

Stamp Specifications (revised 02/10)

| Released Products | Rev.Dx / BS1-IC | BS2-IC | BS2e-IC | BS2sx-IC |
|--------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| Package | PCB w/Proto / 14-pin SIP | 24-pin DIP | 24-pin DIP | 24-pin DIP |
| Package Size (L x W x H) | 2.5" x 1.5" x .5" / 1.4" x .6" x .1" | 1.2" x 0.6" x 0.4" | 1.2" x 0.6" x 0.4" | 1.2" x 0.6" x 0.4" |
| Environment * | -40° to + 85° C (-40° to + 185° F) ** | -40° to + 85° C (-40° to + 185° F) ** | -40° to + 85° C (-40° to + 185° F) ** | -40° to + 85° C (-40° to + 185° F) ** |
| Microcontroller | Microchip PIC'56 | Microchip PIC'57 | Parallax SX28 | Parallax SX28 |
| Processor Speed | 4 MHz | 20 MHz | 20 MHz | 50 MHz |
| Program Execution Speed | ~2,000 instructions/sec. | ~4,000 instructions/sec. | ~4,000 instructions/sec. | ~10,000 instructions/sec. |
| RAM Size | 16 Bytes (2 I/O, 14 Variable) | 32 Bytes (6 I/O, 26 Variable) | 32 Bytes (6 I/O, 26 Variable) | 32 Bytes (6 I/O, 26 Variable) |
| Scratch Pad RAM | N/A | N/A | 64 Bytes | 64 Bytes |
| EEPROM (Program) Size | 256 Bytes, ~80 instructions | 2K Bytes, ~500 instructions | 8 x 2K Bytes, ~4,000 inst. | 8 x 2K Bytes, ~4,000 inst. |
| Number of I/O pins | 8 | 16 + 2 Dedicated Serial | 16 + 2 Dedicated Serial | 16 + 2 Dedicated Serial |
| Voltage Requirements | 5 - 15 vdc | 5 - 15 vdc | 5 - 12 vdc | 5 - 12 vdc |
| Current Draw @ 5V | 1 mA Run / 25 µA Sleep | 3 mA Run / 50 µA Sleep | 25 mA Run / 200 µA Sleep | 60 mA Run / 500 µA Sleep |
| Source / Sink Current per I/O | 20 mA / 25 mA | 20 mA / 25 mA | 30 mA / 30 mA | 30 mA / 30 mA |
| Source / Sink Current per unit | 40 mA / 50 mA | 40 mA / 50 mA per 8 I/O pins | 60 mA / 60 mA per 8 I/O pins | 60 mA / 60 mA per 8 I/O pins |
| PBASIC Commands*** | 32 | 42 | 45 | 45 |
| PC Programming Interface | Serial (w/BS1 Serial Adapter) | Serial (9600 baud) | Serial (9600 baud) | Serial (9600 baud) |
| Windows Text Editor | Stampw.exe (v2.1 and up) | Stampw.exe (v1.04 and up) | Stampw.exe (v1.096 and up) | Stampw.exe (v1.091 and up) |

| Released Products | BS2p24-IC | BS2p40-IC | BS2pe-IC | BS2px-IC |
|--------------------------------|---------------------------------------|--------------------------------|---------------------------------|--------------------------------|
| Package | 24-pin DIP | 40-pin DIP | 24-pin DIP | 24-pin DIP |
| Package Size (L x W x H) | 1.2" x 0.6" x 0.4" | 2.1" x 0.6" x 0.4" | 1.2" x 0.6" x 0.4" | 1.2" x 0.6" x 0.4" |
| Environment * | -40° to + 85° C (-40° to + 185° F) ** | 0° - 70° C (32° - 158° F) ** | 0° - 70° C (32° - 158° F) ** | 0° - 70° C (32° - 158° F) ** |
| Microcontroller | Parallax SX48 | Parallax SX48 | Parallax SX48 | Parallax SX48 |
| Processor Speed | 20 MHz Turbo | 20 MHz Turbo | 8 MHz Turbo | 32 MHz Turbo |
| Program Execution Speed | ~12,000 instructions/sec. | ~12,000 instructions/sec. | ~6000/sec. | ~19,000 instructions/sec. |
| RAM Size | 38 Bytes (12 I/O, 26 Variable) | 38 Bytes (12 I/O, 26 Variable) | 38 Bytes (12 I/O, 26 Variable) | 38 Bytes (12 I/O, 26 Variable) |
| Scratch Pad RAM | 128 Bytes | 128 Bytes | 128 Bytes | 128 Bytes |
| EEPROM (Program) Size | 8 x 2K Bytes, ~4,000 inst. | 8 x 2K Bytes, ~4,000 inst. | 16 x 2K Bytes (16 K for source) | 8 x 2K Bytes, ~4,000 inst. |
| Number of I/O pins | 16 + 2 Dedicated Serial | 32 + 2 Dedicated Serial | 16 + 2 Dedicated Serial | 16 + 2 Dedicated Serial |
| Voltage Requirements | 5 - 12 vdc | 5 - 12 vdc | 5 - 12 vdc | 5 - 12 vdc |
| Current Draw @ 5V | 40 mA Run / 350 µA Sleep | 40 mA Run / 350 µA Sleep | 15 mA Run / 150 µA Sleep | 55 mA Run / 450 µA Sleep |
| Source / Sink Current per I/O | 30 mA / 30 mA | 30 mA / 30 mA | 30 mA / 30 mA | 30 mA / 30 mA |
| Source / Sink Current per unit | 60 mA / 60 mA per 8 I/O pins | 60 mA / 60 mA per 8 I/O pins | 60 mA / 60 mA per 8 I/O pins | 60 mA / 60 mA per 8 I/O pins |
| PBASIC Commands*** | 61 | 61 | 61 | 63 |
| PC Programming Interface | Serial (9600 baud) | Serial (9600 baud) | Serial (9600 baud) | Serial (19200 baud) |
| Windows Text Editor | Stampw.exe (v1.1 and up) | Stampw.exe (v1.1 and up) | Stampw.exe (v1.33 and up) | Stampw.exe (v2.2 and up) |

* 70% Non-Condensing Humidity

** Environment ratings may change with future hardware revisions; please contact support@parallax.com for more information.

*** Using PBASIC 2.5 for BS2-type models.

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