



[Home](#)



[Blog](#)



[Old Projects](#)



[Current Projects](#)



[Publications and Presentations](#)



[Fun Stuff](#)



[Chairman Miau](#)



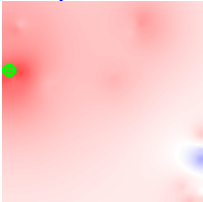
[Pictures](#)



[Whats Inside?](#)



[Other People](#)



[Polls](#)



[Mapper](#)

[IT303 Webcam](#)

[Disclaimer](#)



[Ads by Goooooogle](#)

[JTAG Technologies](#)

Unique FlashLib with >
3500 types High-
throughput flash
programming
www.jtag.com

[General Standards Corp.](#)

High performance analog,
digital, and serial pc104+
cards
www.generalstandards.com

[ASN.1 Tools - OSS](#)

[Nokalva](#)

High performance ASN.1
tools XML support New
RAD features Free eval
www.oss.com

[High performance JTAG](#)

Intelligent solutions for
extended JTAG/Boundary
Scan testing
www.goepel.com

[ARM7, ARM9, PowerPC](#)

Single Board Computer &
Systems Linux, uCLinux,
RTAI, eCos & WinCE
www.dave-tech.it

[Advertise on this site](#)

Google™

- Web
 brej.org

Search

You are browsing with a defective web browser!



Get **Firefox** with **Google Toolbar** for better browsing.

Get Firefox instead. No pop-ups. No viruses. A fantastic plugin system and more.

Goodmans GDB2 and the Bush DFTA1 xi set top boxes

Update

For some reason my Bush box now crashes like hell. I don't think it copes very well with the weaker signal. But at the current prices I just got a new Goodmans one which seems much more stable for around 30 pounds.

Intro

I went and bought a digibox as I started seeing them for under £70. I got a bush freeview adaptor from index (now closed). The [picture](#) on the index site and in the catalogue looks nothing like the one I got. In fact the boxes are recycled [internet tv boxes](#). The third LED is never used. It's just there because the internet box used it.

By coincidence one of the first things I saw when installed it was QVC selling Goodmans GDB2 boxes which [looked](#) exactly the same. Well that's because they are the same thing. The only difference seems to be the label. After smirking at the fact they were selling them for £85 plus p&p I decided to investigate further.

Firmware

The firmware that comes on the box is 2.1.15 which does not display the parliament channel and the games were quite broken. Luckily there are updates for the box available from [Freddy's Utilities](#). The box has a handy serial port around the back to update the firmware.

Serial port

This is a male port and you need to connect to it using a 9pin serial line extension (female to male) rather than a null modem cable. You might already have one to connect to your external modem. If you don't then there is one thing you can do (apart from buying a cable). If you have PC with serial ports on leads going to the case rather than on the ATX back plate then you can unscrew the socket from the case and plug it directly to the box. Make sure you don't unplug the cable from the board. Now you can follow the instructions on [freddy's site](#).

Linux

The instructions are for windows users but as a linux person I simply used minicom in place of hyperterminal. In minicom you will have to change the size of xmodem packet size to 1k. In the "File transfer protocols" change the xmodem line program column to be "/usr/bin/sx -vv -k -X". Just to be safe I also went and deleted all the modem control lines.

Whats inside

The unit is based on the [STi5518](#) chip. It's quite impressive and includes:

80Mhz 32-bit ST20 VL-RISC host processor, 4kB Internal SRAM, 2kB I-cache and 2kB D-cache
This is a [transputer](#) CPU but noone seems to call it that anymore.

Integrated MPEG-2 MP@ML video decoder. Fully programmable zoom-in and zoom-out. *This would be nice to play with*

Integrated audio decoder. Dolby Digital/MPEG-2 multichannel outputs. DTS digital out & MP3 decoding. *Hardware MP3 decoding would be great if you want to just play MP3s from a serial port while swerling the screen to the music*

Integrated PAL/NTSC/SECAM digital video encoder. *This is what enables the unit to be used as a DVR*

Set-top box interfaces: 2 Smartcards, 2 UARTs, 1 SPI/I2C, 3 PWM outputs, 3 capture timers, SDAV/IEEE1394 A/V link layer interface, ATAPI Interface, Modem Analogue front-end interface, IR transmitter/receiver. *The ATAPI interface is the big one here. It would be very nice to be able to turn it into a DVR.*

JTAG Connector

```

-----
A  | 0 1 2 3 4 5 6 7 8 9 |
B  | 0 1 2 3 4 5 6 7 8 9 |
-----

```

A 0-9 all GND

| PIN | STi5518 pin | Pin name | Description |
|-----|-------------|-------------|------------------------|
| B0 | NC | | |
| B1 | OMEGA-203 | TRIGGER_OUT | Trigger output for DCU |
| B2 | OMEGA-202 | TRIGGER_IN | Trigger input for DCU |
| B3 | NC | | |
| B4 | OMEGA-110 | TMS | Test mode select |
| B5 | OMEGA-113 | TCK | Test clock |
| B6 | OMEGA-112 | TDI | Test data in |
| B7 | OMEGA-111 | TDO | Test data out |
| B8 | NC | | |
| B9 | OMEGA-109 | TRST | Test reset |

```

208.....157
1 o          156
.           .
.           .
.           .
.           .
52          105
53.....104

```

Photos



