



USB Converter Board

User's Manual

International Currency Technologies Corp.

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USB Converter Board

1. Specifications

Voltage: DC +3.3V

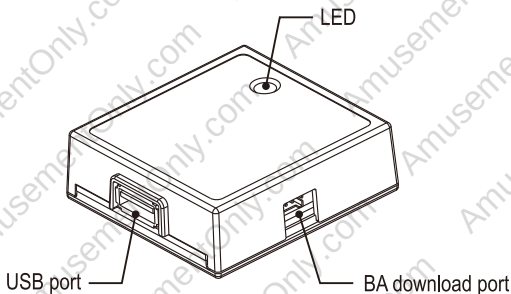
Current: 160mA

Power Consumption: 0.53W

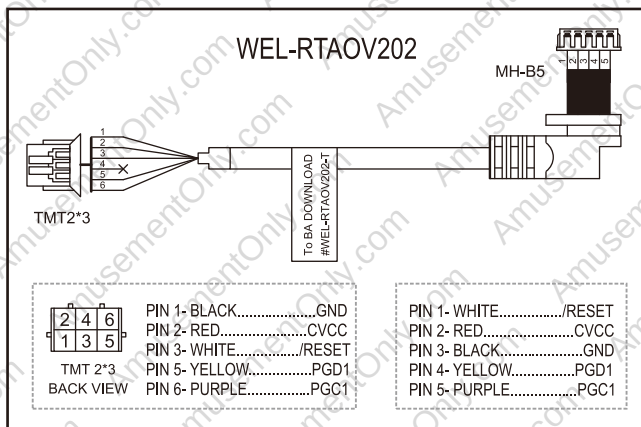
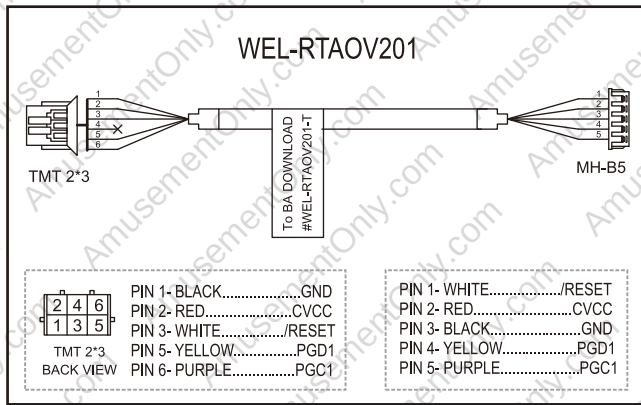
Operating Temperature: 0°C ~ 55°C

Storage Temperature: -30°C ~ 70°C

Support Device: TAO-A/V Series, L Series, LX7, V7E,
V77E, S7ER, S7A Series



2. Harness Application



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3. Tools

1. Format FAT32 USB Flash Drive
2. Download Cable WEL-RTAOV201 / WEL-RTAOV202
3. Target Device

3-1. Device and File name

Model	Hex File Name
TAO-A/V Series	TAEP*
L70	L7DX*
L77	L77X*
L83	L8DX*
L77F	L7FX*

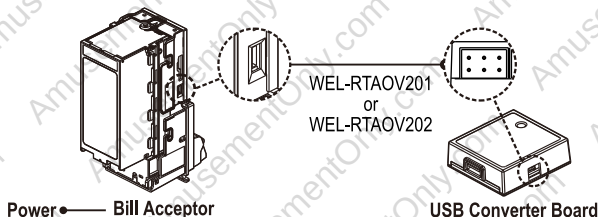
Model	Hex File Name
LX7	V7GP*
V7E	V7GP*
V77E	V7CP*
S7ER	S7FP*
S7A Series	S7SP*

Note: " * " represent to the latest firmware.

3-2. Upgrading the Target Device

Step 1. Download the file into the USB Flash drive. Make sure the file name is "Hex File Name" as above and format ".Hex".

Step 2. Turn ON- Connect the download cable WEL-RTAOV201 (or WEL-RTAOV202) to the Bill acceptor. A blue LED on the USB Converter Board will flash.
S7A Series and S7ER please refer to page 6- Note(7).



Step 3. Connect the USB Flash drive to the USB Port of the Converter Board.

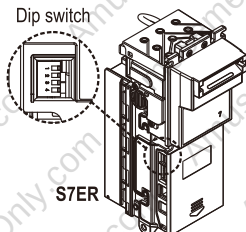
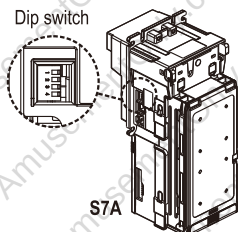
Step 4. Upgrading status:

LED (Time:ON/OFF)	Status
Blue (250ms/5sec)	Waiting for USB Flash drive connection.
Green (250ms/250ms)	Upgrading Bill Acceptor.
Red(250ms/250ms)	The USB Flash drive has more than one firmware for the device.
Red (50ms/50ms)	Cannot detect USB Flash drive or the program has error.
LED OFF	USB Flash drive has no firmware.
Constant RED	Download Failed.
Constant GREEN	Download finished.

Note:

- (1). The name of the firmware can't be changed.
- (2). Verify if the firmware version on the USB Flash drive is compatible for this device.
- (3). Upgrade the firmware of the USB Converter Board if the LED shines in red when power on.
- (4). When the USB Flash Drive has more than one firmware version for same device, the USB Converter Board will only upgrade the latest firmware. The Converter Board will not automatically upgrade if the USB flash drive has firmware for two different devices.
- (5). Do not remove the USB Flash drive during an upgrade.
- (6). When the upgrade has finished, then the Bill Acceptor will automatically restart.

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- (7). a. Setting the dip switch SW1 ON and SW3 & 4 OFF, and then turn on power again. (FIG.01)

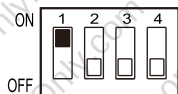


FIG.01

- b. Connect the USB Flash drive to the USB Port of the Converter Board.

- c. When the upgrade has finished, then bill acceptor will automatically restart.

- d. Remove the USB Flash drive

- e. Setting the dip switch SW1 OFF and SW3 & 4 ON, and then turn on power again. (FIG.02)

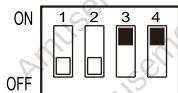


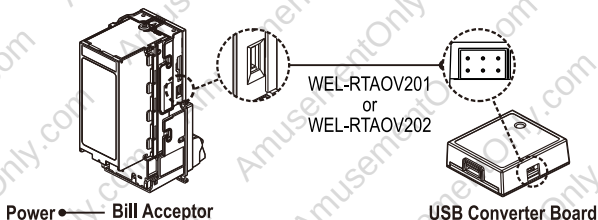
FIG.02

3-3. Upgrading the USB Converter Board

Step 1. Downloading the firmware to the USB Converter Board through an USB Flash drive. The file format has to be “.bin”.

Step 2. Connect the USB Flash drive to the USB port of the Converter Board.

Step 3. Turn ON- Connect the download cable WEL-RTAOV201 (or WEL-RTAOV202) to the Bill Acceptor.



Step 4. Upgrading status:

LED (Time:ON/OFF)	Status
Green (250ms/250ms)	Upgrading USB Converter Board.
Constant RED	Download Failed.
Constant GREEN	Download finished.

Note:

- (1). Connect the USB Flash drive before turning ON the device.
- (2). Do not remove the USB Flash drive during an upgrade.
- (3). When turning ON and the LED flashes red, this means the upgrade failed.
- (4). When the USB Flash Drive has more than one firmware version, the board will only upgrade the latest firmware.

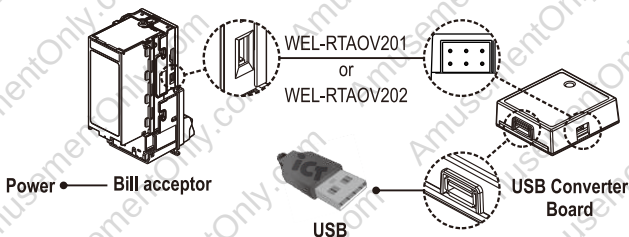
USB Converter Board

3-4. USB Converter Board Version and Checksum information

Step 1. Turn ON- Connect the download cable WEL-RTAOV201 (or WEL-RTAOV202) to the Bill Acceptor



Step 2. Connect the USB Flash drive to the USB Port of the Converter Board.



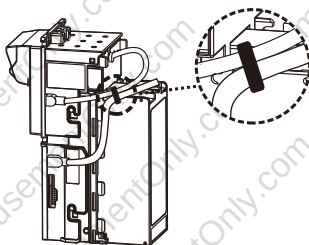
Step 3. Remove the USB Flash drive when the LED light in status.

Step 4. On the PC, look for the file "**USBCB_Information.txt**". In this file you will find the Converter Board version and the Checksum.

Step 5. The file “**USBCB_Information.txt**” contains the following:

```
USB Converter Board:  
Bootloader Version=USB CONVERTER_BOOTLOADER_X.X  
Bootloader Checksum=XXXX  
Application Version= USBCBSXXXX#####  
Application Checksum=XXXX
```

3-5. ICT recommends fastening the USB Converter Board cable to the Bill Acceptor.





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