



W3051
(W3051B-B66.00-E02-01)
Product Specification

CONFIDENTIAL

Unpublished property of Shenzhen JustTide Technology Co Ltd. © JustTide 2006
This document must not be copied or distributed without JustTide's written permission.
Tel: +86 755 8696 0726, Fax: +86 755 8615 3346
www.justtide.com

Table of Contents

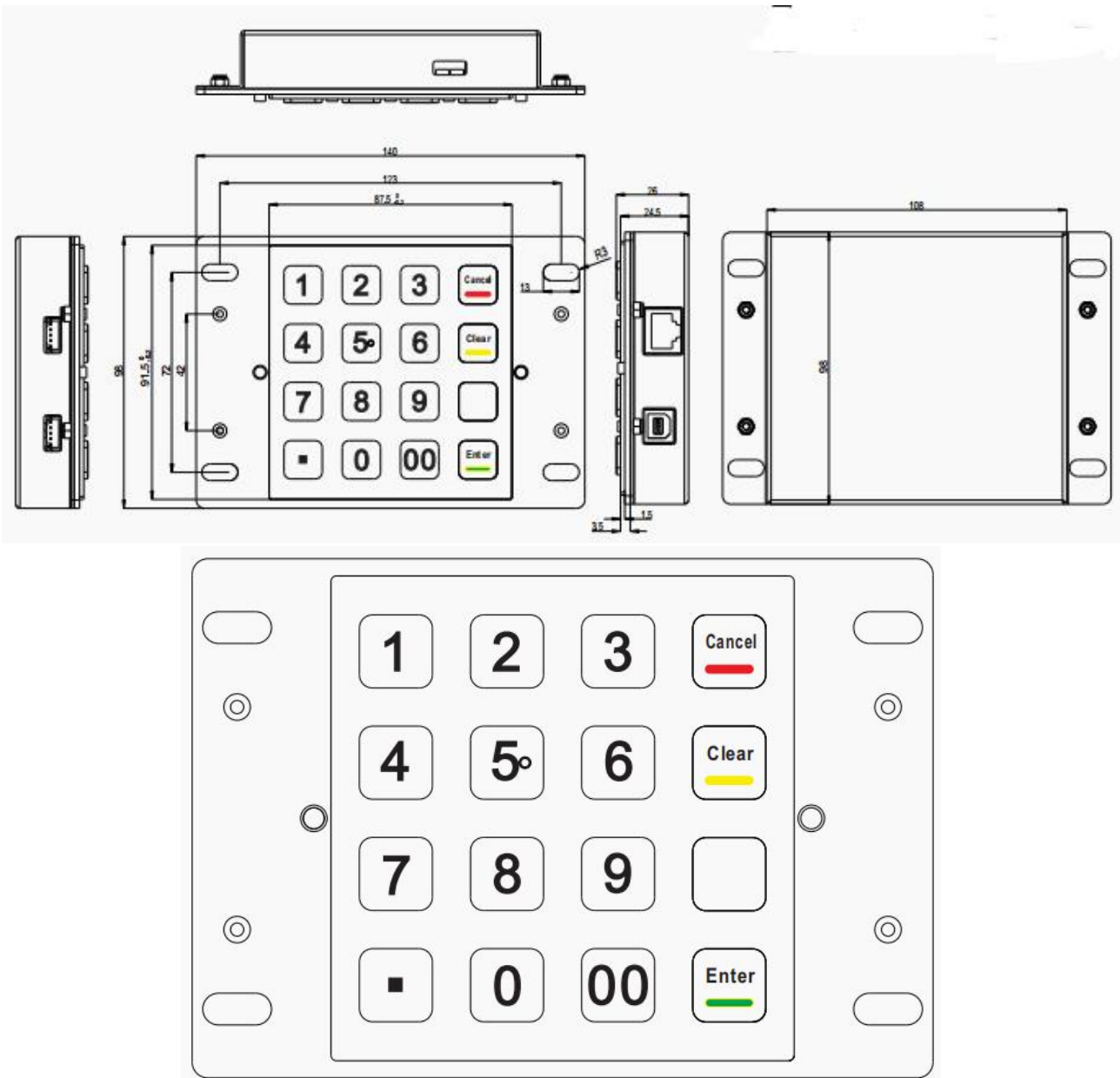
1 Physical features.....	3
1.1. Size and weight.....	3
1.2. Appearance design.....	4
2 Electrical interface.....	4
2.1 RS232.....	4
2.2 USB.....	4
2.3 Expansion port for FDK.....	5
3 Keypad features.....	5
3.1 Security Performance.....	5
3.2 Environmental characteristics and certifications.....	6
3.3 Keystroke performance.....	6
4 Logical features.....	6
4.1 Support functions.....	6

CONFIDENTIAL

1 Physical features

1.1. Size and weight

- Dimensions
 - L×W×H: 87.5mm×91.5mm×1.5mm (140mm*98mm*26mm)
- Weight
 - 0.7 kg
- W3051B-B66.00-E02-01 series drawing:



CONFIDENTIAL

1.2. Appearance design

- Made of high quality stainless steel with laser
- The front panel and keys uses the metal wiredrawing craft
- Easy to use for handicapped
- Button '5' is designed with one stud dot for the visually-impaired
- Function buttons are designed with color frame

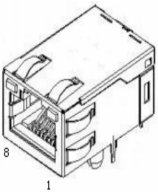
2 Electrical interface

There are two kinds of connectivity with EPP: Serial RS232 and USB.

2.1 RS232

W3051B adopts RJ45 interface of RS232 by which EPP is connected.

Pins are defined as followings:



PIN	1	2	3	4	5	6	7	8
Function	NC	NC	RXD	NC	TXD	GND	NC	DC (+5V)

2.2 USB

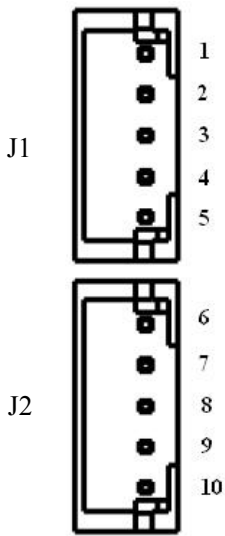
W3051B series adopt standard "B" receptacle for USB interface with connector. The EPP is a self-powered Full-Speed USB2.0-compliant device. Pin definition of USB interface as follow:

Connector Pin No.	Function
1	VBUS
2	D-
3	D+
4	GND

CONFIDENTIAL

2.3 Expansion port for FDK

An 8-key function keypad can be connected through this expansion port. The associated interface cable for this port is shipped with the EPP and it can be custom designed. Pin definition of FDK interface as follow:



Connector Pin No.	Function (J1 Left)	Connector Pin No.	Function (J2 Right)
1	KEY1 (0x41)	6	KEY2 (0x45)
2	KEY3 (0x42)	7	KEY4 (0x46)
3	GND	8	GND
4	KEY5 (0x43)	9	KEY6 (0x47)
5	KEY7 (0x44)	10	KEY8 (0x48)

3 Keypad features

3.1 Security Performance

- Tamper Resistant
- Foreign matters prevention from the back cover
- EPP removal detect
- SPA and DPA attacks detect
- Kuhn attack detect
- Secure firmware download & upgrade
- Prevent attacks associated with EMI radiation

CONFIDENTIAL

3.2 Environmental characteristics and certifications

- Operation temperature range: -25°C~+65°C
- Storage temperature range: -35°C~+75°C
- Environment humidity: ≤95% r.h, non-condensation
- Guaranteed MTBF: 100,000 hours minimum
- Data retention lifetime: ≥5 years without external power supply attached
- Water spray/dust protection: IP65 (Front only)

3.3 Keystroke performance

- Removal switches operating force: 2.5N ±0.4N
- Numerical keys actuating force: 2.7N ±1.0N (Center)
- Function keys actuating force: 2.7N ±1.0N (Center)
- Lifespan of keys: 2,000,000 cycles minimum at 4.6N force applied

4 Logical features

4.1 Support functions

- Built in beeper
- Clear entry
- PIN entry
- PIN encryption with following PIN formats
 - ANSI X9.8
 - ISO 9564 format 0
 - ISO 9564 format 1
 - ECI2
 - ISO 9564 format 3
 - ISO 9564 format 4
 - IBM3624
 - Diebold

CONFIDENTIAL

- DieboldCo
- User data encryption / decryption with following algorithms(AES/TDES)
 - Electronic Code Book (ECB)
 - Cipher Block Chaining (CBC)
- Message Authentication Code (MAC) calculation using CBC algorithm
- Enter master keys from Pin Pad
- Load session keys from application
- Remote Key Loading with SHA1 or SHA256
- Device diagnosis through LED control
- Firmware upgrade control

CONFIDENTIAL