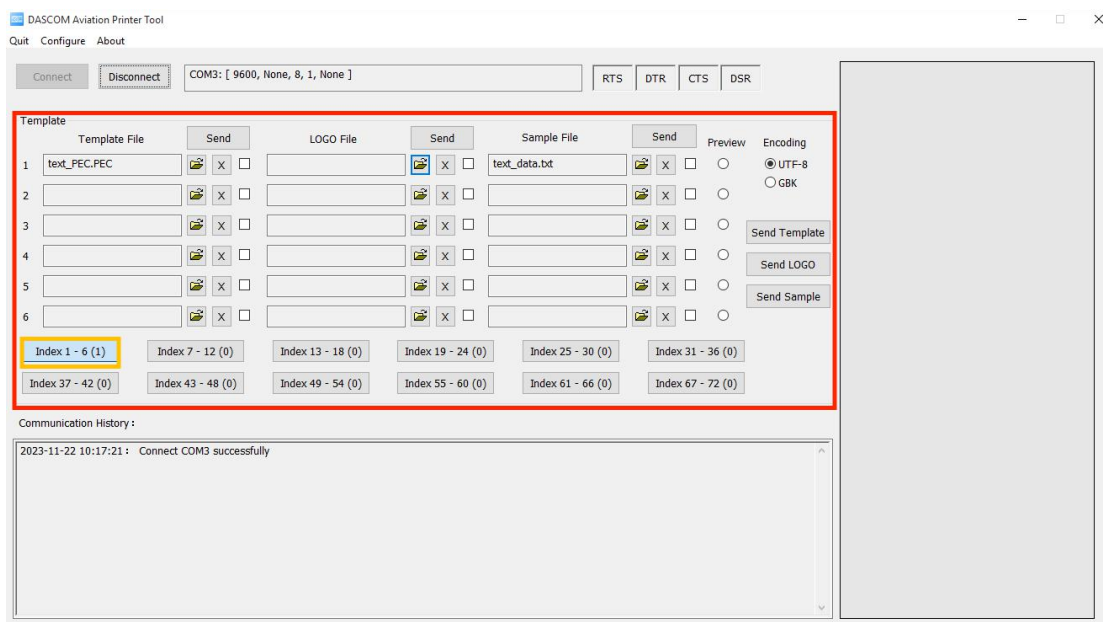


Figure 1

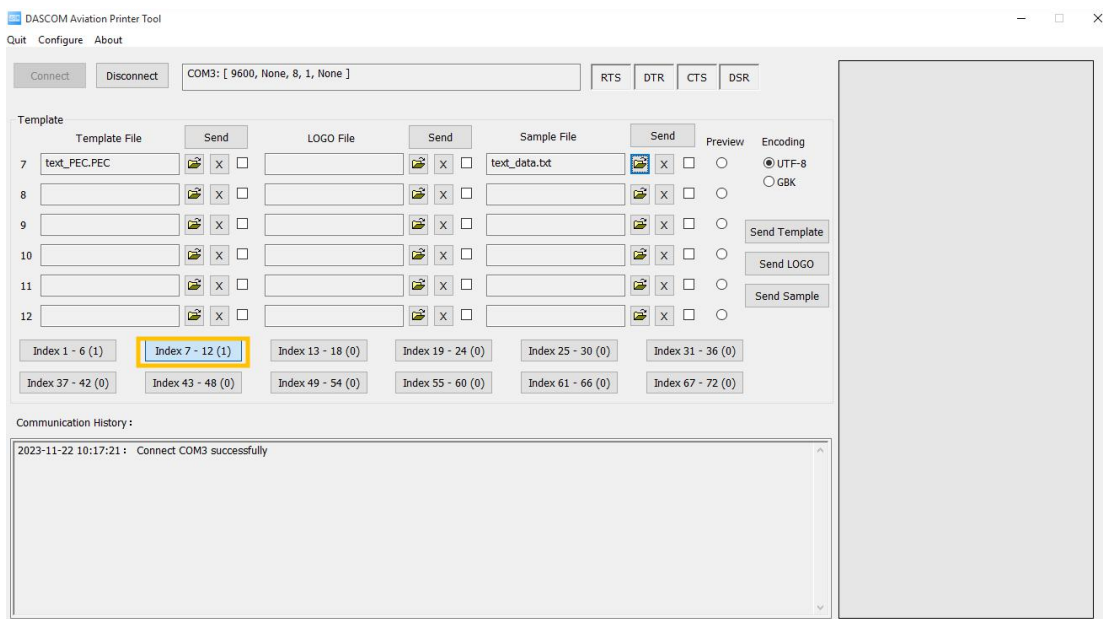
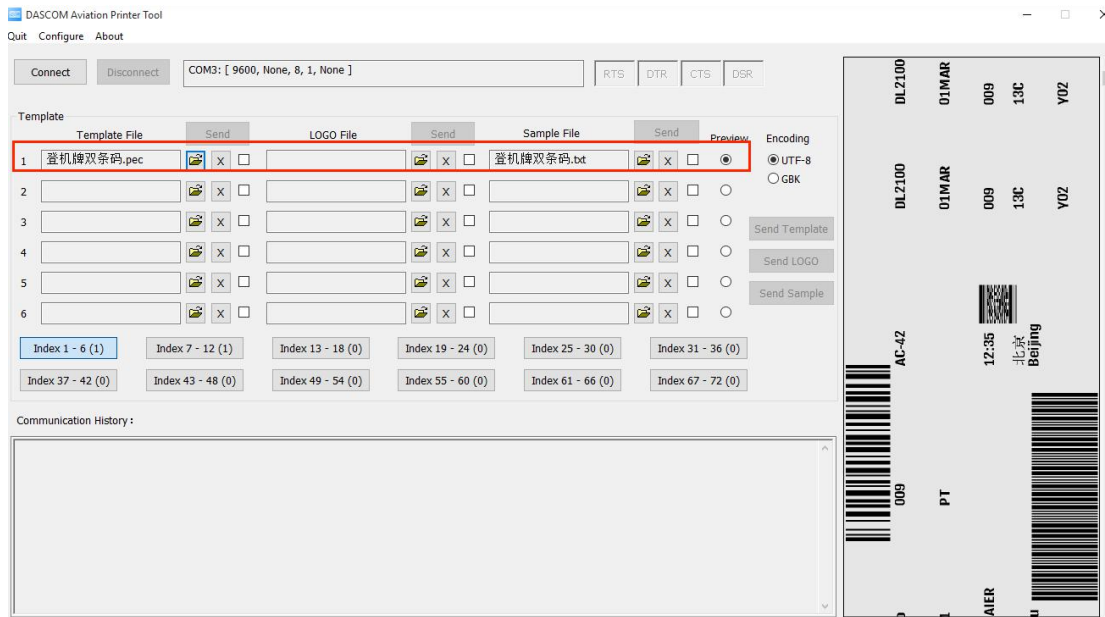


Figure 2

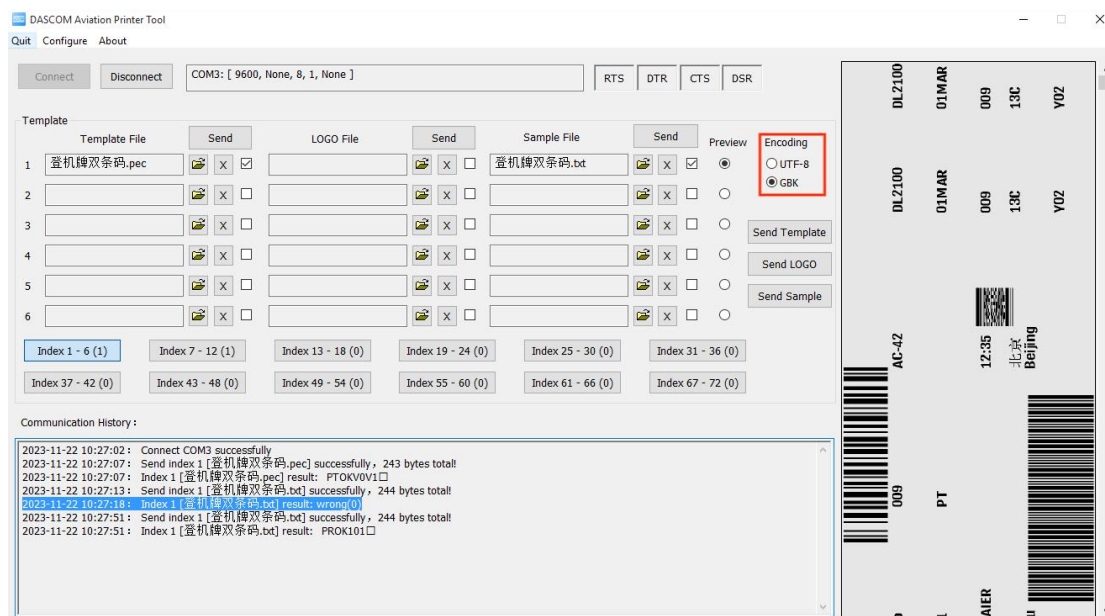
### 3.3.5 Preview File

- (1) After the template file and sample data file are successfully added, you can use the preview function. Click the button that you want to preview, Preview the layout in the preview window on the right.
- (2) If the preview is not displayed after the first addition of the file, you can change the preview coding or click the preview button again to refresh the preview effect.
- (3) Only the template, Logo and data file combination that under the same serial number can be previewed.



### 3.3.6 Preview Coding

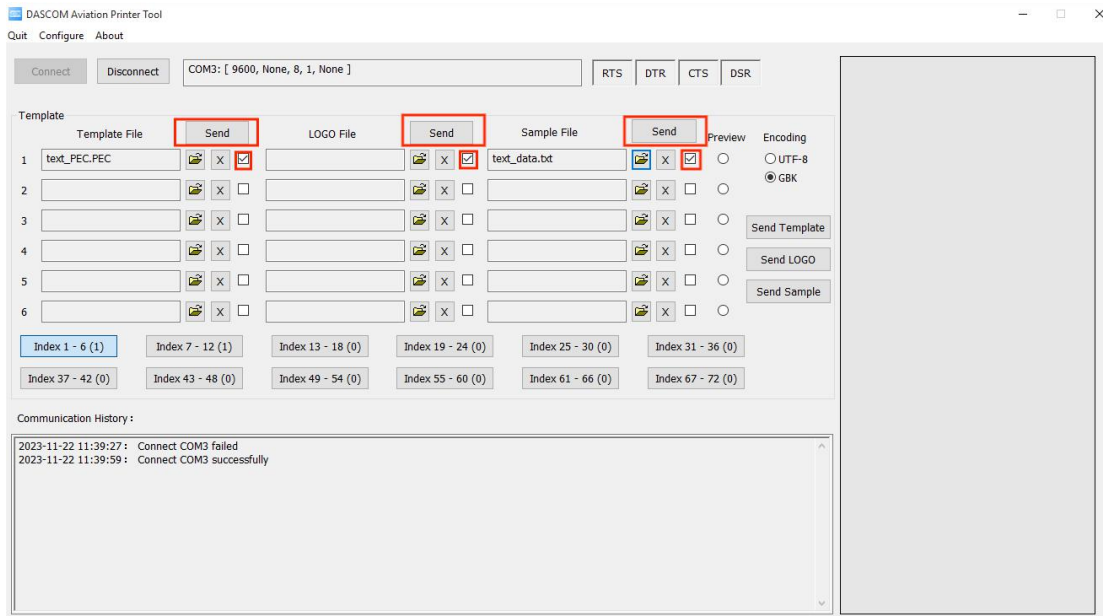
- (1) When garbled characters appear in the preview window, it may be that the sample data file currently previewed has non-English characters with different coding.
- (2) Please click the button of Preview coding and select the appropriate coding mode to restore the preview to normal.



### 3.3.7 Send File

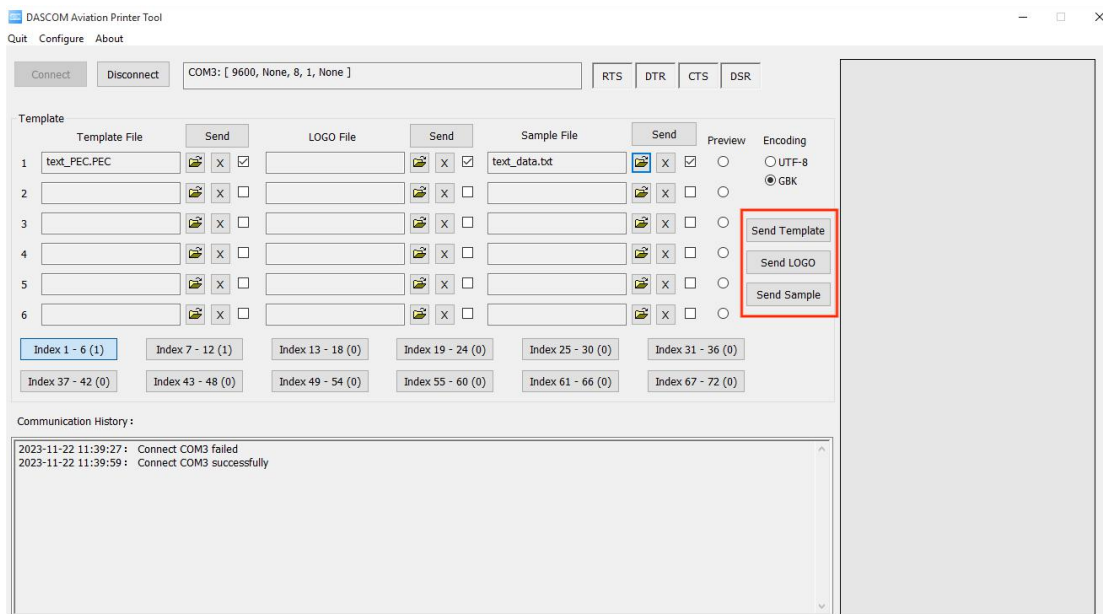
#### 3.3.7.1 Send Batch File

- (1) Click the multiple selection button of each type of file to select the file that needs to be sent.
- (2) Click Send Template to send all templates of all groups currently selected.
- (3) Click Send LOGO to send all logos of all groups currently selected.
- (4) Click Send Example to send all sample data files of all groups currently selected.



#### 3.3.7.2 Send Preview File

- (1) Click Send preview Template to send only the template in the current preview, ignoring other selected templates.
- (2) Click Send preview LOGO to send only the LOGO in the current preview, ignoring other selected logos.
- (3) Click Send preview Sample data file to send only the sample data file in the current preview, ignoring other selected sample data files.



### 3.3.8 Return Info

(1) After connecting/disconnecting ports through the tool or sending data to the printer, the processing information will be returned and displayed in the communication data window.

(2) The following types of return information exist:

A. Port: Displays information about the currently connected or disconnected port.

B. Message sending: Prompts whether the specified file is successfully sent.

C. Printer return: Information returned by the printer after the message has been sent.

(3) Common information prompts

Port connection succeeded: COM[x] is connected successfully

Port connection failure: Failed to connect COM[x]

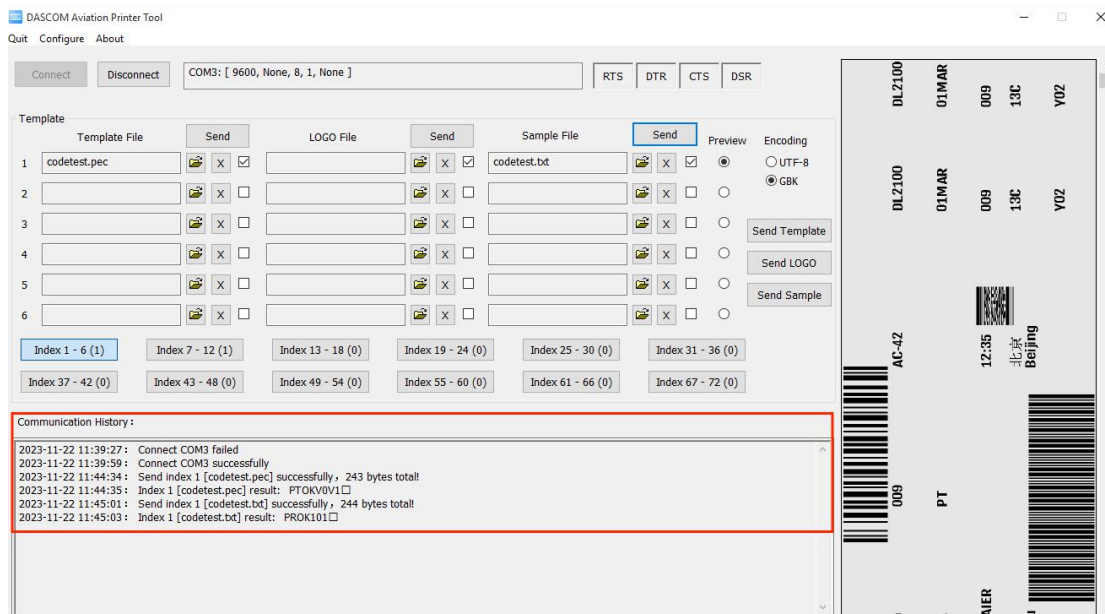
Disconnect: Disconnect COM[x]

Successful file sending: serial number +[file name]+ file sent successfully, total [file bytes] bytes

Successful printer processing: PTOK (template sent successfully), LTOK (LOGO sent successfully),

PROK (data sent successfully)

Printer processing failure: ERR+ error cause

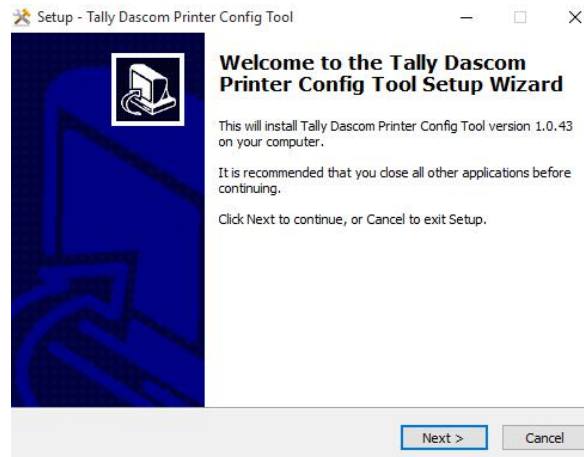


### 3.4 Installing the Configuration Tool

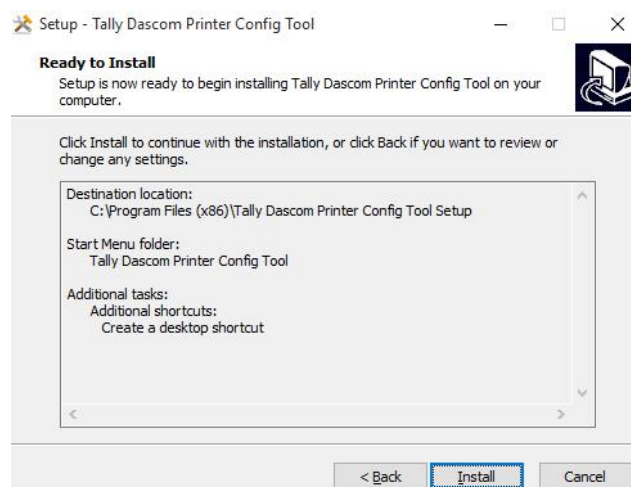
The Configuration Tool package can be downloaded from our web:

<https://www.dascom.com/downloads.html>

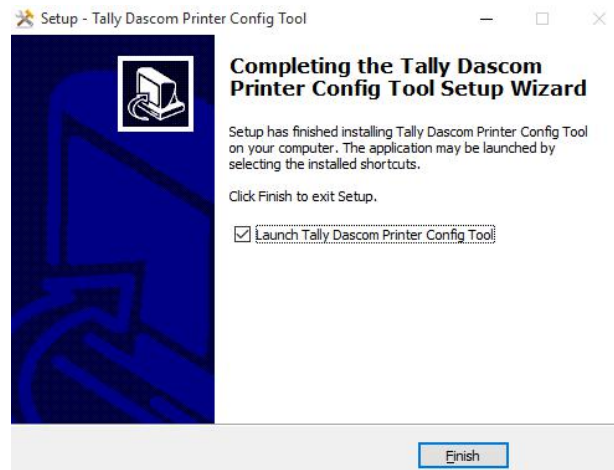
- (1) Click the setup tool "Dascom Printer Config Tool Setup.exe", and the interface shown in the following figure will appear.



- (2) Keep clicking the "Next" button, the interface as shown in the following figure will appear, click "Install".

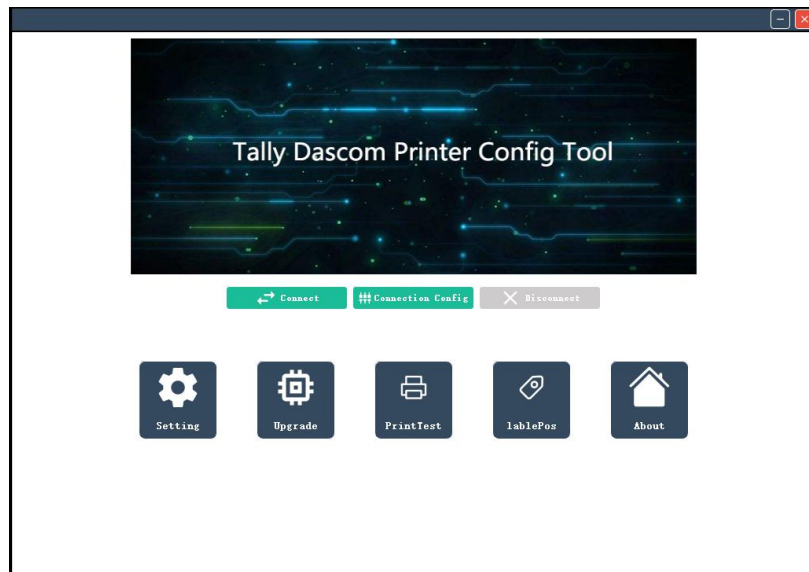


- (3) After the installation is complete, the interface as shown in the following figure will appear. Click “Finish” to complete the installation

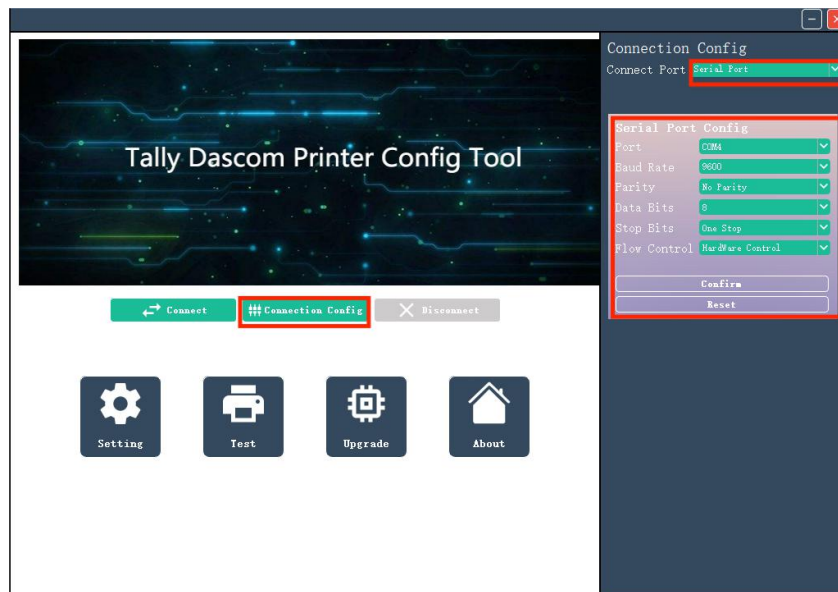


### 3.5 Using the Configuration Tool

- (1) Open and run "Configuration Tool", the interface is displayed as follows. Ensure that the printer is in standby state and the port is connected properly.



- (2) Click "Connection Config", select the connected port and setup the parameters for the port.



- (3) Click "Connect" , when the information in the left blue box appears (PS: the information about the current printer is in the left blue box), click "Setting" button to change the printer configuration.



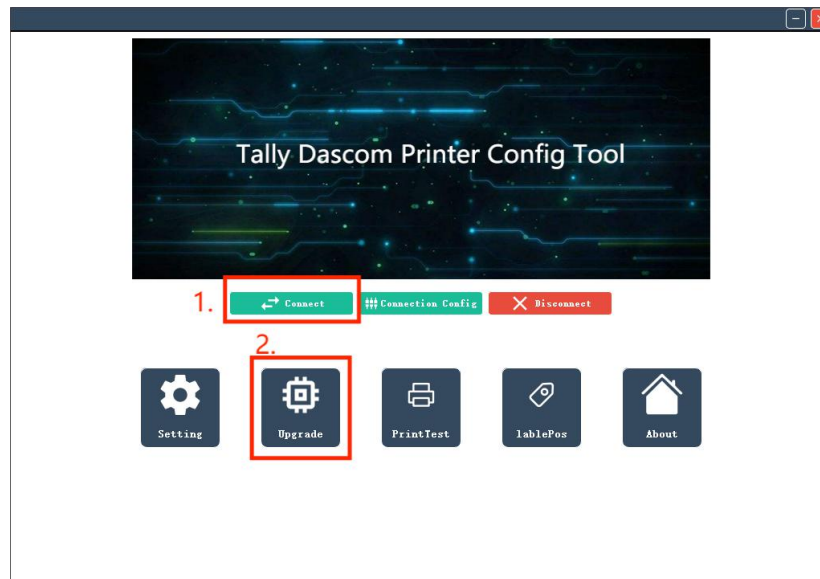
- (4) After clicking the "Setting" button, the following interface will be displayed. At this time, you can change the related settings of the printer.



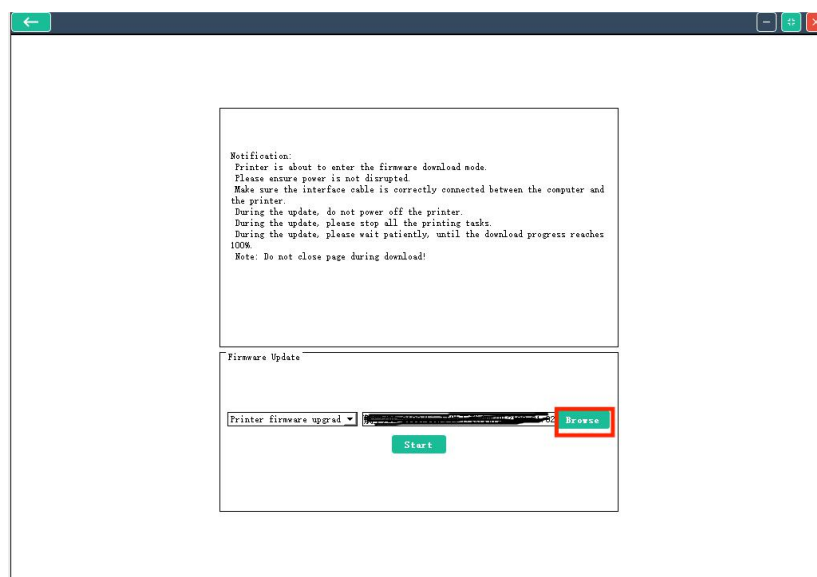
- (5) After the settings are modified, click "Save" at the bottom left, and then a pop-up window will pop up. Just click "Restart printer".

### 3.6 Upgrading the Firmware

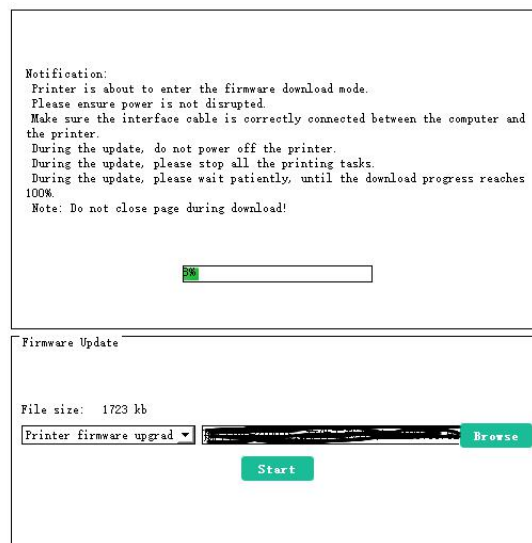
- (1) Connect the printer to the PC with a USB cable. Click Upgrade in the Config Tool menu.



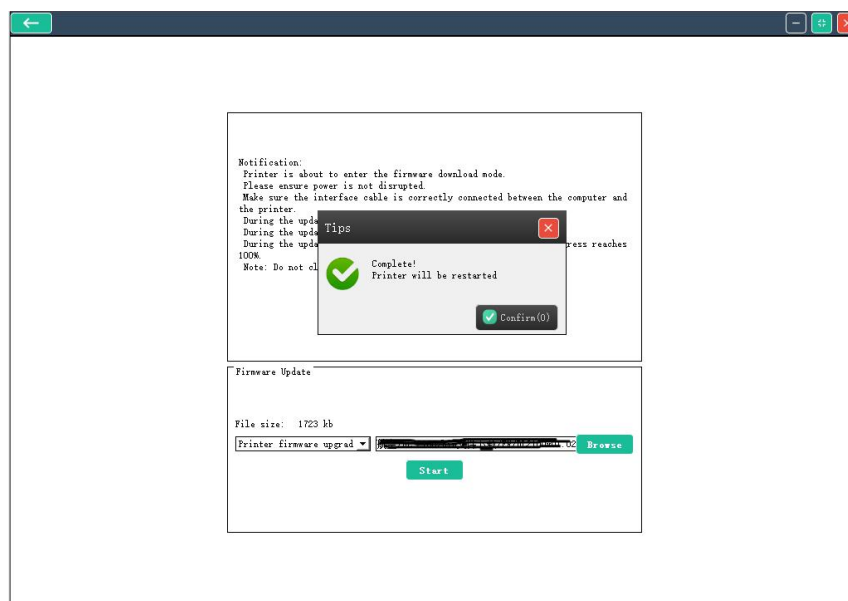
- (2) Locate the firmware file by clicking Browse.



- (3) Click Start. A message box pops up to ask for confirmation; click Confirm.



- (4) When the progress bar reaches 100%, the upgrade process is completed and the printer will be restarted.



## 3.7 Setting Up the Printer via Configuration Tool

### 3.7.1 Emulation Mode

1. The DL-2100 has two types of simulation modes, namely AEA\_EMUL mode for aviation and ZPL mode for conventional printers.
2. Install configuration tool.
3. Enter system setup->emulation mode to check or change current emulation.
4. AEA\_EMUL: aviation, used for ATB, BPP and BTP mode.  
ZPL: conventional printer application.



| item                                 | default value | note                                                                                                            |
|--------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------|
| Menu language                        | Chinese       | ◆ Chinese<br>◆ English                                                                                          |
| Emulation mode                       | AEA_EMUL      | ◆ AEA_EMUL<br>◆ ZPL                                                                                             |
| ATB mode                             | BPP mode      | ◆ ATB mode<br>◆ BPP mode<br>◆ BTP mode                                                                          |
| Data coding                          | GBK coding    | ◆ GBK coding<br>◆ UTF-8 coding                                                                                  |
| Print concentration                  | 16            | Print concentration: 1~32                                                                                       |
| Print speed                          | 8 inch/s      | ◆ 5 inch/s<br>◆ 6 inch/s<br>◆ 7 inch/s<br>◆ 8 inch/s<br>◆ 9 inch/s<br>◆ 10 inch/s                               |
| Post print action                    | Manual tear   | ◆ The paper falls after cutting<br>◆ Tear paper manually<br>◆ Clamp paper after cutting<br>◆ Cut the last paper |
| Tear position adjustment             | 0.0mm         | Tear position adjusted input value range is:-12~12mm                                                            |
| Print horizontal position adjustment | 0.0mm         | Print horizontal position adjusted input value range is:-40~40mm                                                |
| Print vertical position adjustment   | 0.0mm         | Print vertical position adjusted input value range is:-40~40mm                                                  |
| PECTAB error check                   | invalid       | ◆ invalid<br>◆ valid                                                                                            |

| item                                             | Detailed description                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Emulation mode>>AEA_EMUL                         | For boarding pass and baggage tag printing.                                                                                                                                                                                                                                                                                                   |
| Emulation mode>>ZPL                              | For normal paper printing.                                                                                                                                                                                                                                                                                                                    |
| ATB mode select>>ATB mode                        | In this mode, the printer can only parse the PEC template with "PT#" as the file instruction header and the data flow file with "CP" as the file instruction header.<br>If the printer is using ATB mode, after correctly loading the paper, "PT" will be displayed in the lower right corner of the printer display.                         |
| ATB mode select>>BPP mode                        | In this mode, the printer can only parse the PEC template with "BTT0122" as the file instruction header and the data flow file with "CP" or "3CP" as the file instruction header.<br>If the printer is using BPP mode, after correctly loading the paper, the words "BPP" will be displayed in the lower right corner of the printer display. |
| ATB mode select>>BTP mode                        | In this mode, the printer can only interpret the PEC template with "BTT" as the file instruction header and the data flow file with "BTP" as the file instruction header.<br>If the printer is applying BTP mode, after correctly loading the paper, the words "BTP" will be displayed in the lower right corner of the printer display.      |
| Data coding>>GBK coding                          | Change the coding decoding mode of the printer to GBK, to make the Chinese correctly printed.                                                                                                                                                                                                                                                 |
| Data coding>>UTF-8 coding                        | Change the coding decoding mode of the printer to UTF-8, to make the Chinese correctly printed.                                                                                                                                                                                                                                               |
| Print concentration                              | Set the printing concentration of the printer. The higher the concentration, the darker the font color.                                                                                                                                                                                                                                       |
| Print speed                                      | Set the printing speed of the printer. The higher the speed, the faster the printing.                                                                                                                                                                                                                                                         |
| Post print action>>The paper falls after cutting | After the printer has finished cutting the paper, continue to feed the paper until the paper falls from the printer and no longer holds the paper.                                                                                                                                                                                            |
| Post print action>>Tear paper manually           | At this time, the printer cutter does not work, and the paper automatically goes to the tearing position and stops waiting for manual tearing.                                                                                                                                                                                                |
| Post print action>>Clamp paper after cutting     | After the printer has finished cutting the paper, it will hold the paper in front until it is removed.                                                                                                                                                                                                                                        |
| Post print action>>Cut the last paper            | Continuous printing, no paper cutting until the last piece of data is completed.                                                                                                                                                                                                                                                              |
| Tear position adjustment                         | Adjust the tear position.                                                                                                                                                                                                                                                                                                                     |
| Print horizontal position adjustment             | Adjust the print horizontal position.                                                                                                                                                                                                                                                                                                         |
| Print vertical position adjustment               | Adjust the print vertical position.                                                                                                                                                                                                                                                                                                           |
| PECTAB error check>>valid                        | Check the template format sent to the printer. If valid, the template is sent through the aviation tool, and the check information is returned to the aviation tool.                                                                                                                                                                          |
| PECTAB error check>>invalid                      | If invalid, the template is sent through the aviation tool without providing any inspection information.                                                                                                                                                                                                                                      |

3.7.2 Baggage Tag Setup

Model DL-2100

PS 01.02.00.02

Port USB

Sections

System Setup

BTP Setup

BPP Setup

Serial Interface

| Parameters                    | Current Values | Defaults |
|-------------------------------|----------------|----------|
| BTPapLong                     | 4800 dot       | 4800     |
| BTPD Mode                     | BI             | BI       |
| LPC(Discuss plate code)       | No             | No       |
| LPC barcode Minimum High Size | 10 mm          | 10       |
| Julian Date                   | No             | No       |
| BTPD Verify Indicator         | VI             | VI       |
| VI Battery Count              | 3              | 3        |
| Number of Batteries           | BD             | BD       |
| Stack Type                    | E              | E        |
| Element Type T                | No             | No       |

Annotations

No comments

Save

Reset

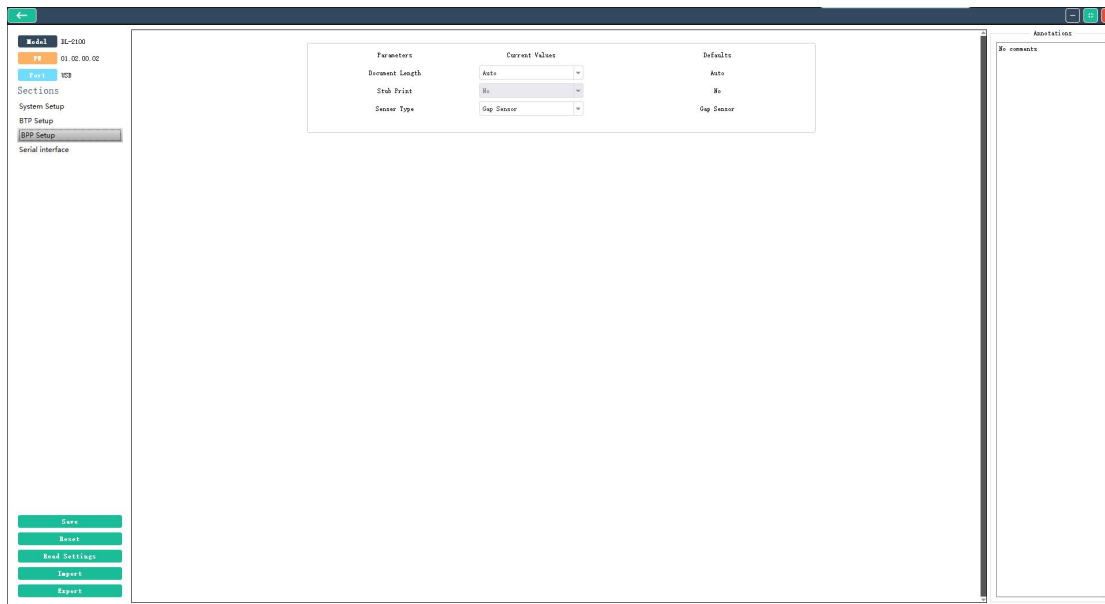
Read Settings

Import

Export

| item                   | Default value | Note 1                                                                       | Note 2                                                                                                                                                                                                                                                                                                                                            |
|------------------------|---------------|------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Baggage tag length     | 4800dot       | length:<br>0~8000dot                                                         | Set the length of baggage tag: 8dot=1mm                                                                                                                                                                                                                                                                                                           |
| RFID mode              | R1            | ◆R0<br>◆R1<br>◆R2<br>◆R3<br>◆R4                                              | Set RFID mode.                                                                                                                                                                                                                                                                                                                                    |
| LPC notification       | invalid       | ◆valid<br>◆invalid                                                           | Whether to return LPC information.<br>(Printer internal RFID configuration command)<br>valid: Set the printer to always return the LPC information of the current aircraft.<br>invalid: Sets the printer not to return LPC information.                                                                                                           |
| LPC Minimum height     | 10mm          | Minimum height:<br>10~200mm                                                  | Minimum height of bar code required to detect LPC.                                                                                                                                                                                                                                                                                                |
| Date notification      | invalid       | ◆valid<br>◆invalid                                                           | Whether to return to Julian Day notification.<br>(Printer internal RFID configuration command)<br>valid: Sets the printer to always return information about Julian Day.<br>invalid: Sets the printer not to return information about the Julian day.                                                                                             |
| RFID verification mode | V1            | ◆V0      ◆V1<br>◆V2      ◆V3<br>◆V4      ◆V5<br>◆V6      ◆V7<br>◆V8      ◆V9 | Set RFID verification mode.                                                                                                                                                                                                                                                                                                                       |
| V1 retry times         | 3             | ◆1<br>◆2<br>◆3<br>◆4                                                         | When the RFID Verify Indicator is V1, you can set the number of retries in the range of 1 to 9.                                                                                                                                                                                                                                                   |
| RFID retry times       | N3            | ◆N0      ◆N1<br>◆N2      ◆N3<br>◆N4      ◆N5<br>◆N6      ◆N7<br>◆N8      ◆N9 | Set RFID retry times.                                                                                                                                                                                                                                                                                                                             |
| Label type             | N             | ◆N<br>◆R                                                                     | N=Normal, no RFID.<br>R=Rfid, with RFID.                                                                                                                                                                                                                                                                                                          |
| T Instruction function | invalid       | ◆valid<br>◆invalid                                                           | When the element type is T (that is, self-increasing RFID), whether to regard the subsequent parameters as RFID parameters.<br>valid: The parameter after the T element is considered to be an RFID parameter.<br>invalid: Considers the parameter after the T element to be a string to print. This setting takes effect only in R2 and R3 mode. |

### 3.7.3 Boarding Pass Setup



| item                 | Default value | Note 1                                                                                                                                                                                     | Note 2                                                                                    |
|----------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| Boarding pass length | Auto          | <ul style="list-style-type: none"> <li>◆ Auto</li> <li>◆ Auto-Reverse</li> <li>◆ 8inch</li> <li>◆ 8+3/8inch</li> <li>◆ 7inch</li> <li>◆ 6inch</li> <li>◆ 5inch</li> <li>◆ 4inch</li> </ul> | Set the length of boarding pass.                                                          |
| Stub printing        | invalid       | <ul style="list-style-type: none"> <li>◆ valid</li> <li>◆ invalid</li> </ul>                                                                                                               | Whether to print on a stub.                                                               |
| Paper sensor         | Penetration   | <ul style="list-style-type: none"> <li>◆ Reflect</li> <li>◆ Penetration</li> </ul>                                                                                                         | Penetration : Applied to paper with holes.<br>Reflect : Applied to paper with black mark. |

3.7.4 Serial Port Setup

Modify the serial port settings used in the printer.

Model: DL-2100

PS 01.02.00.02

Port: USB

Sections

System Setup

BTP Setup

BPP Setup

Serial interface

Save

Reset

Read Settings

Import

Export

| Parameters | Current Values | Defaults    |
|------------|----------------|-------------|
| baudRate   | 9600           | 9600        |
| parity     | 8D             | 8D          |
| dataBits   | 8Bit           | 8Bit        |
| stopBits   | 1              | 1           |
| dataFlow   | FLOW_307812    | FLOW_307812 |

No comments

## CHAPTER 4 SET/CHECK MODE

### 4.1 Configuration List (Self-test Page)

Listing the configurations helps to confirm the printer is properly setup. The procedures to print out this configuration list:

- (1) Properly load the media. Close the top cover. Turn off the power.
- (2) Power on the printer.
- (3) Holding paper feed key while power on the printer, select **【Print Test】**. Holding paper feed key until the printer prints out the configuration list.



## 4.2 Hex-dump Mode

Holding paper feed key while power on the printer, select **【Hex Mode】**. Holding paper feed key until the printer enters Hex mode.

If the printer fails to print online but can print the configuration list offline, you may set the printer to operate in Hex mode to check the communication between the PC and the printer. Feedback any problem to our customer support with this hex-dump list.

## 4.3 Auto Media Registration

If the media sensors are properly setup, the printer can detect and automatically register the media to proper position.

- (1) Ensure the media is loaded correctly.
- (2) After turn on the printer or lock the print head, the printer automatically carries the media registration processes.



The following situations require media registration:

- \* The baggage tag has been printed incorrectly
- \* A blank tag appears in the middle of continuous printing
- \* A baggage tag cannot be correctly identified during continuous printing
- \* A baggage tag cannot be recognized when you replace a baggage tag of another size

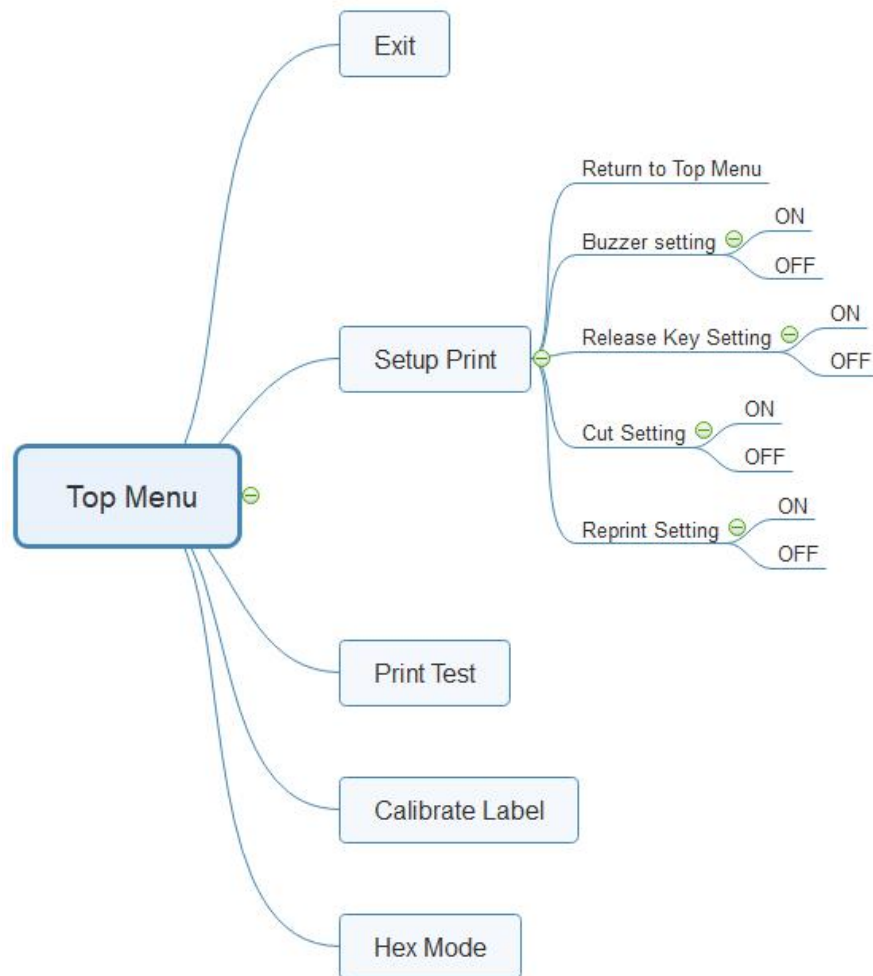
If the auto media registration function is enabled, the printer automatically performs label check every time you turn on the machine and open and close the cover.

## 4.4 Printer Menu

### 4.4.1 Enter Menu

1. Hold Power key and Release key to access to printer menu. Modify the printer's internal settings offline.
2. Enter the menu:
  - A. Close the cover and power off the printer.
  - B. Hold the Release button to power on the printer.
  - C. Release the Release key until the printer screen displays "Menu select".
3. Release button description after enter the menu :
  - 【Press】** Next
  - 【Hold】** Confirm

#### 4.4.2 Menu Structure



#### 4.4.3 Menu Option Description

| menu                | description                                                                                                                                 |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Exit                | Exit the select mode from the menu.                                                                                                         |
| Return to top menu  | Return to the upper-level menu.                                                                                                             |
| Buzzer setting      | Select turns on/off the error sound.                                                                                                        |
| Release key setting | If valid, press the key to release the paper.                                                                                               |
| Cut setting         | Use receipt or black mark paper, printer default to reset when cutting paper. This automatic cutting can be disabled with the valid option. |
| Reprint setting     | valid/invalid Whether to reprint the faulty paper after a print error occurs.                                                               |
| Print test          | Print a self-test page with all settings for the printer.                                                                                   |
| Calibrate label     | Position the currently placed paper.                                                                                                        |
| Hex mode            | If valid, normal printing is not performed. It prints all hexadecimal data received by the printer.                                         |

## CHAPTER 5 TROUBLESHOOTING AND MAINTENANCE

This printer is very reliable and seldom has problems. Follow the below guide to resolve the issues, if occurred. Routine preventive maintenance is discussed to minimize potential problems and keep the printer in good performance conditions.

Before carrying any repair procedure, familiar with the operations helps to avoid personal injury or printer damage.

### 5.1 Led Indication

When the printer has a malfunction or paper jam, the LED indicator can indicate the type of fault. In the error state, press the paper feed key to cancel the error indication.

| Faults            | Probable Causes                         | Recommended Solutions                                                                              |
|-------------------|-----------------------------------------|----------------------------------------------------------------------------------------------------|
| No LED indication | Poor power connections                  | Ensure secure connections from the printer socket to the wall socket.                              |
|                   | No power on                             | Switch on the printer.                                                                             |
|                   | Defective controller board              | Consult the re-seller for service.                                                                 |
| LED is red        | Paper out                               | Load paper.                                                                                        |
|                   | Print head assy is opened or not locked | Press on the print head.                                                                           |
| LED is red flash  | Overheated print head                   | Power off the printer and wait until the print head temperature returns to normal before printing. |
| LED is red flash  | Mismatch media                          | Please change to "Continuous paper" in the Settings or replace the label.                          |
|                   | Dirty paper sensor                      | Clean the paper sensor.                                                                            |

## 5.2 Actions To Resolve Errors

This list provides recommended solutions to the problems. Consult the re-seller's customer support if faults persists.

| Faults                                                         | Probable Causes                                                                                       | Recommended Solutions                                                           |
|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| Unclear printout                                               | Media is not installed correctly.                                                                     | Check if media is installed properly.                                           |
|                                                                | Media does not meet the requirements                                                                  | Use the recommended media.                                                      |
|                                                                | The print head or print roller is dirty                                                               | Clean the print head or print roller.                                           |
|                                                                | Print concentration sets low                                                                          | Increase the printing concentration to meet the printing needs.                 |
| Fail to print out self-test page                               | Hardware failure                                                                                      | Contact after-sales service or technical support.                               |
| Paper does not output properly                                 | Paper jam                                                                                             | Clear paper jam.                                                                |
| Blank labels appear when printing continuously                 | The media positioning is incorrect or the media specifications are different from the actual settings | Implement auto media registration and check whether the media is set correctly. |
| The media size is properly set but the print content is offset | Incorrect media positioning                                                                           | Implement auto media registration.                                              |

### Printer reported error

| Faults           | Recommended Solutions                                                                                                                           |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Cover open error | The cover is not fully closed, please re-open and close the cover to clear the error.                                                           |
| Paper out error  | No media, please load the corresponding media to clear the error.                                                                               |
| Paper jam error  | The sensor is not detecting the correct return. Position the media to near the left.                                                            |
| Sensor error     | The loaded media does not match the printer mode. Usually ATB mode is set but with baggage tag. Please load the correct media or reset AIRmode. |

## 5.3 Restore Factory Defaults

Sometimes restoring the default settings can resolve same issue.

- Use the Configuration Tool to restore factory defaults.

## 5.4 Handling Paper Jam



Caution: Beware of high temperature near the print head.

- Turn off the power. Open the top cover. Unlock and lift the print head.
- Remove the jammed media and reload the media.

## 5.5 Cleaning the Print Head



Let the head cool down before cleaning.

Avoid damage to the head with finger nails or solid objects.

- Turn off the power. Open the top cover and unload the ribbon. Clean the head with a cotton swab soaked with alcohol (alcohol, methanol, or isopropyl alcohol).
- To get good print quality, clean the head once every 3 months.

## 5.6 Preventive Maintenance

This printer is toughly built to meet heavy load without regular maintenance. However regular cleaning can extend the operating life of the printer.

It is recommended to clean the printer every 6 months or 300 operating hours. Turn off the power and unplug the power cord before cleaning.

- Pick up paper debris by a pair of tweezers.
- Clean up the dust inside by a brush or compact vacuum cleaner.
- Clean up the dirt inside with a clean cloth.
- Clean the platen with a soft cloth.

Avoid damages to or loosening the cable winding and components inside. Avoid metallic objects falling into the electric areas to cause short-circuit.

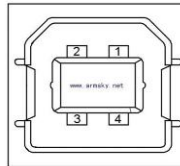
## CHAPTER 6 INTERFACE

### 6.1 USB

USB Pin Assignment:

| Pin | Signal Name | Color |
|-----|-------------|-------|
| 1   | VBUS        | Red   |
| 2   | D-          | White |
| 3   | D+          | Green |
| 4   | GND         | Black |

USB B Female Connector:



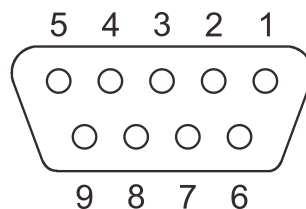
### 6.2 Serial

The serial interface of this printer is compatible with RS-232.

| PIN   | Signal Name |
|-------|-------------|
| PIN1  | EMPTY       |
| PIN2  | DSR         |
| PIN 3 | RTS         |
| PIN 4 | DTR         |
| PIN 5 | RI          |
| PIN 6 | DCD         |
| PIN 7 | RXD         |
| PIN 8 | CTS         |
| PIN 9 | EMPTY       |

The settings of serial interface can be checked by printing self-test page. The default baud rate is 9600bps, 8 data bit, no parity, and 1 stop bit. Handshaking protocol is DTR/DSR.

Serial interface connector

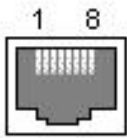


### 6.3 Ethernet

Pin Assignment

| Pin | Signal Name | Description    |
|-----|-------------|----------------|
| 1   | TX+         | Transmit Data+ |
| 2   | TX-         | Transmit Data- |
| 3   | RX+         | Receive Data+  |
| 4   | n/c         | Not connected  |
| 5   | n/c         | Not connected  |
| 6   | RX-         | Receive Data-  |
| 7   | n/c         | Not connected  |
| 8   | n/c         | Not connected  |

RJ-45 Connector:



Input:

DC 24V, 2.5A

## CHAPTER 7 EMULATION SET

### 7.1 ZPL Emulation Set

| command | function                                       |
|---------|------------------------------------------------|
| ^A      | Scalable/Bitmapped Font                        |
| ^A@     | Use Font Name to Call Font                     |
| ^B0     | Aztec Bar Code Parameters                      |
| ^B1     | Code 11 Bar Code                               |
| ^B2     | Interleaved 2 of 5 Bar Code                    |
| ^B3     | Code 39 Bar Code                               |
| ^B4     | Code 49 Bar Code                               |
| ^B5     | Planet Code bar code                           |
| ^B7     | PDF417 Bar Code                                |
| ^B8     | EAN-8 Bar Code                                 |
| ^B9     | UPC-E Bar Code                                 |
| ^BA     | Code 93 Bar Code                               |
| ^BB     | CODABLOCK Bar Code                             |
| ^BC     | Code 128 Bar Code (Subsets A, B, and C)        |
| ^BD     | UPS MaxiCode Bar Code                          |
| ^BE     | EAN-13 Bar Code                                |
| ^BF     | MicroPDF417 Bar Code                           |
| ^BI     | Industrial 2 of 5 Bar Codes                    |
| ^BJ     | Standard 2 of 5 Bar Code                       |
| ^BK     | ANSI Codabar Bar Code                          |
| ^BL     | LOGMARS Bar Code                               |
| ^BM     | MSI Bar Code                                   |
| ^BO     | Aztec Bar Code Parameters                      |
| ^BP     | Plessey Bar Code                               |
| ^BQ     | QR Code Bar Code                               |
| ^BR     | GS1 Databar (formerly Reduced Space Symbology) |
| ^BS     | UPC/EAN Extensions                             |
| ^BT     | TLC39 Bar Code                                 |
| ^BU     | UPC-A Bar Code                                 |
| ^BX     | Data Matrix Bar Code                           |

|         |                                      |
|---------|--------------------------------------|
| ^BY     | Bar Code Field Default               |
| ^CC ~CC | Change Caret                         |
| ^BZ     | POSTAL Bar Code                      |
| ^CD     | ~CD Change Delimiter                 |
| ^CF     | Change Alphanumeric Default Font     |
| ^CI     | Change International Font/Encoding   |
| ^CM     | Change Memory Letter Designation     |
| ^CO     | Cache On                             |
| ^CP     | Remove Label                         |
| ^CV     | Code Validation                      |
| ^CW     | Font Identifier                      |
| ~DB     | Download Bitmap Font                 |
| ~DE     | Download Encoding                    |
| ^DF     | Download Format                      |
| ~DG     | Download Graphics                    |
| ~DN     | Abort Download Graphic               |
| ~DS     | Download Intellifont (Scalable Font) |
| ~DT     | Download Bounded TrueType Font       |
| ~DU     | Download Unbounded TrueType Font     |
| ~DY     | Download Objects                     |
| ~EG     | Erase Download Graphics              |
| ^FB     | Field Block                          |
| ^FC     | Field Clock                          |
| ^FD     | Field Data                           |
| ^FH     | Field Hexadecimal Indicator          |
| ^FL     | Font Linking                         |
| ^FM     | Multiple Field Origin Locations      |
| ^FN     | Field Number                         |
| ^FO     | Field Origin                         |
| ^FP     | Field Parameter                      |
| ^FR     | Field Reverse Print                  |
| ^FS     | Field Separator                      |
| ^FT     | Field Typeset                        |
| ^FV     | Field Variable                       |

|         |                                             |
|---------|---------------------------------------------|
| ^FW     | Field Orientation                           |
| ^MD     | Media Darkness                              |
| ^MF     | Media Feed                                  |
| ^ML     | Maximum Label Length                        |
| ^MM     | Print Mode                                  |
| ^MN     | Media Tracking                              |
| ^MP     | Mode Protection                             |
| ^MT     | Media Type                                  |
| ^MU     | Set Units of Measurement                    |
| ^MW     | Modify Head Cold Warning                    |
| ^NC     | Select the Primary Network Device           |
| ~NC     | Network Connect                             |
| ^ND     | Change Network Settings                     |
| ^NI     | Network ID Number                           |
| ~NR     | Set All Network Printers Transparent        |
| ^NS     | Change Wired Networking Settings            |
| ~NT     | Set Currently Connected Printer Transparent |
| ^PA     | Advanced Text Properties                    |
| ^PF     | Slew Given Number of Dot Rows               |
| ^PH ~PH | Slew to Home Position                       |
| ~PL     | Present Length Addition                     |
| ^PM     | Printing Mirror Image of Label              |
| ^PN     | Present Now                                 |
| ^PO     | Print Orientation                           |
| ^PP ~PP | Programmable Pause                          |
| ^PQ     | Print Quantity                              |
| ^PR     | Print Rate                                  |
| ~PR     | Applicator Reprint                          |
| ~PS     | Print Start                                 |
| ^PW     | Print Width                                 |
| ~RO     | Reset Advanced Counters                     |
| ^SC     | Set Serial Communications                   |
| ~SD     | Set Darkness                                |
| ^SE     | Select Encoding Table                       |

|     |                                                  |
|-----|--------------------------------------------------|
| ^SF | Serialization Field (with a Standard ^FD String) |
| ^SI | Set Sensor Intensity                             |
| ^SN | Serialization Data                               |
| ^SP | Start Print                                      |
| ^SQ | Halt ZebraNet Alert                              |
| ^SR | Set Printhead Resistance                         |
| ^SS | Set Media Sensors                                |
| ^SZ | Set ZPL                                          |
| ^TB | Text Blocks                                      |
| ^TO | Transfer Object                                  |
| ~WC | Print Configuration Label                        |
| ^WD | Print Directory Label                            |
| ~WQ | Write Query                                      |
| ~WQ | Examples                                         |
| ^XA | Start Format                                     |
| ^XB | Suppress Backfeed                                |
| ^XF | Recall Format                                    |
| ^XG | Recall Graphic                                   |
| ^XS | Set Dynamic Media Calibration                    |
| ^XZ | End Format                                       |
| ^ZZ | Printer Sleep                                    |

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