Setup Instructions

SRV-1 Blackfin Camera Board + WiFi Radio

1. Power is connected via the 2 pins pointing down from the bottom front edge of the radio board near the camera module. Ground is closest to the edge, and +V is away from the edge. Power source should be in the range of 5VDC – 15VDC. 500mA should be sufficient.

2. The Lantronix Matchport default configuration is an ad-hoc network –

SSID: SRV1
IP: 169.254.0.10
Port: 10001

You should be able to connect your host computer to the ad-hoc network, point your browser to 169.254.0.10, and change the network settings in Network and WLAN to bring the SRV-1 board onto your local network. Take care to double-check your network settings before committing via Apply Settings – it's a pain to reset the board is you make an error.

3. On power-up, the SRV-1 board will start running the SRV-1 firmware with the interface configured to 921kbps. Optionally, we can install u-boot, which launches at 115kbps, and then launch the SRV-1 firmware. There are 115kbps and 921kbps versions of SRV-1 firmware in the latest code distribution.

4. The command set for the SRV-1 is shown at

http://www.surveyor.com/blackfin/SRV_protocol_bf.html

Most of the functions are running, and those that are missing should be complete soon. Check

http://www.surveyor.com/blackfin/

for firmware updates.

5. To upload new firmware, you will need a terminal program that supports TCP/IP connections and XMODEM transfers. On the PC, there are a variety of suitable programs, including freeware called ShamCom from www.shamrock.de. On the Mac, we've used mxOSX (30 day free trial). Unfortunately, c-kermit doesn't work because it can't send 8-bit data, but we have successfully used telnet plus lsz or sx on Linux and the Mac. The sequence is to use telnet to send the 'X' command which enables the XMODEM transfer, then exit telnet and run, for example:

```
sx –X –k –b –tcp-client 169.254.0.10:10001 srv1.bin
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Once you restart telnet, the file should have transferred into the SRV-1 flash buffer, and a 'zz' command will commit the image to flash memory. We will provide more documentation on the X, zr, zw, zd and zz commands shortly.

6. To test the video feed, download SRV1Console, edit srv.config to point to the right IP address, start the program and select “Network”, then connect

7. There is active work on the SRV-1 Linux port, so check the download page for updates.

8. Note that there are no mounting holes on the Blackfin board – the board is held in place by the 32-pin connector. You can add 9/16” standoffs to the radio board to set correct spacing, or just use some double-sided mounting tape to maintain the gap between the radio and processor board. We’re still considering various options for connector orientation, camera orientation, mounting, etc, and we welcome feedback and suggestions.

If there are any problems, or questions, please contact support@surveyor.com

Last update: 7 November 2007