KeyRing Manual:
Features and Operation

Description

The KeyRing is a small board (which resembles the SX-Key in size and shape) that connects in-between the SX-Key, or SX Blitz, and the SX chip to allow low-voltage programming and debugging.

The KeyRing contains a 4-pin header (where the SX-Key connects), a barrel jack for a wall-pack power supply, a 5-volt regulator and a 4-pin socket that connects to the SX-based target system. Its sole purpose is to allow the SX-Key/Blitz to operate at 5vdc while the target system operates at a lower voltage.

The KeyRing provides a pass-through for Vss, OSC1 and OSC2 and isolates the Vdd connection; providing +5 volts DC to the SX-Key through its 5-volt regulator. The SX chip being programmed should have its own Vdd connection that can be any voltage within the range specified in the SX datasheets. For example, the SX chip can be operating at 3.3 volts while the SX-Key (plugged into the KeyRing) is operating at 5.0 volts.

Size and Pin Configuration

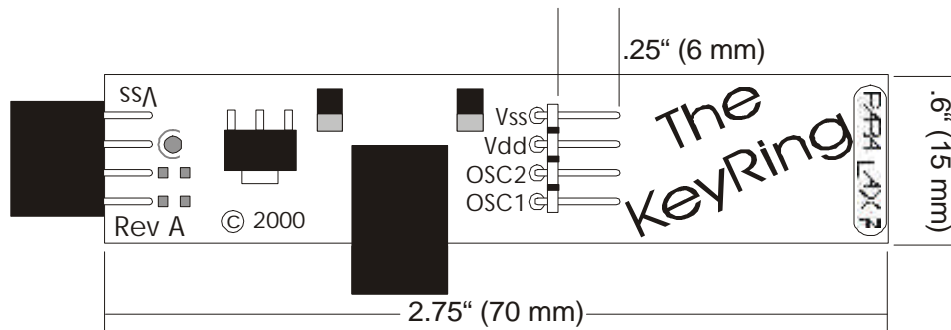The following diagram indicates the size and pin connections of the KeyRing.

Figure 1: KeyRing Diagram

The right-angle header allows for direct connection to the SX-Key or SX-Blitz tools as shown in Figure 2. **NOTE: Some KeyRing's were produced with the SX-Key/Blitz connection labels reversed. The correct connection of the SX-Key/Blitz to the KeyRing is shown in Figure 2.**

The 4-pin socket (left side of figure below) connects to the Vss, Vdd, OSC2 and OSC1 connections on the target system, or any SX-Key development board.

The barrel connector accepts a **center-positive** wall-pack power supply in the range of 6 – 9 vdc. **Note: Power supply should be able to supply 1 Amp (or greater).**
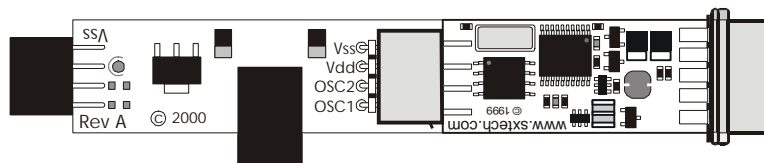

Figure 2: KeyRing Connection Diagram