



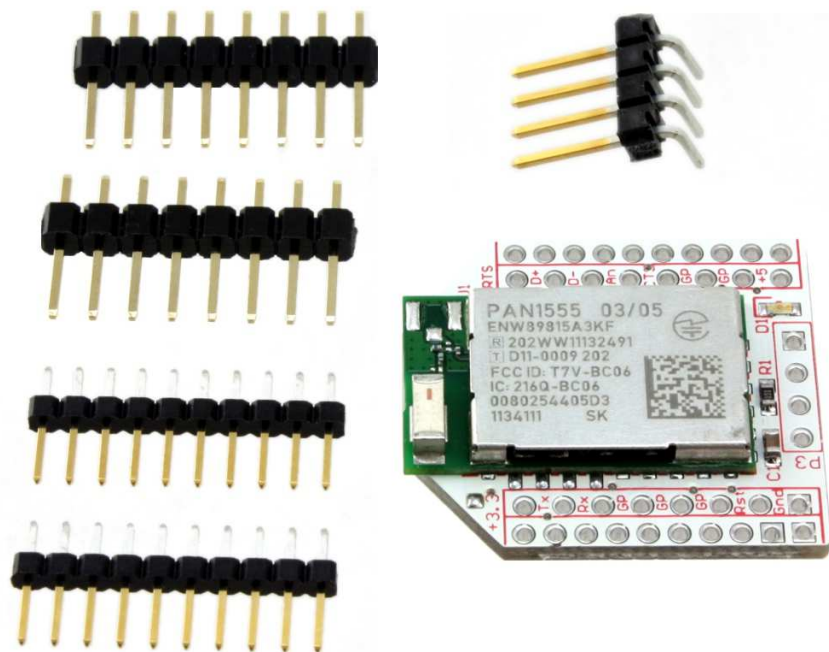
DKSB1013A

PAN1555 Evaluation Board

14 February 2012

Features

- PAN1555 Bluetooth v2.0 class 2 module with SPP (Serial Port Profile)
- Header locations for solderless breadboard, XBee[®] socket, or 4-pin header for essential signals.
- Pin and geometry compatible with XBee[®] modules, including pins for 3VDC, Ground, Tx, Rx, CTS, RTS, Reset, and select ADC and GPIO signals
- Optional linear regulator (MCP1700T-3302E/TT) to allow up to a 6VDC supply on header P3



Quick Start

1. Solder either the 4-position 0.100", the two 10-position 0.100", or the two 2mm pitch headers to the bottom of the PCB.
2. Connect the breakout board's Ground, 3.3VDC, Tx, and Rx lines to your target.
3. Power on the module and begin the pairing process with your host device (PC, Android, etc.)
4. The device name is **BlueMod+P2x/G2 05:D3** where **05:D3** is the last four characters of the MAC address of the PAN1555. The MAC address is seventh line of text on the PAN1555.
5. If prompted, the Bluetooth pass code is 0000 (four zeros).
6. Begin serial data transmissions with your target device as if a serial cable is connected.

Functional Description

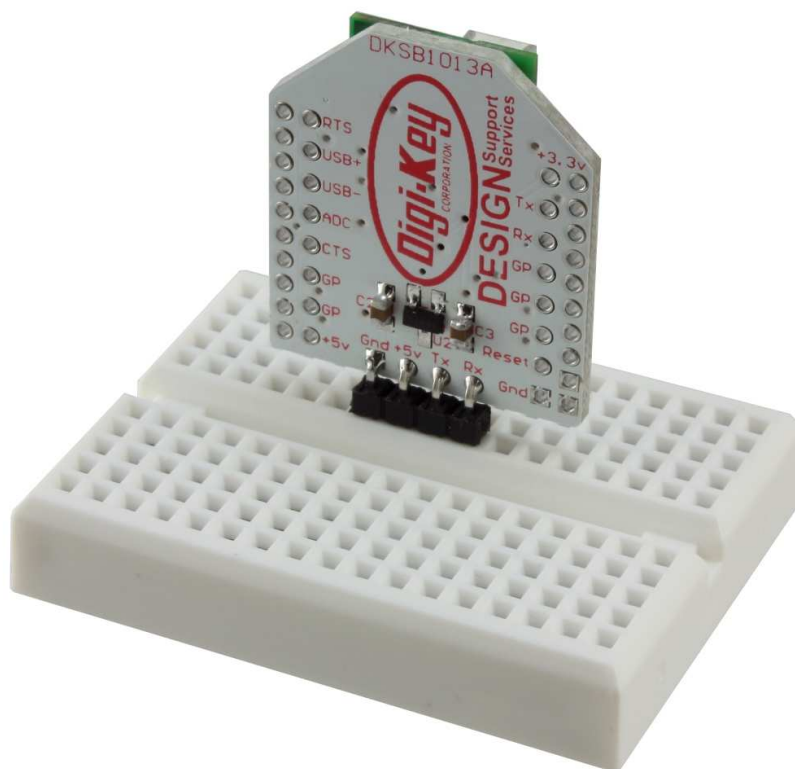
The DKSB1013A breakout board allows evaluation the PAN1555 Bluetooth module without soldering the module to your target PCB. It also adds Bluetooth communication or control to devices that are designed around XBee[®] modules from Digi. The 2mm header positions are pin and geometrically compatible with XBee[®] modules for the following signals and pins:

- 3.3VDC (pin 1) and ground (pin 10)
- Tx (data out, pin 2) and Rx (data in, pin 3)
- CTS (pin 12) and RTS (pin 16)
- Reset (pin 5)
- Analog input (pin 17)
- GPIO (pins 4, 6, 7, 11, and 15)

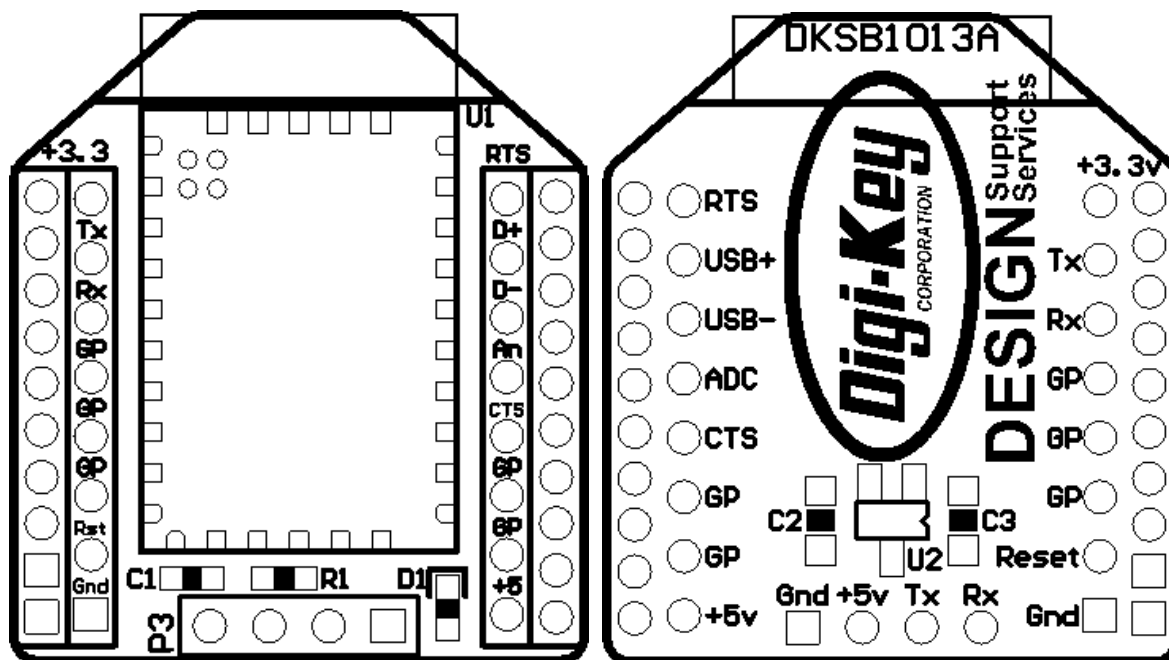
The LED D1 flashes when the unit is powered on, and is lit when a serial link is established (not when the unit is paired). For more information, please see the PAN1555 datasheet.

C2, C3, and U2 are intentionally unpopulated, as they are not needed when using the DKSB1013A as a drop-in replacement for an XBee[®] module. To use a five-volt supply on header P3, purchase and solder to the PCB an MCP1700T3302ETT voltage regulator and two 1uF ceramic 0805 capacitors (for example, Digi-Key part number 445-3463-1-ND).

The four-pin header P3 includes the four essential signals for the PAN1555. These signals are: Ground, 5VDC, Tx, and Rx. The included four pin header is intended for use in a solderless breadboard. Note that components C2, C3, and U2 have been added in the photo below.

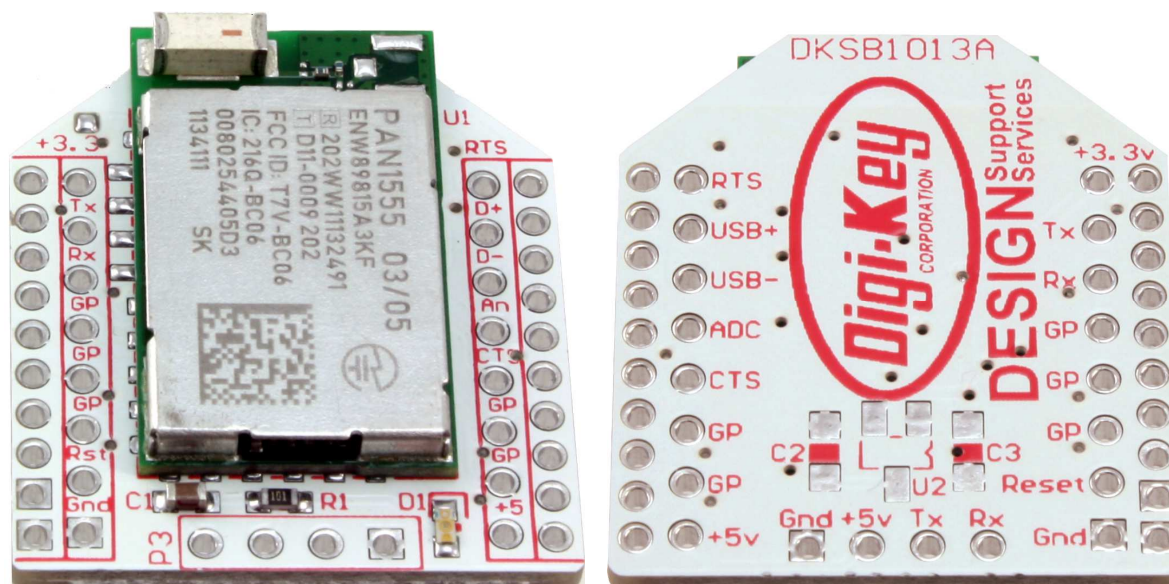


Layout

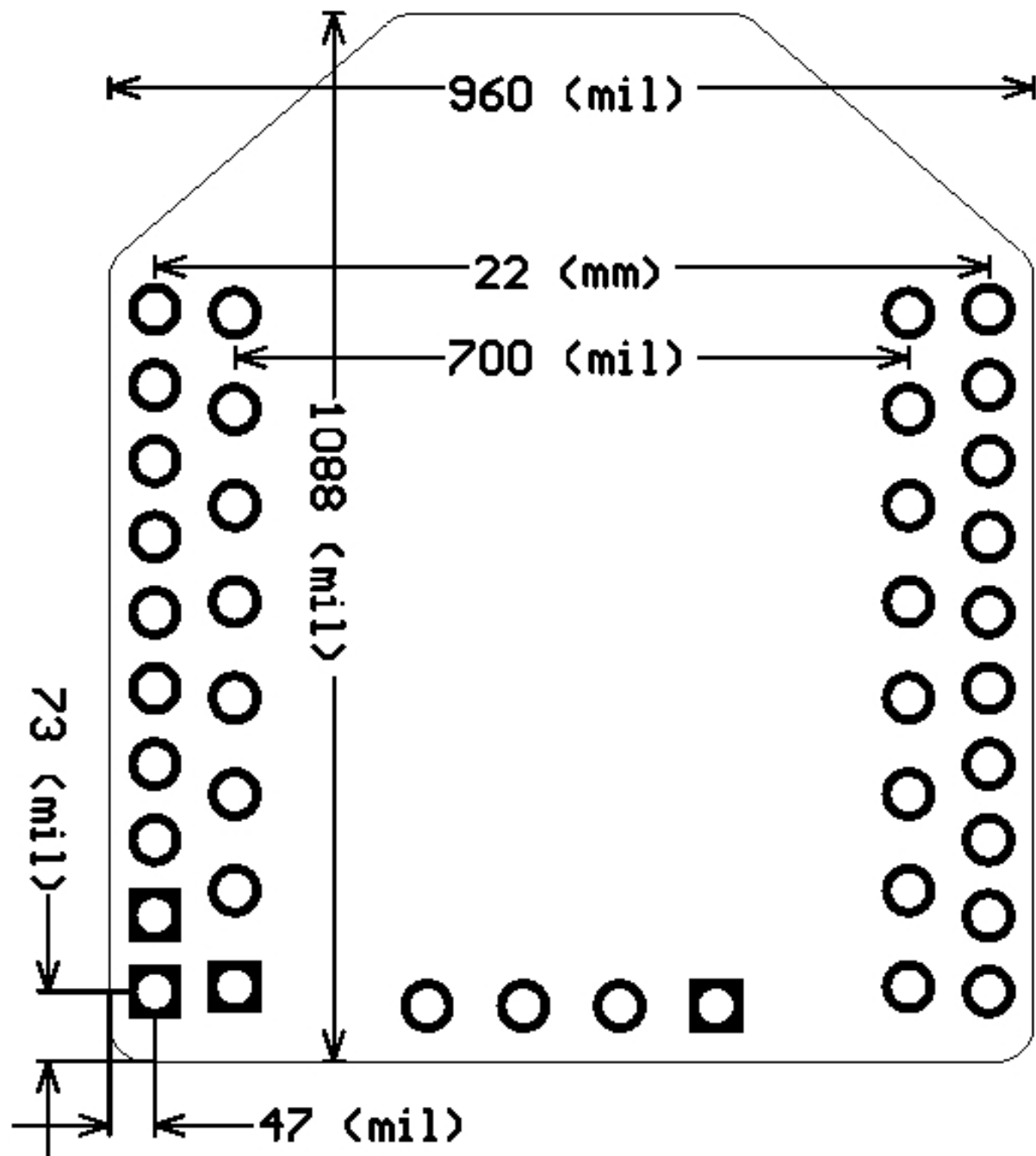


Top View

Bottom View



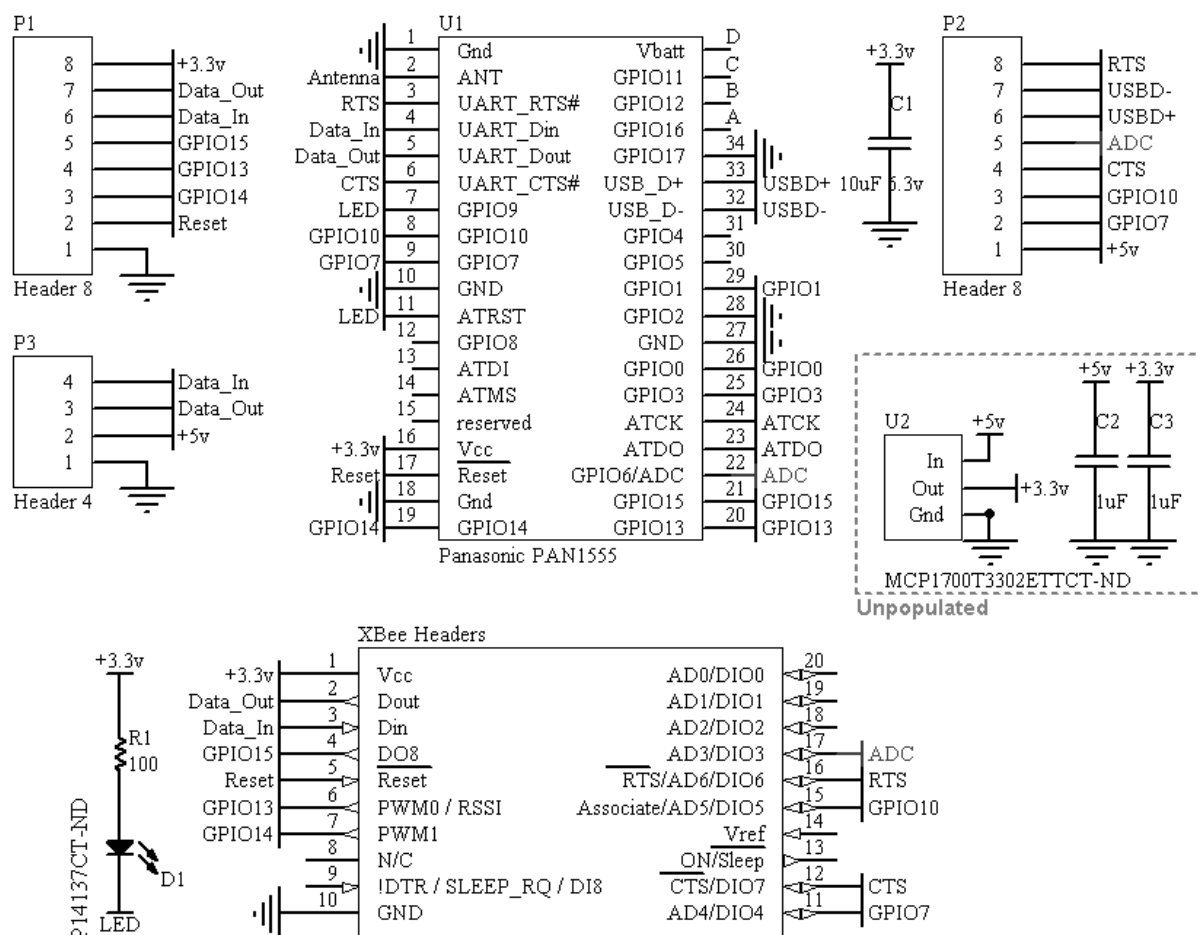
Dimensions



Bill of Materials

Part	Digi-Key Part Number	Description	Mfg Part Number
C1	445-3448-1-ND	CAP CER 10UF 6.3V Y5V 0603	C1608Y5V0J106Z
D1	P14137CT-ND	LED BLUE HIGH BRIGHT ESS SMD	LNJ936W8CRA
R1	P100GCT-ND	RES 100 OHM 1/10W 5% 0603 SMD	ERJ-3GEYJ101V
U1	P14521CT-ND	MODULE BLUETOOTH V2.0 SPP W/ANT	ENW-89815A3KF
P1, P2	3M9452-ND	CONN HEADER VERT SGL 8POS GOLD	961108-6404-AR
P3	3M9469-ND	CONN HEADER R/A SGL 4POS GOLD	961104-5604-AR
XBee	3M9329-ND	CONN HEADER 10POS 2MM VERT T/H	951110-8622-AR
C2*, C3*	445-3463-1-ND	CAP CER 1uF 50V Y5V 0805	C2012Y5V1H105Z/0.85
U2*	MCP1700T3302ETTCT-ND	IC REG LDO 3.3V 250MA SOT23-3	MCP1700T-3302E/TT
*These parts are unpopulated on the DSKB1013A. They may be purchased and added to allow a higher supply voltage.			

Schematic



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