

# BitScope and Glomation update

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# Bitscope mod. 445

- 4 Analog Channels (8 inputs via BNC & POD).
- 8 synchronised Logic and Timing channels.
- Deep buffer capture on all 12 channels.
- 100 MHz Analog Capture Bandwidth.
- 40MSPS Logic, 25nS glitch detection.
- Mixed Signal DAQ Chart Recording.
- Built-in Realtime Spectrum Analyzer.
- Isolated network host connectivity
- User programmable with libraries

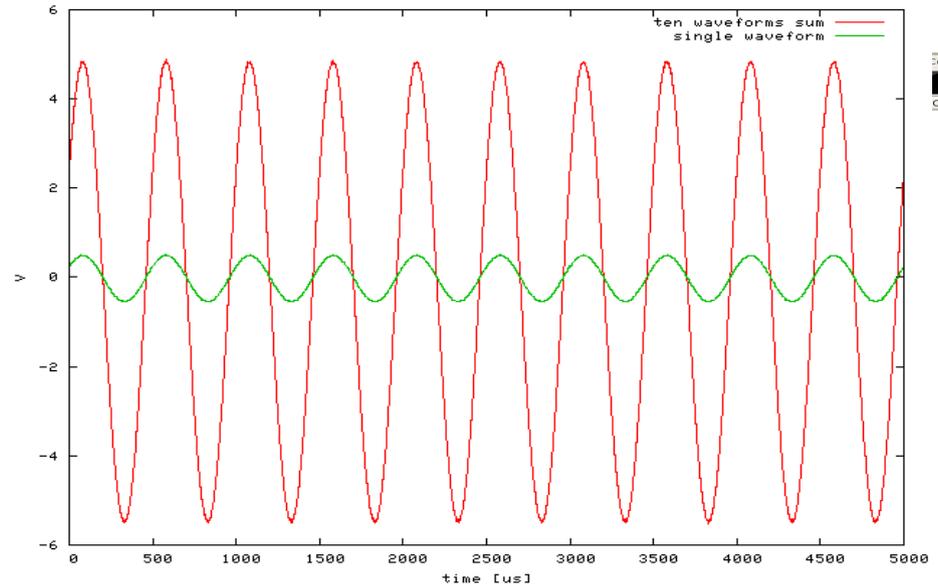
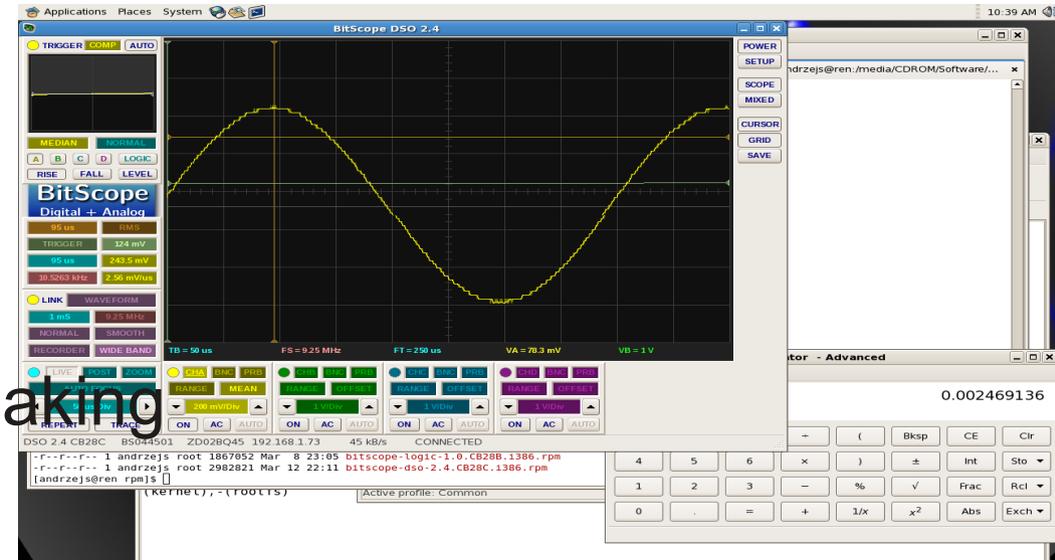


# Installed at DAB work bench

The libraries practically work out of the box.

Writing DAQ code, took some tweaking  
(but not much)

Hope to use it for purity  
monitor in vertical slice test.  
Need to understand outputs.



# Glomation - update

- Got it working off of an SD card – after untarring need to chroot (or maybe it's enough to create the proc directory).
- Am now proficient booting it from wherever needed.
- Registered it online (not kerberized) and upgraded system (might not have been necessary)



OK!



Not needed?



# The I2C thermometer

- The system upgrade was to try to use built-in kernel drivers for the thermometer.
- Didn't work: Drivers exist for DS1621 and DS1625 (using 1621) – we have DS1624.



**DS1624**

**Digital Thermometer and Memory**

- Detecting doesn't return anything:

```
GESBC:/# i2cdetect 0
WARNING! This program can confuse your I2C bus, cause data loss and worse!
I will probe file /dev/i2c-0.
I will probe address range 0x03-0x77.
Continue? [Y/n] y
  0  1  2  3  4  5  6  7  8  9  a  b  c  d  e  f
00:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
10:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
20:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
30:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
40:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
50:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
60:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
70:  --  --  --  --  --  --  --  --  --  --  --  --  --  --  --
GESBC:/# █
CTRL-A Z for help | 115200 8N1 | NOR | Minicom 2.1 | VT102 | Offline
```

# But!

- Found code written for a microcontroller compiler with a high level of abstraction.
- Won't work – but debian detects the i2c and saves it to /dev/i2c-0:

```
GESBC:/# i2cdetect -l
i2c-0    i2c                i2c-gpio-1                I2C adapter
```

- Can write to it like file – need to change the i2c\_write() etc functions to “printfs”:

```
char *filename = "/dev/i2c-2";
//buf[0] = reg;
if (write(file,buf,1) != 1) ...
```

- If not, I can always use Jamieson's bit-banging code – I found the register adress.
- Should have it working soon I hope.