

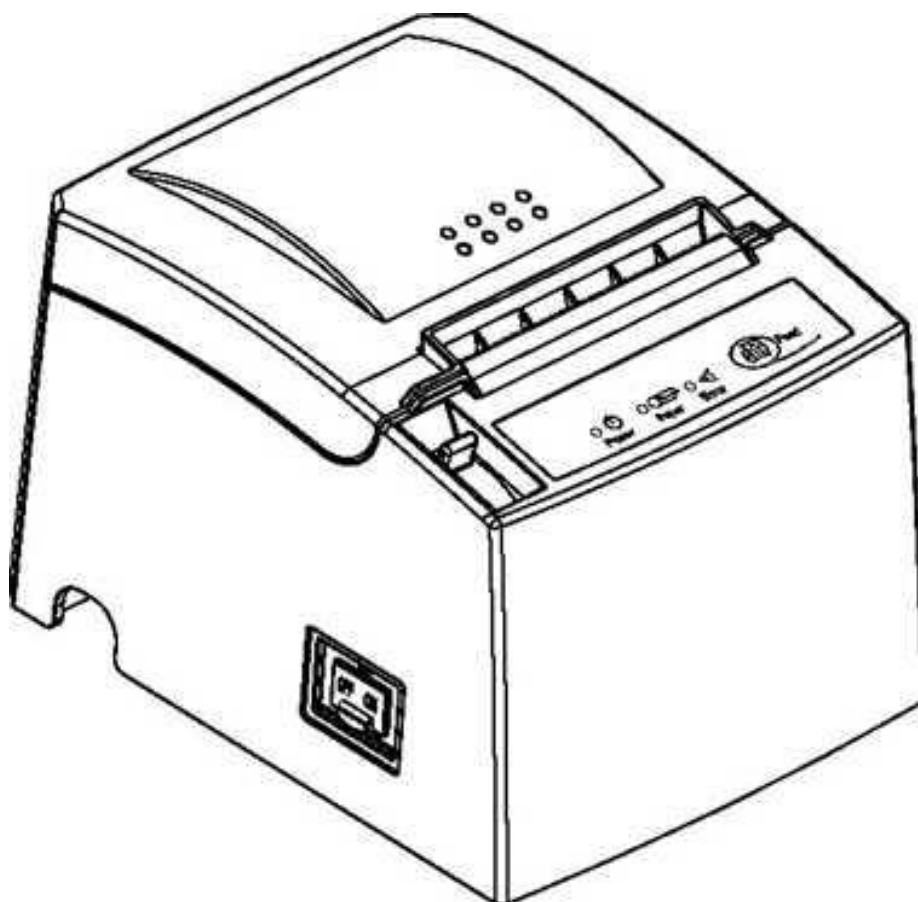
New as of:

04.2016

# NitraPrint for DAC UNIVERSAL

Operating Instructions

English



# *NitraPrint for DAC UNIVERSAL*

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# *NitraPrint for DAC UNIVERSAL*

## **1 General Description**

### **1.1 Overview**

The NitraPrint thermal receipt printer is designed for use with the DAC UNIVERSAL and computer peripheral equipment.

### **1.2 Feature**

- 1 Compact desktop Line Thermal printer.
- 2 Easy loading designed for dropping the paper roll
- 3 Built-in USB and interface conformity to RS-232C, centronics and Ethernet for different applications depends on which interface card is inserted into the printer.
- 4 Command protocol is compatible with ESC/POS.
- 5 2 drawer kick-out.
- 6 The resident data buffer has storage capacity of about 4K-bytes, enable data to be received even while printing.
- 7 Support download bit image, directly bit image and bar-code printing.
- 8 The sensors include paper end, paper near end and cover sensor.

# *NitraPrint for DAC UNIVERSAL*

## **1.3 Accessories**

<b>Item</b>	<b>Unit</b>
Paper roll / 80mm (width) x 70mm (diameter)	(1 roll)
Power adapter	(1 unit)
Power cord	(1 unit)
Operating instructions supplied on electronic media	(1 unit)
Paper divider for 58mm (width) thermal paper	(1 unit)
RS232 cable	(1 unit)

# NitraPrint for DAC UNIVERSAL

## 2 Specifications

### 2.1 Main Specifications

Item		Description		
1	Printing method	Thermal line		
2	Printing speed	Approx. 220 mm/s		
3	Command	ESC/POS		
4	Driver	Linux, Windows and OPOS		
5	Character structure	Alphanumeric (A)	Alphanumeric (B)	Kanji
		12 x 24	9 x 17	24 x 24
6	Columns 80mm/58mm	48 / 34 columns	64 / 45 columns	24 / 17 columns
7	Character size	1.50(W) x 3.00(H)	1.13(W) x 2.13(H)	3.00(W) x 3.00(H)
8	Density	203dpi		
9	Fonts	Multilingual code page x 40, Chinese, Japanese, Thai, Korean, Others		
10	Bar Code	UPC-A, UPC-E, EAN13, EAN8, Code39, Code93, Code128, CODABAR, ITF, QR Code.		
11	Detectors	Paper end, Paper near end, Cover, Printer head overheat and Cutter jam		
12	Paper	Singly-ply thermal paper roll		
13	Paper roll size	79.5±0.5 (W) x 83 mm (Dia.)		
14	Paper thickness	0.05 ~ 0.06 mm		
15	Drawer output	2		
16	Reliability	Head	100 km or more	
		Cutter	700,000 times	
17	Memory	Buffer	4K bytes	
		SRAM	256K bytes	
		Flash	1M bytes (NV Image)	
18	Power supply	+24 VDC / 2.5A		
19	Interface	Built-in USB/RS-232, Parallel and Ethernet are optional		
20	Gross weight	2.40 kg		

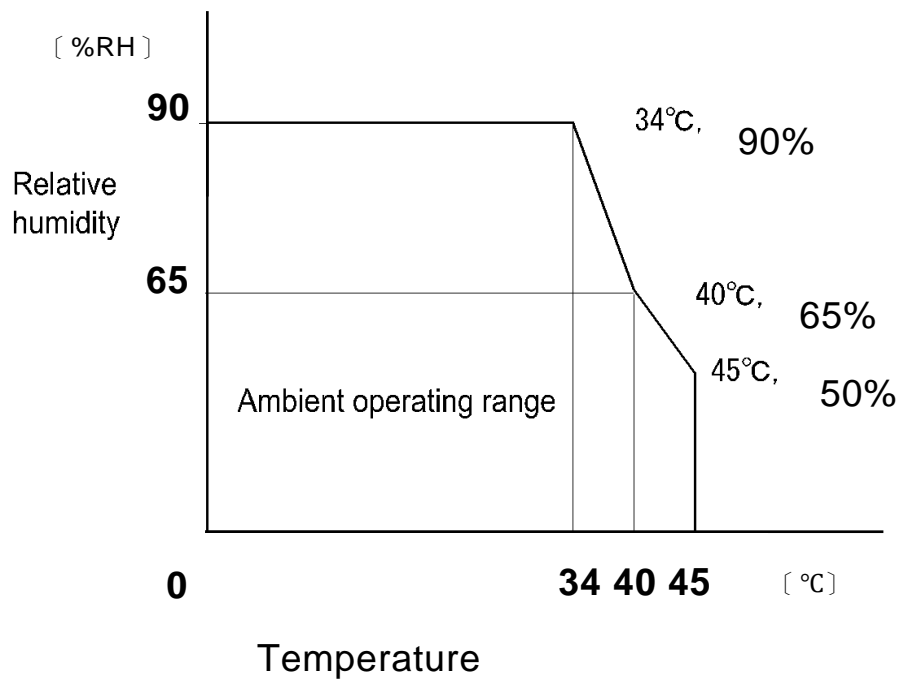
## *NitraPrint for DAC UNIVERSAL*

21	External dimension		136 (W) x 178 (D) x 123 (H) mm
22	Temperature	Operating	0 ~ 45°C
		Storage	-10 ~ 50°C
23	Humidity	Operating	10 ~ 90 %RH
		Storage	10 ~ 90 %RH

# NitraPrint for DAC UNIVERSAL

## 2.2 Operating Specifications

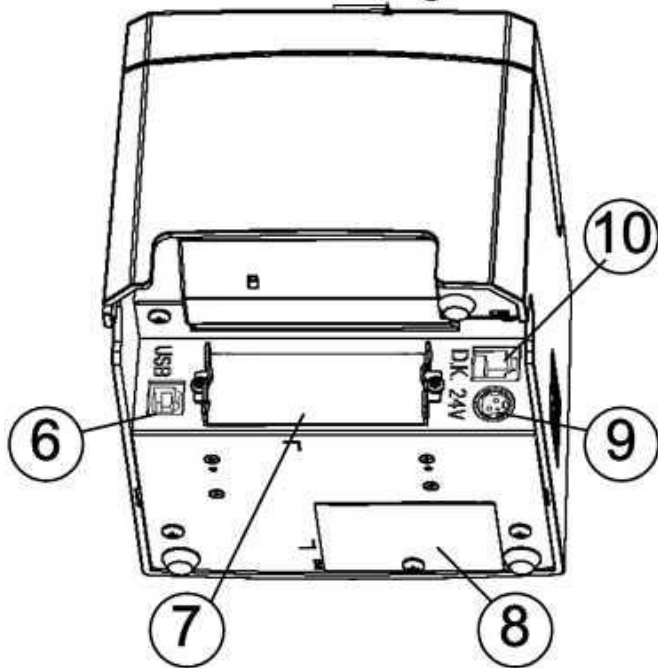
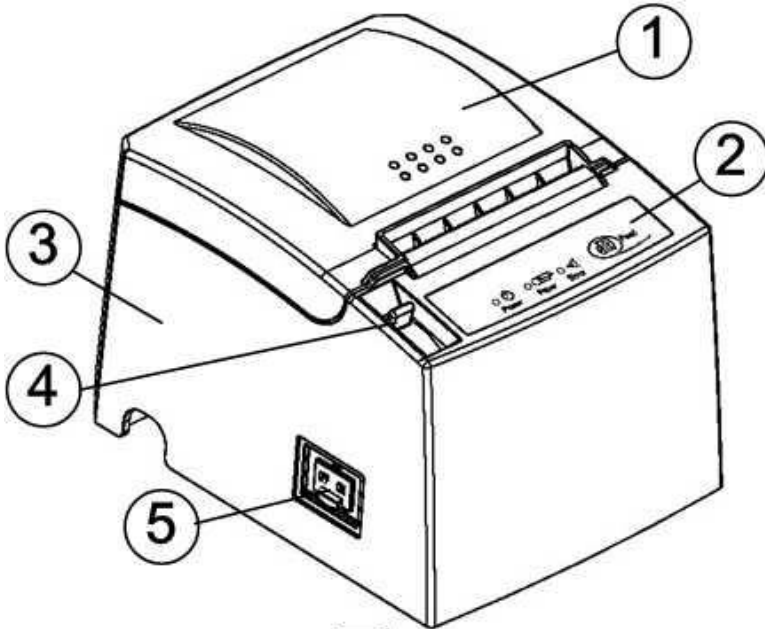
Item		Specifications
Temperature/ Humidity	Operating	0 to 45°C (32 to 113°F), 0 to 90% RH no condensation allowed. (Refer to ambient operating ranges in the figure below.)
	Storage: (shipped packed state)	-10 to +50°C (14 to 122°F), 0 to 90% RH (excluding paper)





# NitraPrint for DAC UNIVERSAL

## 3 External Appearance and Descriptions



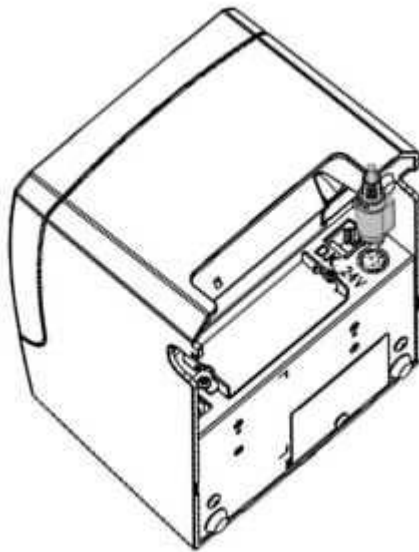
(1)	Printer cover
(2)	Control panel
(3)	Main housing
(4)	Cover open lever
(5)	Power switch
(6)	USB connector
(7)	Interface card
(8)	DIP switch cover
(9)	Power connector
(10)	Cash drawer connector

# NitraPrint for DAC UNIVERSAL

## 4 Installations

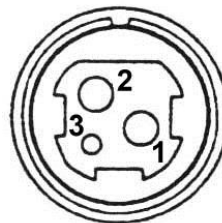
### 4.1 How to Connect Power Adapter

- 1 Ensure that the power switch is OFF.
- 2 Plug the power connector into the printer's power connector.



- 3 Plug the power cord into the outlet, and turn on the power.
- 4 Connector Specifications shows as below.

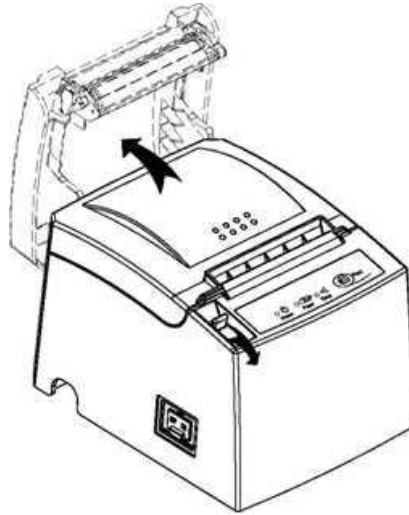
Pin Number	Signal Name
(1)	+24VDC
(2)	GND
(3)	NC
Shell	Frame GND



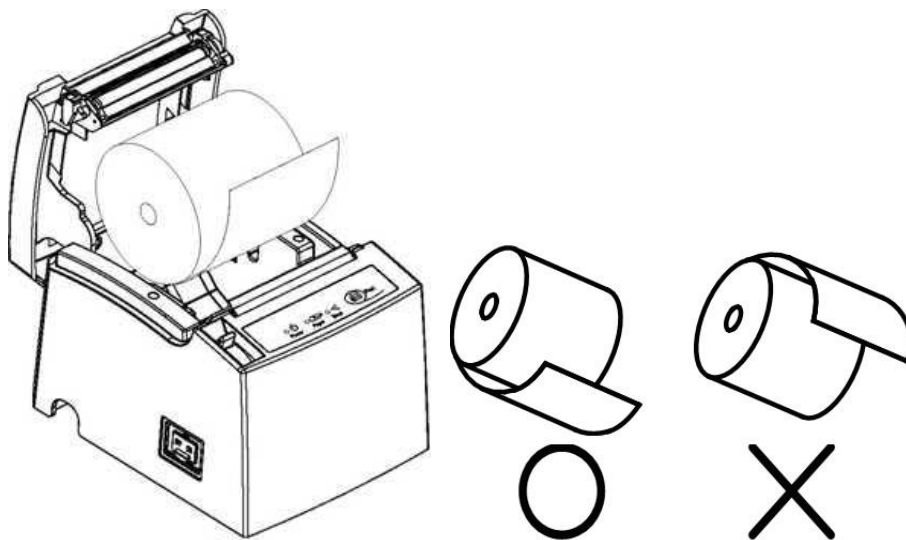
# *NitraPrint for DAC UNIVERSAL*

## **4.2 How to Load Thermal Paper**

- 1 Pull the cover open lever to open the printer cover.

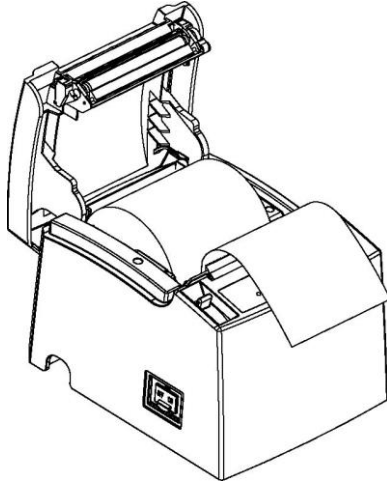


- 2 Remove any used paper roll's core and put the new paper roll.

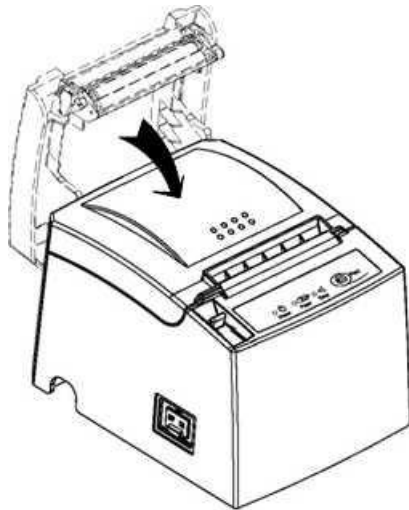


## *NitraPrint for DAC UNIVERSAL*

- 3 Pull out the thermal paper.



- 4 Close the printer cover.



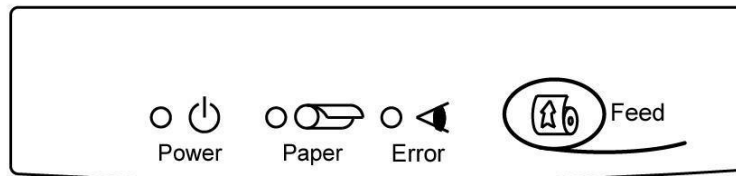
- 5 The NitraPrint is now ready for operation when connected to a DAC UNIVERSAL via the supplied RS232 cable.

Make sure printout is enabled in the DAC UNIVERSAL menu.

# NitraPrint for DAC UNIVERSAL

## 5 Control Panel

### 5.1 Basic Operation



#### 1 Feed button

When this push-button switch is pressed once briefly (for 0.5 seconds or less), the paper is fed forward by one line. When it is held down continuously, the paper is fed forward continuously until the switch is released.

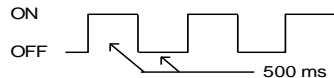
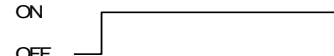
#### 2 Power LED indicator

The light indicates power well connected.

# NitraPrint for DAC UNIVERSAL

## 3 Paper LED indicator

- The indicator remains lighting when paper near end or paper end.
- The indicator keeps sparkling when printer process in self-test or hexadecimal dump mode.
- The flash timing chart shows as below.

Printer status	Blinking Pattern
Self-Testing	
Paper end	

## 4 Error LED indicator

When printer cover is not properly closed or paper jam happen on cutter part or paper is not put properly, the error indicator lamp (red LED) will light and an acoustic alarm is emitted if function is activated.

# NitraPrint for DAC UNIVERSAL

## 5.2 Switch Operation (Combined Switch Operation)

### 1 Self-printing mode

Turn the power on while holding the feed button depressed. Self-printing receipt will be printed out (Ref. the right receipt).

Self-printing will be performed according to the VER. NO., printer settings and characters etc (Ref. the right receipt). When the feed button is pressed again after self-printing stopped, the printer will print self-printing receipt again.

To turn off this mode, it is necessary to turn off the printer power completely.

```
*** WP-TB10 ***
F/W Version: 0.99a
H/W Version: 1.1
Ext. Flash: 4M Bytes
Ext. SRAM: 128K Bytes
Printing Speed: 220mm/s
Command: ESC/POS

Interface: USB, RS-232
          9600,N,8,1,DTR/DSR

Font: USA, 繁體中文 v1.0

!''#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNO
PQRSTUVWXYZ[\]_`abcdefgijklmnopqrstuvwxyz{|}~

!''#$%&'()*+,-./0123456789:;<=>?@ABCDEFGHIJKLMNOQRSTUVWXYZ[\]_`
abcdefgijklmnopqrstuvwxyz{|}~

*** DIP Switches Status ***

      DSW1      DSW2
      12345678  12345678
DN      *** * *
OFF ***** * * *

-----

1. Select Parity Check
SW1-5
OFF: No
DN : Yes

-----

2. Select Parity Type
SW1-6
OFF: Odd
DN : Even

-----

3. Select Baud Rate
SW1-7 SW1-8
OFF OFF: 9600 bps
DN OFF: 19200 bps
OFF DN : 38400 bps
DN DN : 115200 bps

-----

4. Select Handshake Busy
SW2-1
OFF: Off line, buffer full
DN : Buffer full, ASB on

-----

5. Select Printing Speed
SW2-2
OFF: 220mm/s
DN : 150mm/s

-----

6. Select Print Density
SW2-3 SW2-4
OFF OFF: Light
DN OFF: |
OFF DN : |
DN DN : Dark

-----

7. Select Error Beep Alarm
SW2-6
OFF: Alarm
DN : Silence

-----

8. Select Paper Width
SW2-7
OFF: 80mm
DN : 58mm

-----

9. Select Default Page Mode
SW2-8
OFF: Off
DN : On

*** Test Completely ***
Press LF key for test again !!
```

# NitraPrint for DAC UNIVERSAL

## 2 Hexadecimal dump mode

Open printer cover. Turn on power while holding the feed button depressed. Then close printer cover. The printer will be set to hexadecimal mode.

```
=== Hexadecimal Dump ===  
  
31 32 33 34 35 36      123456  
37 38 39 30 41 42      7890AB  
43 44 45 46 47 48      CDEFGH  
49 4A 4B 4C 4D 4E      IJKLMN  
4F 50 51 52 53 54      OPQRST  
55 56 57 58 59 5A      UVWXYZ
```

Each of the signals sent from the computer to the printer will be printed out in hexadecimal code. This function allows user to check control code.

To turn off the mode, it is necessary to turn off the printer completely.

OFF	OFF	Light
ON	OFF	
OFF	ON	
ON	ON	Dark



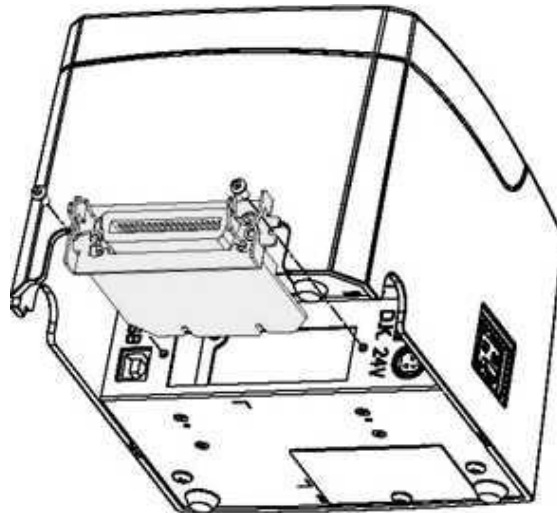
# *NitraPrint for DAC UNIVERSAL*

## **6 Interface Specifications**

NitraPrint has built-in USB and also provides RS232c, centronics, Ethernet and other interface cards, which is replaceable for more convenient adjustment according to requirement.

### **6.1 Changing the Interface Card**

Turn off the printer and all components connected, remove the 2 screws and the interface card unit. Insert the new interface card unit and screw it.



# NitraPrint for DAC UNIVERSAL

## 6.2 Serial Interface Specifications

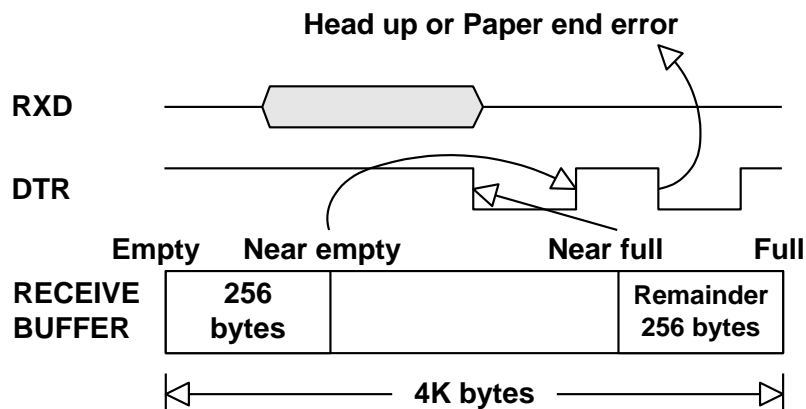
### 1 Specifications (Conform to RS-232C)

Synchronizing system	Asynchronous system
Handshaking	DTR/DSR control
Baud rate	9600,19200,38400,115200 (Refer chapter 5-3)
Data length	7 or 8 bit length
Parity	None, even or odd

### 2 Pin assignment

No.	Signal	I/O	Signal Name
2	TXD	Output	Transmit data
3	RXD	Input	Receive data
6	DSR	Input	Data set ready
20	DTR	Output	Data terminal ready
7	GND	-	Signal ground

### 3 Timing Chart



# NitraPrint for DAC UNIVERSAL

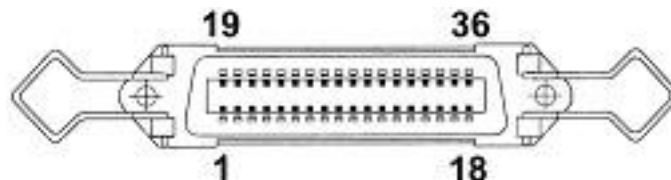
## 6.3 Parallel interface specifications

### 1 Specifications (Conform to Centronics)

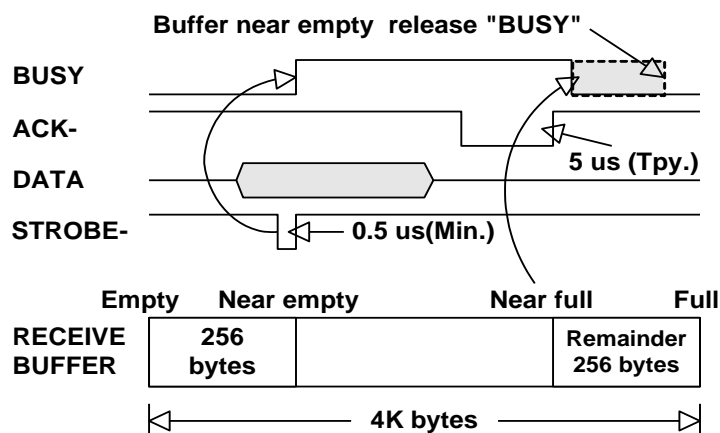
Data transmission format	8-bit parallel
Synchronizing system	According to the strobe pulses
Handshaking	According to the BUSY signal
Signal level	TTL level

### 2 Pin assignment

No.	Signal Name	No.	Signal Name
1	STB-	17	F.G.
2-9	DATA 1 – DATA 8	18	NC
10	ACK-	19-30	TWISTED PAIR GND
11	BUSY	31	RESET-
12	PE	32	FAULT-
13-15	NC	33	GND
16	GND	34-36	NC



### 3 Timing Chart



# NitraPrint for DAC UNIVERSAL

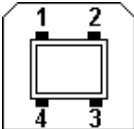
## 6.4 USB Interface Specifications

### 1 Specifications

- USB B type/ female
- USB specification 2.0 complaint, full speed mode (12 Mbps).

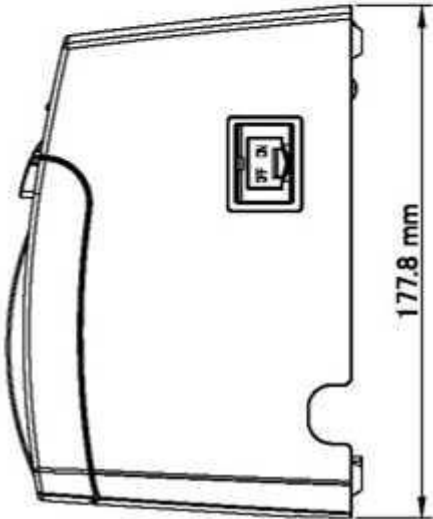
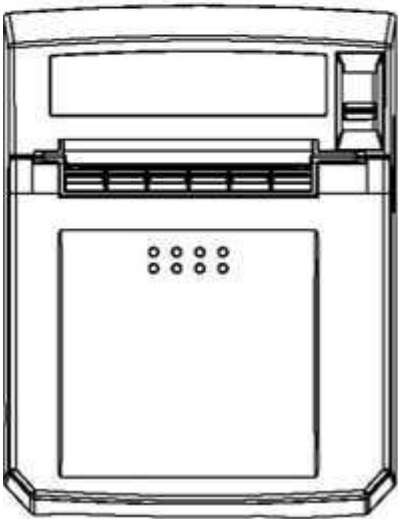
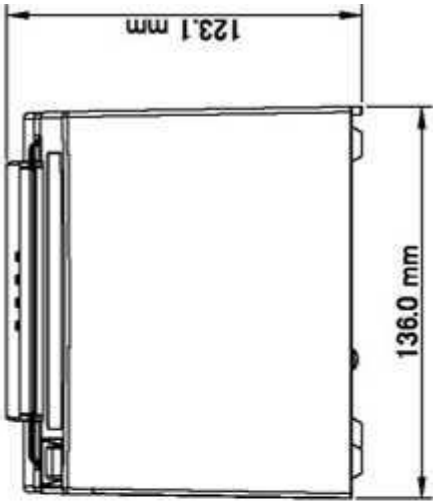
### 2 Pin assignment

No.	Signal Name	Function
1	5VDC	Power input
2	USBD-	USB data signal -
3	USBD+	USB data signal +
4	GND	Signal ground



# NitraPrint for DAC UNIVERSAL

## 7 External Dimensions



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