The Stargate by Crossbow/Intel is a small linux computer, that does provide some GPIO, and various tools to use it. The daughter card for the Stargate, contains the ethernet port, a USB port, a serial port, and a few other things. The Stargate also has a interface for other peripheral devices - the ones we have contain a 433mhz board.

Stargate also has a CF card for addition storage (which is needed if you are going to be using a SQL database) and a PCMCIA slot which currently has a 802.11B wifi device in it.

Capatal of having cameras, and various other sensors hooked to it, and doing mesh networking, this was/is a small powerful board.

The board is running linux, a very scaled down version called TinyOS. I did find some resources for TinyOS - see the links below.

Drawback, the ones we have do not use the default root password - meaning there was no way to login to it. Flashing a “stock” image was the only thing that could be done. The “stock” image appears to not contain many/if any tools.

The other drawback that I found is the documentation for the re-flashing is not the best, and I think it skipped some steps somewhere - So far I’ve only gotten it to flash one time (and let me boot and login), most of the time it ends up deleting the partitions just before it boots. And right now, it currently tried to boot, but gives a error saying something about unable to find root - and then a “kernel panic” message.

The problem seems that it doesn’t save the partitions in it’s flash memory, and even thou I did get it to work once, as soon as I rebooted “kernel” partition deleted itself - causing it not to boot.

I think I’ve found how to fix this, but haven’t had the time to try yet.

Also, the image file that is current is version 7.3 - our boards look like they are running an older version of the kernel/root/bootldr - and will not take 7.3 without some work - to be honest the documents do say this, but it doesn’t make it clear which version to download and install - version 7.1 is what at least appears to work, and at very least did flash.

There is quite a bit of information on these boards out there, but some of it is not the best, most of it does come from schools. I think there is enough below to piece together enough information to get one working sooner or later.

Links to various tools and information for the Stargate Board made by Crossbow and intel.

Primary Documentation:

<http://www3.nd.edu/~cpoellab/teaching/cse40815/Stargate_Manual_7430-0317-13_B.pdf>

Source/Images for reflash:

<http://platformx.sourceforge.net/>

General Information:

<https://www.eol.ucar.edu/isf/facilities/isa/internal/CrossBow/DataSheets/stargate.pdf>

Price Sheet can be found on this page:

<https://www.eol.ucar.edu/isf/facilities/isa/internal/CrossBow/>

These are some links Jim found - I think they are for software that can be installed on the device, not the device itself, but I’m not sure about that.

[http://people.cs.ksu.edu/~singh/persnl/htdocs/faq.htm](http://people.cs.ksu.edu/%7Esingh/persnl/htdocs/faq.htm)

<http://www.willow.co.uk/MOTE-VIEW_User_Manual_.pdf>

<http://www.radford.edu/nsrl/creu1011/PowerPoints/Combined2.pdf>

<http://studylib.net/doc/10111538/teaching-assistant-s-2nd-stargate-tutorial>

TinyOS Documentation/Programming:

<http://csl.stanford.edu/~pal/pubs/tinyos-programming.pdf>

<http://tinyos.stanford.edu/tinyos-wiki/index.php/TinyOS_Documentation_Wiki>

Videos of me messing with it trying to reflash it over a serial cable - I did get it to work once, but now the board just boots to a “kernel panic” message, still working on it thou.

<https://youtu.be/FzQnk7xozow>

<https://youtu.be/xn2CcMaT2rs>

<https://youtu.be/BTntkohRU_A>