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## SX28 Proto Board (#45301/45302)

### Introduction

Parallax's new SX28 Proto Boards are a super low-cost, configurable project area for through-hole soldering or wire wrap applications. With our free SX/B compiler, free assembler and a low retail price on the SX28 Proto Board; SX developers can now prototype with this microcontroller.

Features of the SX28 Proto Board:

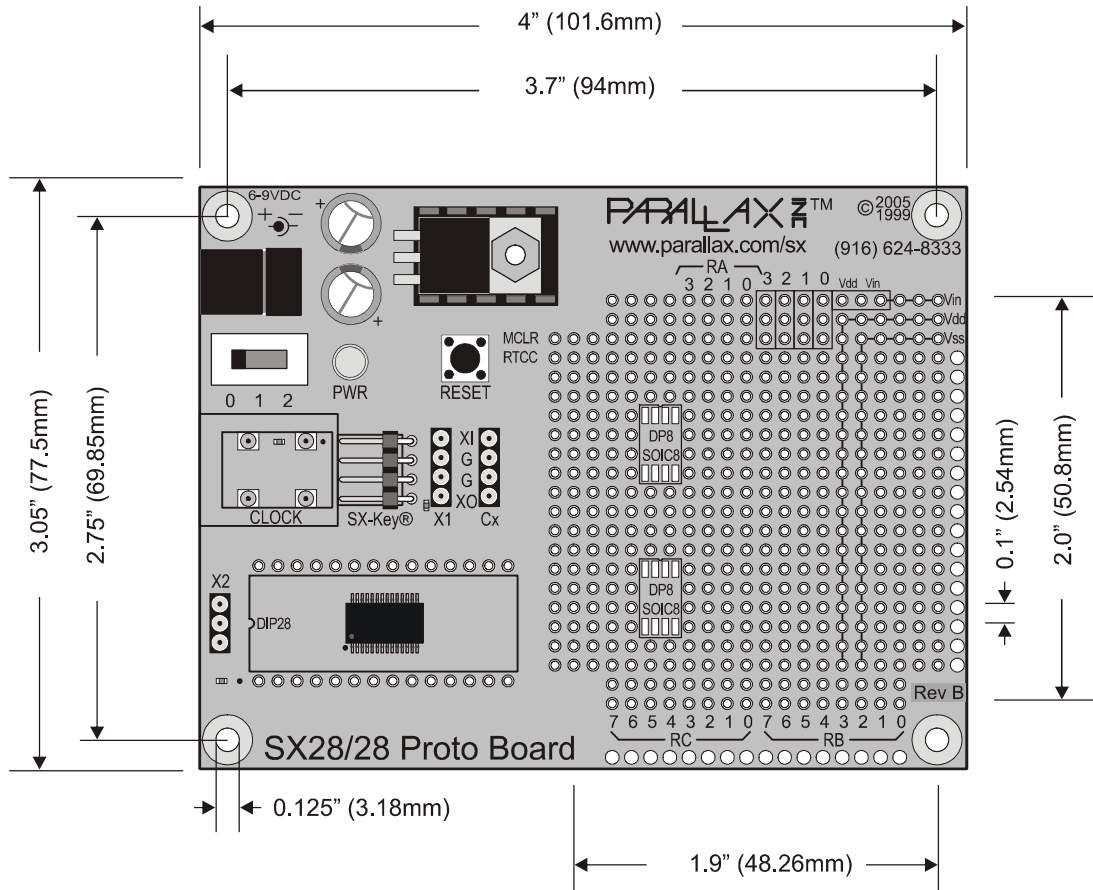
- Surface-mount SX28AC/SS-G
- Footprint for replacing SX28AC/SS with ZIF Socket for SX28AC/DP development/testing
- LM2940 voltage regulator with heat sink provides up to 1 Amp of current; two 47  $\mu$ F capacitors
- Input power supply of 6-30 VDC (2.1 mm center positive wall pack) with power LED
- SX-Key<sup>®</sup> programming port with TTL oscillator mechanical interlock prevents both from being used at the same (to prevent damage to the SX-Key or TTL oscillator)
- Three-position power switch (0 = off; 1 = logic power; 2 = power to logic and servo ports)
- Pushbutton reset
- Clock configurations supported with additional components sold by Parallax: TTL oscillator (DIP-8 package – clock label); ceramic resonator (SIP3 package – X1 header); Crystal (HC/49 package – X2 header)
- Smart prototype holes for servo headers: DIP and SOIC8 components
- Power and ground rails: Vin (input voltage, unregulated); Vdd (5 VDC); and Vss (ground)
- (4) ports for servo connection
- Complete access to all SX28 ports (20 I/Os)
- Strain relief holes along the edges of the prototype area
- Fits on the Parallax Boe-Bot<sup>®</sup> robot chassis

Some considerations towards efficient use of the SX28 Proto Board:

- 300 mil DIP components (ICs, sensors, A/Ds, shift registers, LED drivers) may be mounted over the Vdd/Vss rails on the right side of the prototype area for easy access to power and ground
- Position parts near the strain relief holes for wires leading off of the prototype board

The schematic for this product is available for download from  
[http://www.parallax.com/detail.asp?product\\_id=45302](http://www.parallax.com/detail.asp?product_id=45302).

## Measurements



## Useful Project Hardware

Programming the SX28 requires one of the following:

- SX Tech Tool Kit LITE (#45180)
- SX Tech Tool Kit PLUS (#45181)

We recommend this power supply:

- 7.5 VDC, 1 Amp power supply (#750-00009)

Parallax stocks a number of components which could be used on the SX28 Proto Board.

- 20 MHz SIP resonator (X2 socket) (#250-02060)
- 50 MHz SIP resonator (X2 socket) (#250-05060)
- 75 MHz TTL Oscillator (clock socket) (#252-00005)
- 3-pin SIP connectors for servo connections (#451-00303)
- 16-pin SIP Socket (#450-01601)
- 13-pin SIP Socket (#450-01301)