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SAFETY INFORMATION

- Ensure the printer is set to STOP before inserting or removing the cartridge.
- Avoid using printer with high voltage and/or non-compatible power supplies or external electronic accessories.
- Ensure printer is installed and stored in a manner to prevent any strong impacts from any external objects.
- Minimize the use and storage of the printer in high dust environments.
- The working temperature of the printer is 5°C – 50°C.
- Turn off printer before plugging in or removing any cable (ENCODER / SENSOR / IO).
- Be careful when using other external devices such as: ENCODER / SENSOR / ALARM BEACON / POWER SUPPLY.
- Only use authorized cartridges provided by your supplier.
- Ensure you follow all instructions when installing new firmware or software.
- Use a mask and safety goggles to prevent exposure to any airborne ink particles.
- Use gloves to prevent any injury while installing the printer mounting brackets as there may be sharp edges.
- Do not expose to excessive heat sources, sunshine, fire or similar.
- For indoor use only. Printer should not be exposed to water.
- The power-outlet shall be installed near the equipment and shall be easily accessible.
- No replaceable parts inside, refer servicing to manufacturer specified agency or qualified service personnel.
- Only use accessories specified by the manufacturer.
- Disposal: all electrical and electronic products including batteries should be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities.
- Please ensure the printer and your systems are properly grounded.
- Use only the power supply listed in the user instructions: power supply adapter: manufacturer: MEAN WELL ENTERPRISES CO., LTD., MODEL NO.: GST60A24-P1J
EMERGENCY CASE

For emergency situations, e.g. smoke coming out of printer, uncontrollable continuous printing, fire, sounds, etc.,

Please remove the power supply immediately!

ENVIRONMENTAL PROTECTION

Don’t throw printer or ink cartridges into regular garbage or recycling bins. Ensure proper disposal (e.g. electronic waste) in accordance with your local laws.

PRODUCT WARRANTY

Limited warranty. The housing and circuit board for each printer is warranted to be free from defects in materials and workmanship for a period of twelve (12) months from the bill of lading date. This limited warranty does not apply to spare parts, authorized inks, or cartridges, or to housings and circuit boards that experience problems resulting from misuse, tampering or improper storage.

The warranty is VOID if:

- Any non-original parts and unapproved OEM inks are used.
- The product has been altered or modified without approval from us.
- Print head damage is a result of improper installation.
- Damage occurs from an accident, such as but not limited to, being dropped, being sprayed with water or other liquids, caused by a natural disaster, caused by stocking or shipping conditions.
- Unapproved, incorrect or unstable power supply is used.
ABOUT THE PRINTER

Thank you for purchasing the Smart-Jet DUO Thermal Inkjet Printer, a product of MSSC LLC, US. This printer is designed for packaging printing applications powered by Thermal Inkjet (TIJ) Technology.

The Smart-Jet DUO produces crisp text, logos, variable data and barcodes on porous and non-porous media by automatically recognizing aqueous and solvent inks and applying the appropriate printing parameters.
## Technical specifications

<table>
<thead>
<tr>
<th>NO</th>
<th>DESCRIPTION</th>
<th>SPECIFICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Model</td>
<td><strong>Smart-Jet DUO</strong></td>
</tr>
<tr>
<td>2</td>
<td>Dimensions (L x W x H)</td>
<td>Controller (192 x 130.5 x 34.5 mm), Print head max (216.5 x 65 x 49.3 mm)</td>
</tr>
<tr>
<td>3</td>
<td>Weight</td>
<td>Controller (888 grams), Print head (412.4 grams)</td>
</tr>
<tr>
<td>4</td>
<td>Power supply</td>
<td>DC 24V-2.5A</td>
</tr>
<tr>
<td>5</td>
<td>Maximum power consumption</td>
<td><strong>60 W</strong></td>
</tr>
<tr>
<td>6</td>
<td>Maximum printing resolution</td>
<td><strong>600 x 600 dpi</strong></td>
</tr>
<tr>
<td>7</td>
<td>Print speed</td>
<td>76 m/min @ 300 x 300 dpi</td>
</tr>
<tr>
<td>8</td>
<td>Optical density</td>
<td>3 levels</td>
</tr>
<tr>
<td>9</td>
<td>Operation</td>
<td>7” Touch Screen</td>
</tr>
<tr>
<td>10</td>
<td>Message memory</td>
<td><strong>8GB</strong></td>
</tr>
<tr>
<td>11</td>
<td>Ink solution</td>
<td>Aqueous and Solvent</td>
</tr>
<tr>
<td>12</td>
<td>Menu language</td>
<td>Multiple / selectable</td>
</tr>
<tr>
<td>13</td>
<td>Printable characters</td>
<td>Windows true fonts</td>
</tr>
<tr>
<td>14</td>
<td>No. of lines</td>
<td>Unlimited</td>
</tr>
<tr>
<td>15</td>
<td>Character height</td>
<td>Maximum 12.7 mm / 0.5 inch</td>
</tr>
<tr>
<td>16</td>
<td>Printability</td>
<td>Text, image, barcode, counter, box/lot, shift code, date, time, expire date, database, POD and Shape</td>
</tr>
<tr>
<td>17</td>
<td>Operating temperature</td>
<td><strong>5°C – 50°C and 90% air humidity, non-condensing</strong></td>
</tr>
<tr>
<td>18</td>
<td>External connections</td>
<td>External sensor, External Encoder and Alarm beacon</td>
</tr>
</tbody>
</table>
Printer overview
Controller front view

Controller back view
<table>
<thead>
<tr>
<th>ITEMS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>POWER button</td>
<td>Turn machine ON / OFF.</td>
</tr>
<tr>
<td>FUSE</td>
<td>External fuse connected to mainboard, check fuse if you cannot turn on printer.</td>
</tr>
<tr>
<td>24V – 2.5A</td>
<td>Machine’s power supply port.</td>
</tr>
<tr>
<td>LAN</td>
<td>Connect to PC for POD transfer data.</td>
</tr>
<tr>
<td>USB</td>
<td>Connect to Keyboard, Mouse, import Template and Database.</td>
</tr>
<tr>
<td>PH 1, PH 2</td>
<td>Machine’s print head connection port.</td>
</tr>
<tr>
<td>EXTENDED</td>
<td>Connect to External Sensor, External Encoder and Alarm beacon.</td>
</tr>
</tbody>
</table>

**LED (STOP, ALARM, RUN)**

Show the machine status.

**STOP:** turn ON after you plug the power supply and switch button power on controller.

**ALARM:** turn ON if have some errors / warnings / issues on the print head like: no any cartridge in slots, cartridges invalid, cartridges conflict …

**RUN:** turn ON after you press Print button on software and print data are send to controller without any issue.
Print heads
One cartridge head

<table>
<thead>
<tr>
<th>TECHNICAL PARAMETERS</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of cartridges per printhead</td>
<td>1</td>
</tr>
<tr>
<td>Number of printheads controller can support</td>
<td>2</td>
</tr>
<tr>
<td>Print height</td>
<td>12.7 mm ~ 0.5 inch</td>
</tr>
<tr>
<td>Connection port on controller</td>
<td>Port I, Port II</td>
</tr>
<tr>
<td>External sensor compatible</td>
<td>YES</td>
</tr>
<tr>
<td>Stitching availability</td>
<td>NO</td>
</tr>
<tr>
<td>Size</td>
<td>L x W x H: 216.5 x 65 x 49.3 (mm)</td>
</tr>
</tbody>
</table>
INSTALLATION

Component list (See on the Quick Guide)
Print head setup (See on the Quick Guide)
Controller setup (See on the Quick Guide)
Print head cable setup

Using one printhead with the Smart-Jet DUO PRO

For this example, use only 1 Smart-Jet DUO PRO printhead. Connect the printer to the controller as shown above. The printhead will print data shown on Template 1 Design Tool.

Use two print heads Smart-Jet DUO PRO
External devices connections

**NOTES:**
- Machine is able to operate with External Sensor, Encoder, and Alarm Beacon. Consult your supplier for further support on the correct settings and connections.
- To connect machine with External Sensor, Encoder, Alarm, etc..., an additional connector DB15 (male) will be required.

**External Sensor (Accessories - Please contact Seller)**

Machine supports NPN and PNP type sensors.
Connect sensor using 24V power supply pin on machine.
Pin diagram for use with sensor:

![Pin diagram for External Sensor](image)

**External Encoder (Accessories - Please contact Seller)**

An encoder is recommended to ensure the best print quality when using a variable speed conveyor.
Based on the resolution (R) of the encoder, you can calculate the diameter (D) of the wheel you should use based on the following formula:

$$D = \frac{R}{\pi \times 600} \text{ (inches)}$$

**Example:** Encoder has $R = 3600$ (PPR)

$$\Rightarrow D = 1.90985 \text{ inches } \approx 48.5 \text{ mm.}$$

Pin diagram of encoder:

![Pin diagram for External Encoder](image)
Alarm beacon (Accessories - Please contact Seller)

Allows users to monitor the status of the printer from a distance via the light signals from the alarm beacon. Pin diagram of Alarm beacon:

<table>
<thead>
<tr>
<th>PIN ON DB15 PORT</th>
<th>VALUE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>24V</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>RED</td>
<td>STOP_STATUS</td>
</tr>
<tr>
<td>9</td>
<td>GREEN</td>
<td>PRINT_STATUS</td>
</tr>
<tr>
<td>15</td>
<td>YELLOW</td>
<td>ALARM_STATUS</td>
</tr>
</tbody>
</table>

**Error Description**

<table>
<thead>
<tr>
<th>ERROR</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stop print (Normal event)</td>
<td>User clicked stop button on display screen. Printing will be Stopped. No light is ON.</td>
</tr>
<tr>
<td>Invalid Cartridge</td>
<td>The cartridge in the printer is not completely seated in the printer or is not from an authorized supplier.</td>
</tr>
<tr>
<td>No Cartridge</td>
<td>No cartridge is in the printer or the cartridge is not completely seated in the print head.</td>
</tr>
</tbody>
</table>
Conflict Cartridge
More than one type of ink cartridge is being used. Be sure to use same ink type on both print heads.

Ink Low
The value of Ink Level (in either printhead) is lower than 15.0 ml. *The HP Smart Card has been implemented to each cartridge that allows the software to automatically read the calculated volume of ink inside each cartridge.*

Ink Out
The value of Ink Level in the software is lower 0.4 ml.

Speed Limit
Current speed of conveyor received from encoder is higher than the printing ability of print heads. See Printing Speed Table below for more information.

POD/Real Time Printing Speed overload
After sensor is trigged in real time printing, the software reacts in real time and sends data to the printheads. If the total time to print and send data is larger than the passing time of the object from sensor to print head, the software will automatically stop print and display a message to operator. If this message appears, the operator should slow down the speed of conveyor to increase the amount of time it takes for the product to move past the printhead to allow the printer to process data in real time without reaching the speed limit.

**Printing Speed Table**

<table>
<thead>
<tr>
<th>Resolution</th>
<th>Density 1 Speed (m/min)</th>
<th>Density 2 Speed (m/min)</th>
<th>Density 3 Speed (m/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>300x100</td>
<td>228</td>
<td>114</td>
<td>76</td>
</tr>
<tr>
<td>300x150</td>
<td>152</td>
<td>76</td>
<td>50</td>
</tr>
<tr>
<td>300x300</td>
<td>76</td>
<td>38</td>
<td>25</td>
</tr>
<tr>
<td>600x100</td>
<td>228</td>
<td>114</td>
<td>76</td>
</tr>
<tr>
<td>600x150</td>
<td>152</td>
<td>76</td>
<td>50</td>
</tr>
<tr>
<td>600x300</td>
<td>76</td>
<td>38</td>
<td>25</td>
</tr>
<tr>
<td>600x600</td>
<td>38</td>
<td>19</td>
<td>12</td>
</tr>
</tbody>
</table>
Software Interface

Main interface

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>NAME</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>[Power]</td>
<td>Power Off Printer</td>
<td>Use this button to turn off your printer. Please select this button then press YES to turn off the controller.</td>
</tr>
<tr>
<td>[Design]</td>
<td>Design</td>
<td>Access the Template Design Tools to Create / Modify / Open template / Ink Calculator</td>
</tr>
<tr>
<td>[Settings]</td>
<td>Settings</td>
<td>Adjust all printing parameters: Resolution, Speed, Print mode, Sensor mode,...</td>
</tr>
<tr>
<td>[View log]</td>
<td>View log</td>
<td>View all made by printer operators.</td>
</tr>
<tr>
<td>[Update]</td>
<td>Update</td>
<td>Use this button to update your Software and firmware to newer version.</td>
</tr>
<tr>
<td>Button</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>-----------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Account</td>
<td>Coming soon.</td>
<td></td>
</tr>
<tr>
<td>About</td>
<td>View information about the current firmware version, software version, hardware version, brand name and website address. Display the Key or ID application. Use to unlock the Ink Authentication. Show private label for ink cartridge.</td>
<td></td>
</tr>
<tr>
<td>Open template</td>
<td>Open existing templates that are saved on the controller.</td>
<td></td>
</tr>
<tr>
<td>Purge</td>
<td>This button pushes some ink out of all of the nozzles to clean the print head.</td>
<td></td>
</tr>
<tr>
<td>Start</td>
<td>Used to Start printing your template.</td>
<td></td>
</tr>
<tr>
<td>Stop</td>
<td>Used to Stop printing your template.</td>
<td></td>
</tr>
<tr>
<td>Start page</td>
<td>Set begin index of Counter / Database section.</td>
<td></td>
</tr>
<tr>
<td>End page</td>
<td>Set ending index of Counter / Database section.</td>
<td></td>
</tr>
<tr>
<td>Loop</td>
<td>Select Enable if you want to repeat data.</td>
<td></td>
</tr>
</tbody>
</table>
### Real information

<table>
<thead>
<tr>
<th>FIELD</th>
<th>DESCRIPTION</th>
<th>VALUE</th>
</tr>
</thead>
</table>
| **Status**  | Display the current status of the printer.       | Stopped  
Ready (normal status, not printing)  
Printing (normal status, printing) |
| **Speed**   | Display the current speed.                       | If you are not using the encoder, the value will equal the number you input to **Setting → System Settings → Encoder → Internal → Speed.**  
If you are using the encoder, the value will equal the speed that is sent from the Printer Controller. |
| **Printed page** | Display the number of messages that have been printed.  
The count will increase by 1 per print. | 0 to 1,000,000,000 |
| **Total page** | Display maximum prints of the template. If the template has a Counter, the Total Page will equal End value of Counter.  
If template has a Database, the Total Page will equal total rows of database file. | • If template contains only fixed text, Total Page will be 1. Enable Loop for unlimited print.  
• If template contains a Counter and Database, Total Page will equal the total number of rows of the database. |
<table>
<thead>
<tr>
<th>Quick Setting</th>
<th>Used for quick access to basic settings.</th>
<th>Resolution Density Channel Direction Delay before Disable sensor</th>
</tr>
</thead>
</table>
| Head 1        | Display the type of cartridge in port 1 of the controller. Display the ink volume of cartridge on head 1 (Port 1 on controller). Display status of cartridge in Port 1 controller. | - Print Head type: PRO / REACH / MAX  
- Ink volume: 0.001 – 800.0 (ml)  
- Status of cartridge  
  - No cartridge  
  - Invalid cartridge |
| Head 2        | Display the type of cartridge in port 2 of the controller. Display the ink volume of cartridge on head 2 (Port 2 on controller). Display status of cartridge in Port 2 controller. | |
| System clock  | Display current system clock on your PC | Value can be changed in Settings → Advanced settings → System time |

**DesignJet Tools**

![DesignJet Tools](image)

- **Text 1**
  - 18-02-2020
  - Counter 1:0000001

- **Text 2**
  - 02:42:46 PM
  - Counter 1:9999999
<table>
<thead>
<tr>
<th>ITEMS</th>
<th>NAME</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Create New Template</td>
<td>Create new template. Specify new Template name, Number of heads, Printhead type and Width of template.</td>
</tr>
<tr>
<td></td>
<td>Open Template</td>
<td>Open existing template using the application folder. You will able to preview each template in the selection template window.</td>
</tr>
<tr>
<td></td>
<td>Save Template</td>
<td>Save the current template using a template name.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Object list</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Text: Add Text to template.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Counter: Add Counter to template.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Database: Add Database to template</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Barcode: Add Barcode to template.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Image: Add Image to template.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Datetime: Add Datetime to template.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shift code: Add Shift Code to template.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Shapes: Insert Line, Rectangle and Ellipse to template.</td>
</tr>
<tr>
<td></td>
<td>Undo</td>
<td>Undo the previous step on your template.</td>
</tr>
<tr>
<td></td>
<td>Redo</td>
<td>Redo the previous step on your template.</td>
</tr>
<tr>
<td></td>
<td>Clone</td>
<td>Copy the object to another area on the template.</td>
</tr>
<tr>
<td></td>
<td>Paste</td>
<td>Paste the copied object.</td>
</tr>
<tr>
<td></td>
<td>Delete</td>
<td>Remove your object from the template.</td>
</tr>
<tr>
<td>More</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Edit**: Edit length of template.  
**Save as Template**: Save template with a new name.  
**Split database**:  
**Ink Calculate**: Allows you calculate and estimate the cost of printing using the following parameters:  
1. Density & Resolution.  
2. Volume of ink (cartridge or bulk ink).  
3. Cost of ink by volume (ml).  
The result will be an Estimation Number Of Prints using the provided parameters.  
**Schema**:  
**Remove database**: Remove a previously loaded database file.  
**File manage**: Use to manage (Copy file from USB Flash / Transfer file to USB Flash / Deleted file) all data on the application. These include the following:  
1. Template file (*.dsj).  

**Template Layout**  
Template layout is one of important components on software. It will allow you to design or layout any printable object.  

**Template Ruler**  
The ruler is used to measure the distance between objects. The following units can be used: mm, cm, pixel or inch. Go to Settings -> Advanced Settings -> Design Units to change.  

**Template Section**  
All templates will include 2 sections that correspond with each printhead.  

**Object properties**  
Use these tools to adjust the object after it has been inserted into the template.  

**List shape**  
List all objects present on your template.  
Use the Up / Down arrows to bring forward or send back an object when layering a template.
Printing parameters setup

Head Settings

Resolution
The support 4 High Quality resolutions: 600x100, 600x150, 600x300 and 600x600.

**NOTE:** High Quality printing resolutions use both channels on the cartridge to print, this means you will not be able to change the printing channel.

And normal resolution: 300x100, 300x150 and 300x300.

This setting will apply for all cartridges connected to that printhead. The higher the resolution setting, the lower the maximum printing speed will be.

Channel

**ODD:** the printer will only use the ODD side nozzles when printing.

**EVEN:** the printer will only use the EVEN side nozzles when printing.
If used with 600 dpi resolution, the two (2) channels will print together.

**Density**
Select the number of drops per pixel. Supports 1, 2, or 3 drops per pixel.

**Direction**
Used to set the direction of each printhead.

**Delay before**
This value is the distance from the sensor to the beginning of the message.

*For box application*
Disable sensor

Disable sensor is the distance between two sensor marks or the product length. The purpose of this setting is prevent multiple prints on one product (except if the repeat print mode is being used).

In this distance, the printer will accept only the first sensor signal and will ignore any signals after that. This can happen if your product has multiple colors or contrasts that may cause the sensor to activate again.

Please see picture below for further information on this setting.
For web application

For box application
**Fixed length - On both Print mode: Sensor & Continuous**

Fixed length is distance between two repeating prints. Fixed length is used once the repeated number of prints is >0 with **Sensor mode**.

**System Settings**

**Encoder**

**External Encoder:** enables the ability to read the real speed of the conveyor when plugged into the unit and correct encoder parameters are set.

**Internal Encoder:** enable this option to allow the printer to print using a fixed speed value entered by the operator (this value should be equal to speed of the product).

We have 3 options for this mode: **REAL / FAST / SLOW**.

**Print mode**

Allow the user to control which mode the printer should be printing.

**Sensor mode**

Machine is triggered by sensor to print.

**Repeat sensor:**

Repeat sensor is the number of prints required for each sensor trigger. the default value of Repeat sensor is 0, maximum value is 99,999 times. If no repeat print is required, the unit will print normal.

**Sensor mode:** Select Internal or External.

**Continuous mode**

Continuous mode allows the unit to print without input from a sensor. This mode is useful for **web / pipe / roll** printing applications (without a sensor/eye mark).
Immediate: Print continuously without requiring a sensor signal.
Level: Print continuously with a sensor signal required.

**Auto jet**
Periodically pushes ink out of the nozzles to clean the printhead. This function will prevent the ink from drying on the nozzles, this is useful to keep good printing quality.
Click on the Enable / Disable button to change option for this function:
Enable: Enable Auto jet on software.
Disable: Disable Auto jet on software.
Time: Input time intervals for jetting (second (s)).

**NOTES:**
- We recommend that this function is enabled to keep optimal print quality. The timer should be around 15-20 seconds.
- The Auto Jet function will able to run while machine in both Stop and Printing mode.
- The Auto Jet function is different than the Purge function.

Auto switch channel - COMING SOON
Realtime - COMING SOON
Advanced Settings
**Display – COMING SOON**

**Roll over**
Set the number of hours added to the current time. This function is useful once you need to change the date earlier or later than the normal time. The date will normally change at 23:59:59. Printer support both types: **Back date** and **Forward Date**.

**Example: Next day**
Current time is 12:20 PM. If the roll over is set to 3 (hours), the system time will be 3:20 PM, the time and date will print 3 hours faster than normal.

**System time**
Adjust the system in the Software and on the Windows OS.

**Interface languages**
English, German, Vietnamese, Chinese, Korean and Russian.

**GETTING STARTED**
Install the printer on your conveyor according to the installation instructions.

- Set print direction and appropriate throw distance to obtain best print quality (1-3 mm).
- Insert ink cartridge.
- Connect print head cable, sensor and encoder.
- Plug the power cord into an appropriate power source to start up the printer.
- Turn on the power button.
- Set up the software (Design template, Resolution, Density, Print mode,...).

**OPERATION**

**How to design a template**
From the **Main interface**, click **Design** button to open the **DesignJet** interface.
New template

Click **New** to open a new template form. Set the Template name, Number of heads, Printhead Type and Width of template. Click the **OK** button to apply.
**Open template**

Click Open and select a template name to open. Click Open button to reload the template.

**Save template**

Click Save button to save the template.

**Delete template**

Click on button ⋮ and then select File manager. Select template needing to be deleted, click the delete button to delete file.
Save As template

Save this template with other names. Click on button ⬤ ⬤ and then select Save as button. Naming the template and click the save button.

Add Text object

Click on button ⬤ and then select Text button to open the Text form. Input your desired content in the text box, then select OK.
Add Counter object
Click on button  and then select the Counter button to open the Counter setting form.

Single Counter
Add single counter.

Start counter: Set begin value of counter.

End counter: Set the stop value of counter. Once the stop value is reached the counter will automatically return to the Start counter.

Step value: Set step value for counter.

Repeat time: Set the number of times each number will be printed.
Prefix: Set prefix for counter.
_SUFFIX: Set suffix for counter.
Fill zero: Add fill zero at the beginning of the counter. After finishing the setup. Click OK to apply.

Box/Lot Counter – Coming soon

Add Database object
Click on button and then select the Database button to open the database form.

Load database: Select Load database => Select Database type => Next.
Select database file from the list on the left.
**Select database fields**

**TEXT**: Insert Text into template.

**DATETIME**: Insert Date/Time into template.

**DATA FIELDS (F1, F2, F3)**: Select field. This value is a match with the Column in the database file. **Row**: Set the first row of the database to print.

**Text**: Change the content of the Text object above.

**Datetime format**: Set the format of the Date/Time object.

Click **OK** to apply.

**Add Barcode object**

Click on button [ ] and then select **Barcode** button to open the barcode form.
**Source:** Supports Static text, Counter, Datetime, Database, POD and Shift Code.

**Barcode type:** Select barcode type. The unit includes 1D and 2D barcode types such as CODE 11, CODE 2OF5 STANDARD, CODE 2OF5 INTERLEAVED, CODE 2OF5 IATA, CODE 2OF5 MATRIX, CODE 2OF5 DATA LOGIC, CODE 2OF5 INDUSTRY, EAN8, EAN13, UPC12, UPCA, UPCE, CODE 39, CODE 39 EXTENDED, EAN UCC128, CODABAR 2, CODE 128, GS1 DATABAR EXPANDED, GS1 DATAMATRIX, UCC128, QRCODE, DATAMATRIX, GS1 DATABAR EXPANDED STACKED, GS1 128, QRCODE 2005 ...

Click **Next** to set the Barcode value and then Press OK to insert the barcode in the template.

**Add Image object**

Click on button and then select **Image** button to open the image form.

**Image type:** Support Static and Database.

**Static:** Choose the path and select image file => Click **Open** to add image to template.
**Database:** Supports printing with variable images.

### Add Datetime object

Click on button \( 	imes \) and then select the **Datetime** button to open the Date / Time form.
Add Date / Time / Expiry Date

**Format:** Use Windows Date / Time format to display. Select the format desired at List box.

**Expiry date:** Use to create an expire date and follow format above.

Add Shift Code object

Click on button and then select the *Shift Code* button to open the Shift Code form.

**Shift code name:** The current Shift code will display on print. Maximum supported field is 5.

**Shift code time:** The current time of shift code will correspond with each Shift code name. The shift code that is printed is based on the system time.

**Example:**
Shift code 1 has time is 11h00 and Shift code 2 has time 12h00.
At 11h00 Shift code 1 will be print.
At 12h00 Shift code 2 will be print.

**Add Shapes object**
Click on button ![button](image) and then select the Line / Rectangle / Ellipse button to draw a shape on the template.

**Ink Calculate**
Use this function to estimate the cost to print your template.
To use this function, you first need your designed template, then click the Ink Cost button to open the Ink Cost application.
Set all parameters to calculate the ink cost for the designed template.

**Density / Resolution:** Select your target parameters.

**Cartridge:** Set the ink volume of the cartridge.

**Drop volume:** The volume of ink drop "density".

**Page:** Set number prints required for the job.

**Cost:** Add cost of the cartridge in your currency.

**Ink Type:** Select the type of ink being used **Solvent-base** or **Water-base ink**.

Click on the Calculator button to finish your calculation, your result will be displayed on the left corner of the screen.

**File Manager**

Use the **File Manager** to manage all files supported by the software such as: files, databases and images.

These action you can do with **File Manager**:

- Copy the target file to target folder. (Software folder or any folder on Windows)
- Delete the target file.

Click on button and then select the **File manager** button to open the File manager form.
**File Type**
List of files that are supported by the software.

**Files (template file)**
This is a template file with a *.dsj extension.

**Database**
Database files such as: *.txt, *.csv, *.SQLite, *.SQL, *.MySQL, *.JSON.

**Image**
Image and photo files such as: *.png, *.jpg, *.bmp,...

**USB**
Select the target or source folder to copy or transfer.

- Transfer the file from the software folder to the USB or target folder.
- Transfer the file from the USB or source folder to the software folder.
- Delete the file from the software or target folder.
How to print

Step 1: Open template

From the Main interface, click **Open** icon to open a template from a folder.

**Template list:** Select the template to be printed.

**Template Preview:** View the content of a template.

Click the **Open** button to use the template.

Step 2: Adjust Printing Parameter

Before start printing, you should adjust the printing parameters so that they are set correctly for your configuration.

Click the **Start** button to begin printing!
UPDATING INSTRUCTIONS

Update Software / Firmware
This tool will help you update the printer to a newer version of software / Firmware. Please consult your supplier for the correct update files. Copy these files to a USB Flash then plug into the controller to update.

Task List
Select the task: **Update Software / Update Firmware**.

USB List
Select the USB that is plugged into the Controller from the drop down list.

File Update
Select the correct file from the File update drop down list.

Buttons
- Refresh the USB list once you plugged a new USB into the controller box or PC.
- Start installing new Software, Firmware, Font, and Cartridge Info from the USB.