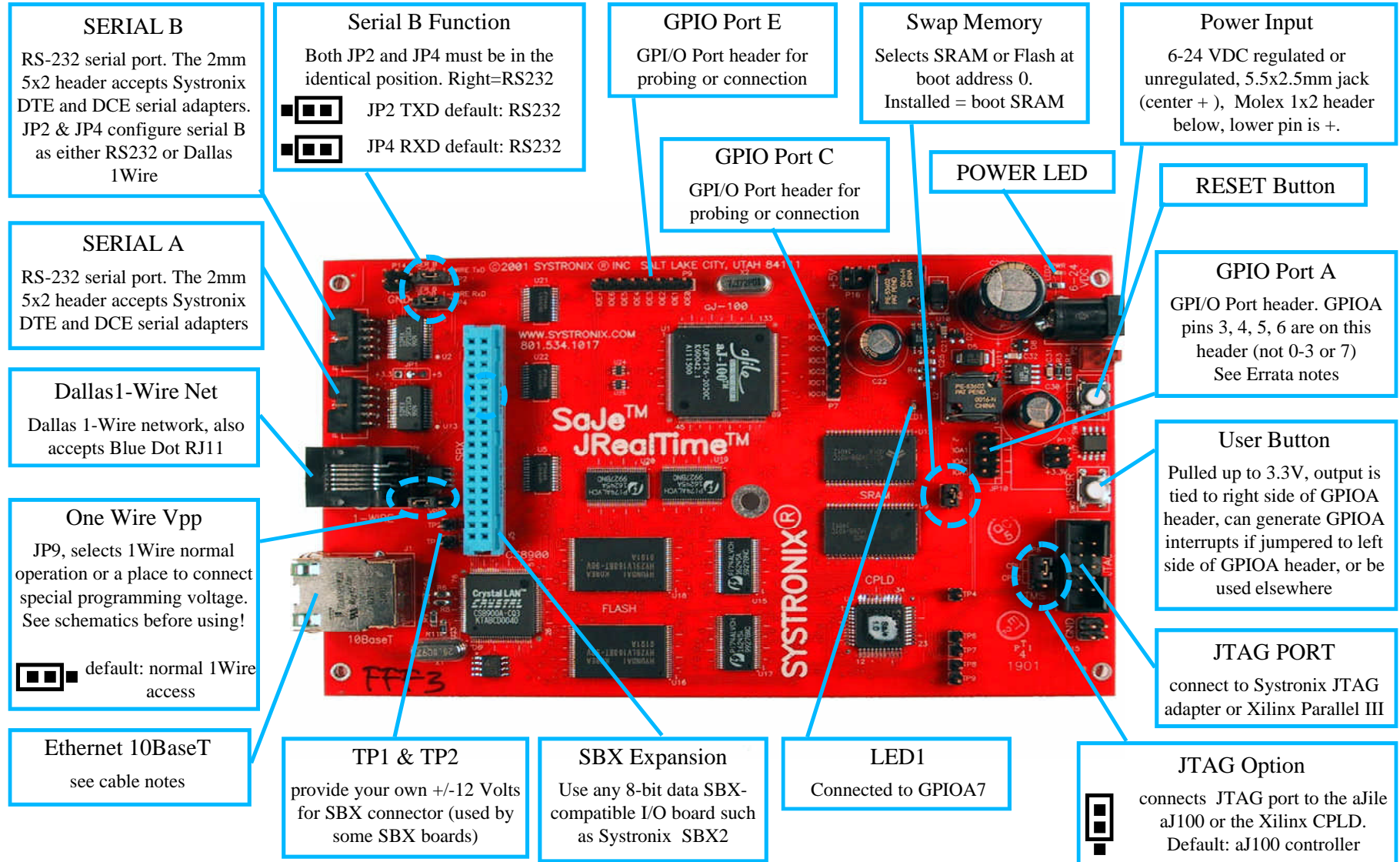


# Systronix Rev2 SaJe Quick Reference

The most commonly used jumpers and I/O connections are shown here. Uninstalled or seldom used jumpers and connection points are not identified. For more I/O details, please refer to the SaJe schematics and sample code. The latest version is available at <http://www.saje.systronix.com>.

**Be sure to check the website before using SaJe for the first time as it may contain essential, last-minute news, documentation, and files.**



**JRealTime™** by **SYSTRONIX®** [www.saje.systronix.com](http://www.saje.systronix.com) and [www.jrealtime.com](http://www.jrealtime.com)

## Quick Reference Notes

**Install aJile/Systronix SaJe tools from CDROM** - install JemBuilder and Charade from the CDROM provided with your development kit. Check the website at <http://www.jstampu.com> for the latest aJile tools.

**GPIOA Header JP10** *Early versions (prior to PCB rev 2.01) are incorrectly labelled.* The correct pins from top (next to the large inductor L2) to bottom are GPIOA6, 5, 4, 3. *GPIOA0,1,2 are used by the ethernet controller and SBX interface so don't try to use them for other purposes.* GPIOA7 drives the heartbeat LED1, but can be used for other purposes (the LED will blink when GPIOA7 is low, which can be a useful activity indicator).

**SWAP Memory Jumper - important!** - JP8 selects whether SaJe boots up from SRAM (jumper installed) or flash (jumper not installed). You must build (in JemBuilder) for either SRAM or flash, and set the jumper to match. For the fastest program downloading during development, we recommend loading in SRAM.

**Be sure to build, link, and connect for the correct device** - you must specify "SaJe Configuration" in JemBuilder, and "aJ100" in Charade in order to correctly build and download programs to SaJe.

**JTAG Port** - used for loading programs and debugging. Use only the Systronix JTAG adapter and 5x2 100-mil cable, or the Xilinx Parallel III cable. Refer to the schematics for the 5x2 header pinout. Pin 1 is in the lower right corner of the header in the adjacent photograph.

**Ethernet** is 10BaseT on an RJ45. Pins 1 and 2 are TX and pins 3 & 6 are RX. Use a straight cable to a hub. Use a crossover cable if connecting to a PC's ethernet port directly. Connect only to a 10 MBit or mixed 10/100 MBit network, do not connect to a fixed 100 MBit network.

**Serial A** is always RS232. The 2mm 5x2 header accepts a Systronix DCE or DTE adapter. If using a DCE, a straight-through serial cable will connect to a PC. If using DTE, a null modem cable is needed to connect to a PC.

**Serial B** can be jumper selected to be either RS232 or (on the RJ12 connector) Dallas 1Wire. The 2mm 5x2 header accepts a Systronix DCE or DTE adapter. If using a DCE, a straight-through serial cable will connect to a PC. If using DTE, a null modem cable is needed to connect to a PC.

**Dallas 1Wire** connect a Dallas Blue Dot reader or 1Wire network (such as the Systronix 8x1Wire board) to this Dallas- and Systronix- pinout RJ12 connector. Some 1Wire devices use a higher programming voltage, this can be applied to the center terminal of JP9. For normal 1Wire access, jumper the two left pins together as shown in the default setting graphic.

**Power Supply** is 6-24 volts, DC unregulated or regulated. The input jack is 5.5 x 2.5 mm, center positive or negative. SaJe uses an efficient, wide input range switching supply. Supply current decreases nearly linearly as supply voltage increases due to the power conversion in the regulator. Recommended power includes the Systronix 1A 12 VDC cube. The regulator can supply at least 500 mA for additional components or expansion cards.

**Tutorial & Examples:** [www.jrealttime.com](http://www.jrealttime.com) or [www.saje.systronix.com](http://www.saje.systronix.com)

An ongoing tutorial and sample programs are available on our web site at [www.jstampu.com](http://www.jstampu.com).

**Initializing and Programming SaJe** requires a number of software programs which must be installed and used in a specific sequence. Full details, including a step-by-step tutorial are available on our web site. Note that these steps are almost identical to those used with JStamp. The major difference is that JStamp uses the aJ80 controller and SaJe uses the aJ100. These differ only by speed and pinout - the native Java core is identical.

## Spare and Optional Parts

- SBX prototyping and expansion boards are available from Systronix and other vendors.
- Ethernet straight and crossover cables, hubs, and RS-232 serial cables and adapters are available from Systronix and other vendors.
- DCE and DTE adapters are available from Systronix. One of each is included with your SaJe development kit.

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## Errata

**GPIOA Header JP10** *Early versions (prior to PCB rev 2.01) are incorrectly labelled.* The correct pins from top (next to the large inductor L2) to bottom are GPIOA6, 5, 4, 3. *GPIOA0,1,2 are used by the ethernet controller and SBX interface so don't try to use them for other purposes.* GPIOA7 drives the heartbeat LED1, but can be used for other purposes (the LED will blink when GPIOA7 is low, which can be a useful activity indicator).

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