

## Stamp Specifications (revised 04/05)

| 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 *                  | 0° - 70° C (32° - 158° F) **         | 0° - 70° C (32° - 158° F) **  | 0° - 70° C (32° - 158° F)     | 0° - 70° C (32° - 158° F)     |
| Microcontroller                | Microchip PIC16C56a                  | Microchip PIC16C57c           | Ubicom SX28AC                 | Ubicom SX28AC                 |
| 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                       | Javelin Stamp                |
|--------------------------------|--------------------------------|--------------------------------|---------------------------------|--------------------------------|------------------------------|
| Package                        | 24-pin DIP                     | 40-pin DIP                     | 24-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"             | 1.24" x 0.60" x 0.45"        |
| Environment *                  | 0° - 70° C (32° - 158° F)      | 0° - 70° C (32° - 158° F)      | 0° - 70° C (32° - 158° F)       | 0° - 70° C (32° - 158° F)      | 0° - 70° C (32° - 158° F)    |
| Microcontroller                | Ubicom SX48AC                  | Ubicom SX48AC                  | Ubicom SX48AC                   | Ubicom SX48AC                  | Ubicom SX48AC                |
| Processor Speed                | 20 MHz Turbo                   | 20 MHz Turbo                   | 8 MHz Turbo                     | 32 MHz Turbo                   | 25 MHz Turbo                 |
| Program Execution Speed        | ~12,000 instructions/sec.      | ~12,000 instructions/sec.      | ~6000/sec.                      | ~19,000 instructions/sec.      | ~8,500 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) | 32768 Bytes                  |
| Scratch Pad RAM                | 128 Bytes                      | 128 Bytes                      | 128 Bytes                       | 128 Bytes                      | N/A                          |
| 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.     | 32768 Bytes                  |
| Number of I/O pins             | 16 + 2 Dedicated Serial        | 32 + 2 Dedicated Serial        | 16 + 2 Dedicated Serial         | 16 + 2 Dedicated Serial        | 16                           |
| Voltage Requirements           | 5 - 12 vdc                     | 5 - 12 vdc                     | 5 - 12 vdc                      | 5 - 12 vdc                     | 5 - 24 vdc                   |
| Current Draw @ 5V              | 40 mA Run / 350 µA Sleep       | 40 mA Run / 350 µA Sleep       | 15 mA Run / 36 µA Sleep         | 55 mA Run / 450 µA Sleep       | 80 mA Run / No Sleep         |
| Source / Sink Current per I/O  | 30 mA / 30 mA                  | 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   | 60 mA / 60 mA per 8 I/O pins |
| PBASIC Commands***             | 61                             | 61                             | 61                              | 63                             | 0 (Java)                     |
| PC Programming Interface       | Serial (9600 baud)             | Serial (9600 baud)             | Serial (9600 baud)              | Serial (19200 baud)            | Serial (28800 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)       | Javelin Stamp IDE            |

\* 70% Non-Condensing Humidity

\*\* Industrial Models Available, -40° - 85° C (-40° - 185° F). Contact Parallax Sales for information.

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