

CKT0001 – Demo Board

File Information

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1 – Introduction

CKT0001 Demo Board includes CKT0001 integrated circuit developed by CayennE-k Tecnologia. It was developed to be used as a development system for hardware and system developers, but due to its simplicity it can also be used in the final equipment as a simple module.

It has both slave SPI and UART interfaces for communicating with host processor and an USB connector for the Pendrive.

CKT0001 Demo Board needs 3.3V to work properly while a Pendrive requires 5V, which must be provided externally since CKT0001 is not able to generate 5V.

Details about CKT0001 usage, list of commands, interfaces can be found in the CKT0001 datasheet.

2 –Pinout

PIN	FUNCTION	TYPE	DESCRIPTION
1	5V	POWER	5V power supply
2	3.3V	POWER	3.3V power supply
3	GND	POWER	GROUND
4	LED1	OUTPUT	LED1 output – indicates pendrive is recognized
5	LED2	OUTPUT	LED2 output – indicates idle state or activity
6	CFG1	INPUT	Configuration pin 1 0 – SPI interface 1 – UART interface
7	CFG2	INPUT	Configuration pin 2 0 – low baud rate 1 – high baud rate
8	/RST	INPUT	Reset signal. Connect to VDD through a 4.7kΩ resistor for normal operation.
9	TX	OUTPUT	UART transmit data
10	RX	INPUT 5V compliance	UART receive data

11	SDO	OUTPUT	SPI output data
12	SDI	INPUT 5V compliant	SPI input data
13	SCK	INPUT 5V compliance	SPI clock
14	/CS	INPUT 5V compliance	/CS – enables communication via SPI when CFG1=0, negative logic

- It is not possible to use SPI and UART interfaces at the same time.

3 – Specifications

Nominal Supply Voltage (VDD): 3.3V

Power Supply (VDD): 3.0-3.6V

Current Consumption: 20mA (no LEDs connect on LED1 or LED2 pins)

Input/Output voltage: 2.6-3.6V

Input High Voltage: 0.8VDD

Input Low Voltage: 0.15VDD

Maximum Voltage in 5V Capable Pins: 5.5V

LED1 output current: 25mA maximum

LED2 output current: 25mA maximum

Pendrive Voltage: 5V nominal

Pendrive Current: 100mA suggested (verify manufacturer information)

SPI Interface:

SPI Clock Frequency (SCK): 4MHz maximum

Minimum Time Between Bytes: 50us

UART Interface:

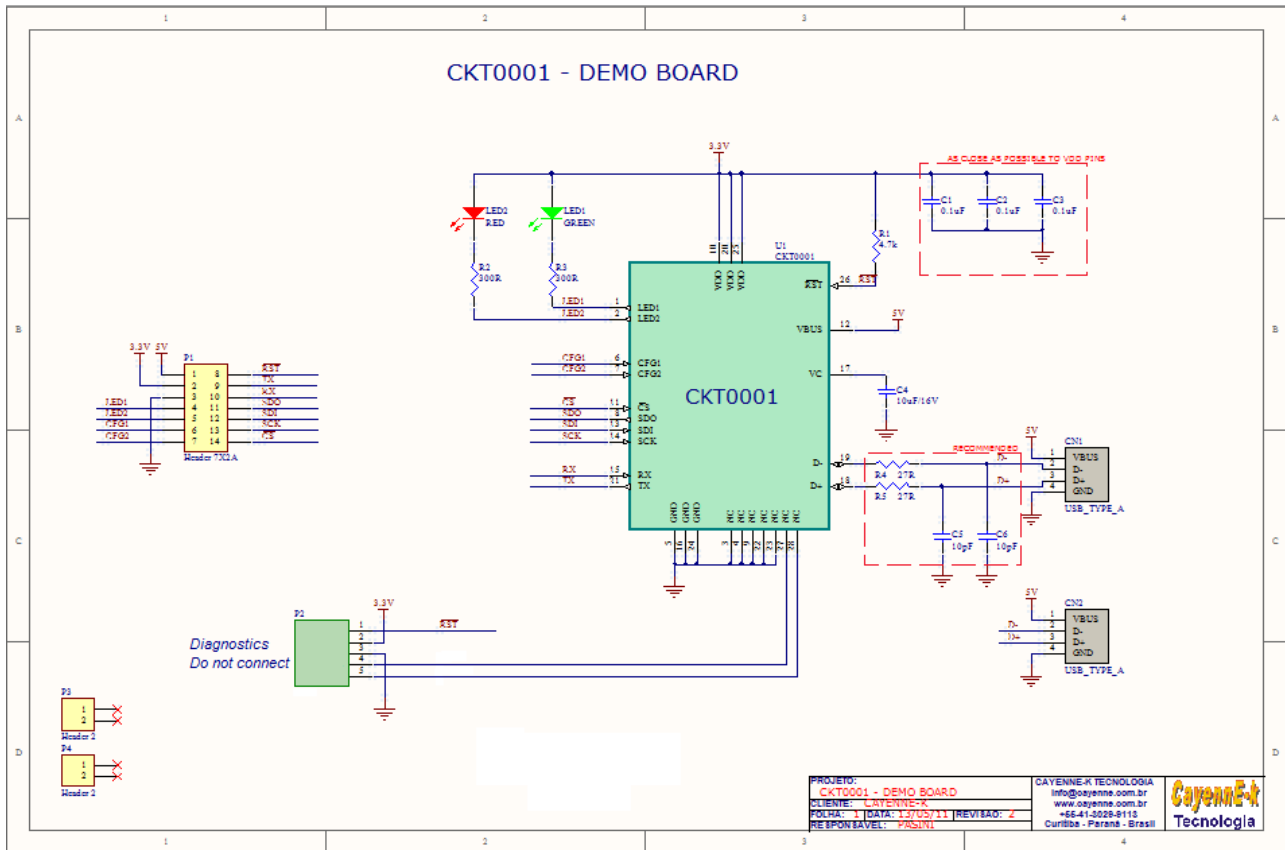
UART High Baud Rate: 115200bps

UART Low Baud Rate: 9600bps

Minimum Time Between Bytes: 100us

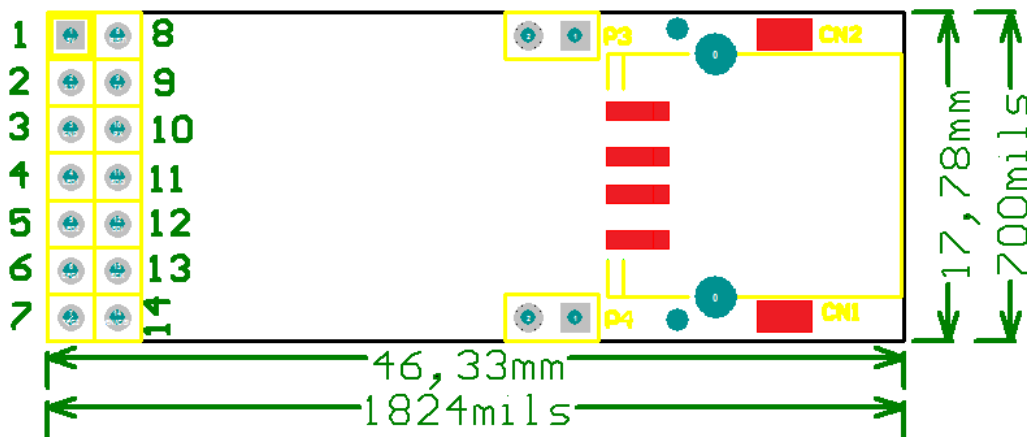
Working Temperature: -40°/+125° C

4 – Schematic



ERRATA: Revision 01 date 13/05/2011 had pins 18 (D+) and 19 (D-) of CKT0001 inverted in the PCB. It was fixed and user may face absolutely no problem using CKT0001 Demo Board. Next revision of the board will correct it definitely.

5 – Mechanical Drawings



P1 is male header type connector, spaced 2.54mm or 100mils. P2 is for diagnostics purposes only; it must be left unconnected in all cases.

6 – Ordering Information

Part Number

CKT0001-Demo Board

7 – Warning

Attention:

This device is not to be used in medical or military equipments.

It is believed that the product and this description is correct, without errors and up-to-date with electronic components used. Nevertheless, consult last minute changes in this datasheet.

CKT0001 Demo Board follows proper standards, laws and common practices used in electronic equipments and systems. Even though,

errors may occur during CKT0001 Demo Board usage due to voltage spikes, electromagnetic fields and temperature. CayennE-k Tecnologia is not responsible for any loss of information or system inoperability that may occur for these and any other reasons.

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In case of doubts, consult CayennE-k Tecnologia by e-mail info@cayenne.com.br or at www.cayenne.com.br

12 – Document History

Revision 01: 09/06/11 – First Release

The logo for CayennE-k Tecnologia features the company name in a large, bold, yellow font with a blue outline, set against a dark blue background. The word 'TECNOLOGIA' is written in a smaller, white, sans-serif font to the right of the main name.

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