

July 10, 2015

NOVA

PITCHFORK!!5!

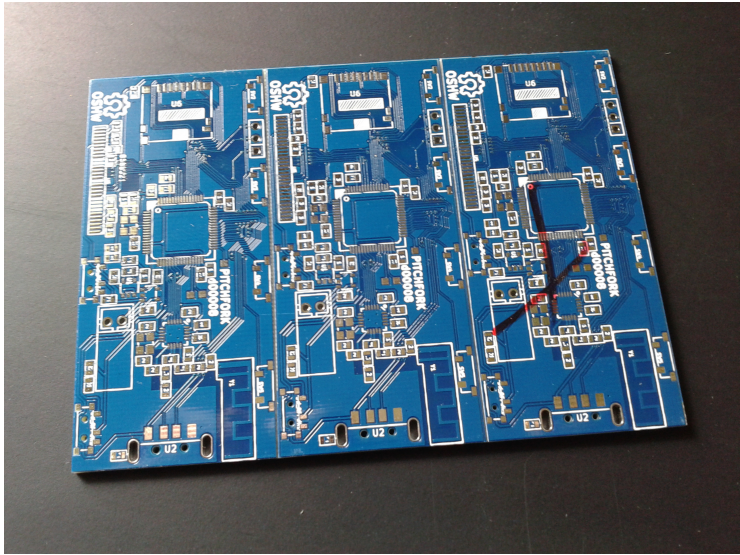
PITCHFORK (TOP SECRET UMBRA//COMSEC//EYES ONLY//20380119)

- o (U//FOUO) PITCHFORK is a device for compartmentalizing key material and cryptographic operations in a small and durable USB device.

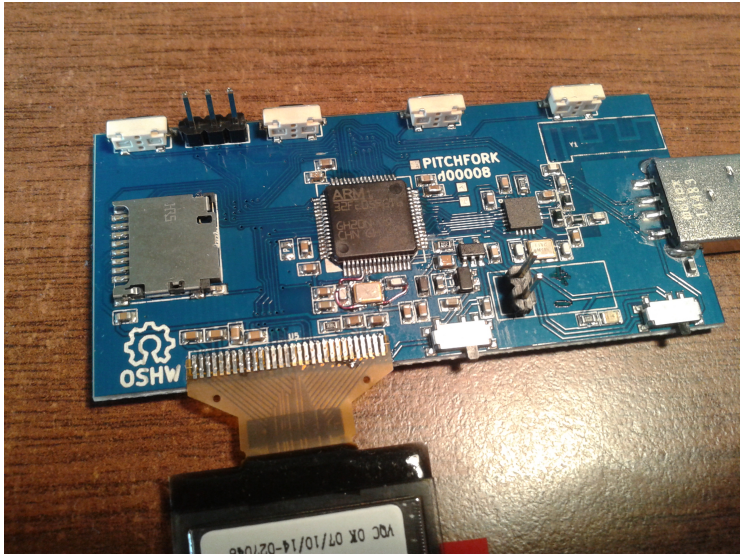
status update



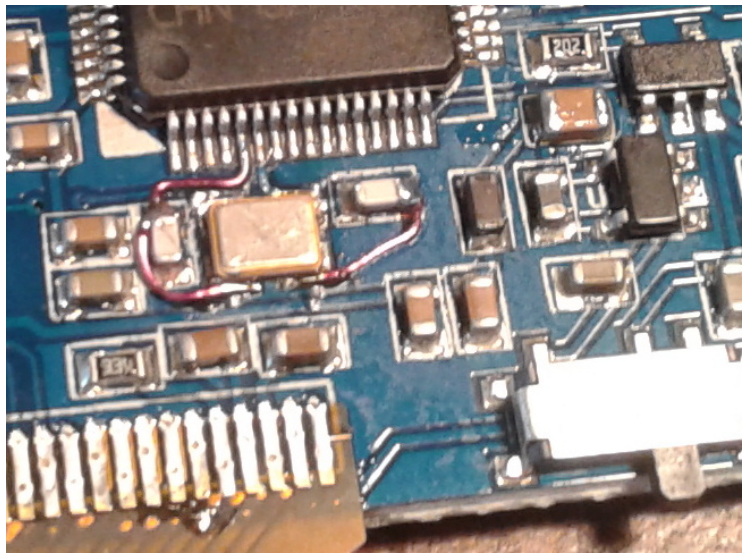
PITCHFORK 151
PITCHFORK 151
PITCHFORK 151
PITCHFORK 151



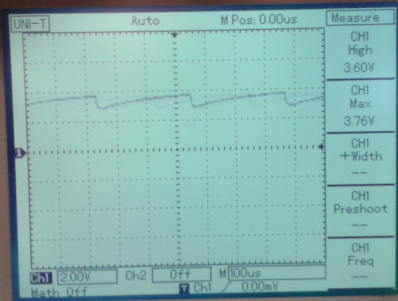




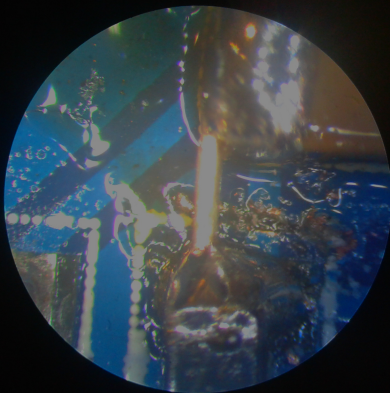


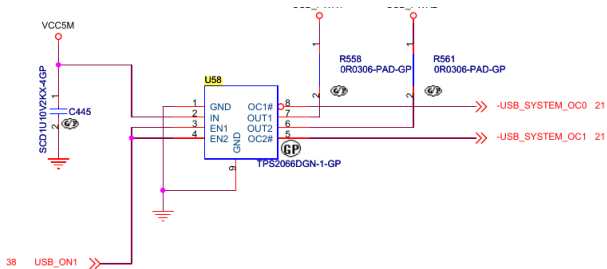


UNI-T UT2025B 25MHz 250MS/s DIGITAL STORAGE OSCILLOSCOPE



- F1
- F2
- F3
- F4
- F5



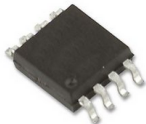


		U58	
1st	TI	TPS2066DGN-1	74.02066.B71
2nd	TI	TPS2066DGN	74.02066.A71

BOM

 Wistron Corporation 21F, 88, Sec.1, Hsin Tai Wu Rd., Hsichih, Taipei Hsien 221, Taiwan, R.O.C.
Title <h2 style="text-align: center;">USB POWER / CONNECTOR</h2>

TEXAS INSTRUMENTS TPS2066DGN LEISTUNGSSCHALTER, HIGH-SIDE, MSOP-8



Q Zum Heranzoomen klicken

Abbildung ggf. ähnlich. Alle Angaben ohne Gewähr. Ausschlaggebend sind die Produktinformationen des Herstellers.



Hersteller: TEXAS INSTRUMENTS

Bestellnummer: 2323772

Herstellerteilenummer: TPS2066DGN

 [Technical Data Sheet \(1.53MB\) EN](#)

 [Zu Favoriten hinzufügen](#)

Verfügbarkeit

Verfügbarkeit: 96

15 versandfertig (Liege stock)

81 versandfertig (UK stock)

[Bestellannahmeschluss](#) 

▶ [Wiederbeschaffung](#)

Preiseinheit: Stück 1

Mindestbestellmenge: 1

Verkaufseinheit: 1

Preis: 2,46 €

Menge

 **Kaufen**

off-spring

```
set break: @resp_finish (0x2000003a) OK
```

```
set break: @resp_dump (0x20000038) OK
```

```
set new pc: @test (0x20000001) OK
```

```
continuing
```

```
r0:2001ffd4 r1:00000004 r2:00000385 r3:00000000 r4:2001ffd4 r5:00000000  
r9:00000000 r10:00000000 r11:00000000 r12:00000000 sp:20000000  
wsp:2001ffd0 psp:00000000 special:00000000
```

```
breakpoint hit: resp_dump
```

```
test.c:5 resp_dump((unsigned char*) &number, 4);
```

```
2001ffd4 | 00000000 ....
```

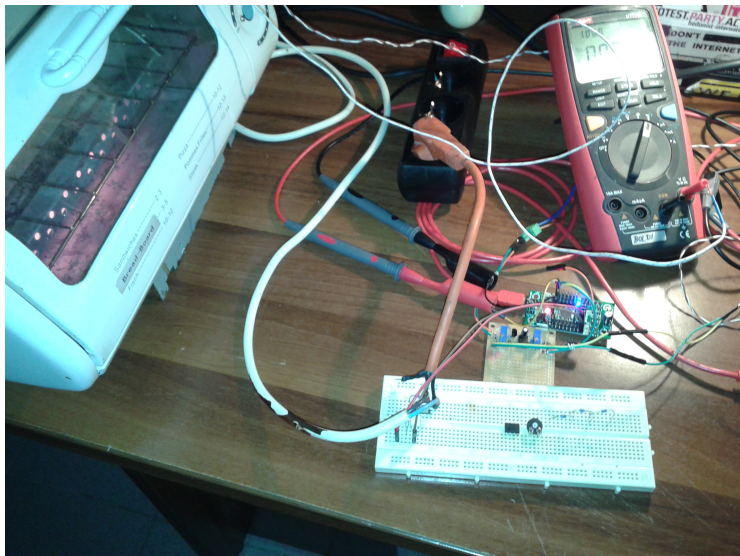
```
r0:2000003c r1:0000000b r2:00000385 r3:00000000 r4:2001ffd4 r5:00000000  
r9:00000000 r10:00000000 r11:00000000 r12:00000000 sp:20000000  
wsp:2001ffd0 psp:00000000 special:00000000
```

```
breakpoint hit: resp_dump
```

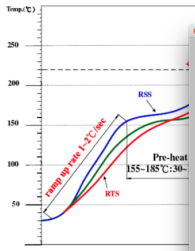
```
test.c:6 resp_dump((unsigned char*) "hello world", 11);
```

```
2000003c | 68656c6c6f20776f 726c64 hello.world
```

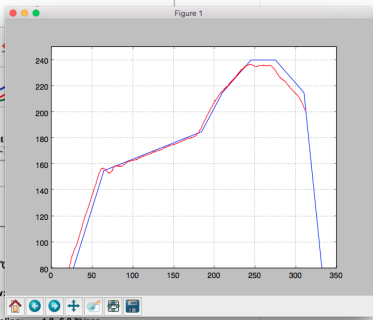
```
r0:2001ffd4 r1:00000004 r2:00000385 r3:aa55aa55 r4:2001ffd4
```

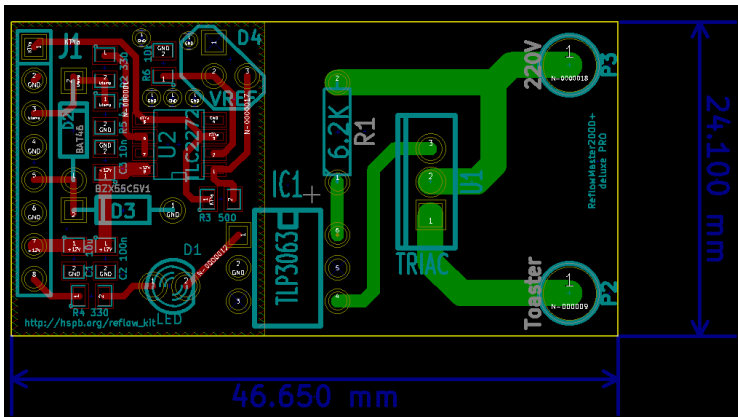


<https://github.com/hsbp/reflowoven>



ramp up rate(30-150 °C) :
pre-heating time(155-185 °C)
time period above 220 °C :
ramp up rate during reflow:
peak temperature:
ramp down rate during cooling: 1.0-6.0 °C/sec





future plans







Crypto Museum
cryptomuseum.com



using lpc4370, with 2 HS usb ports, implement usb firewall

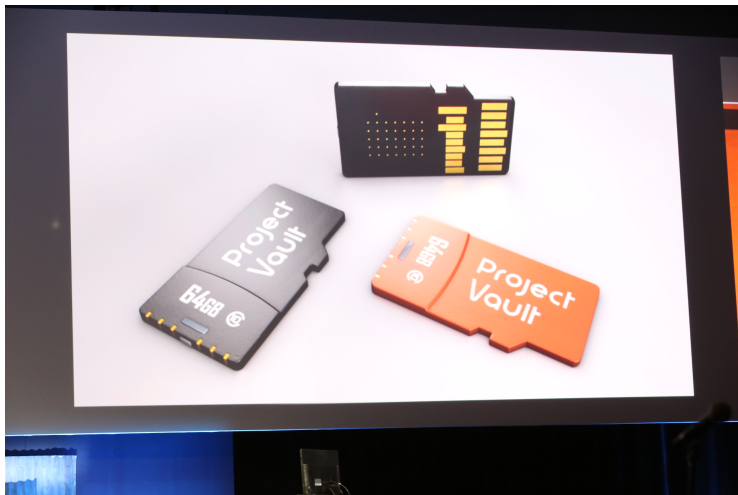
alternatives

fido U2F™
Certified

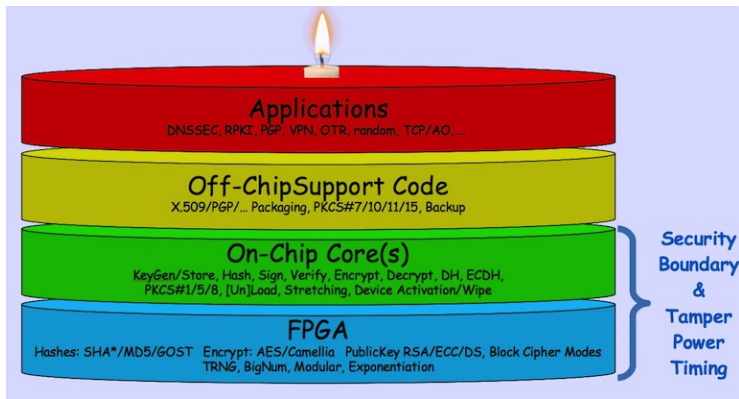




The GPF Crypto Stick is a USB stick in a small form factor containing an integrated OpenPGP smart card to allow easy and high-secure encryption e.g. of e-mail or for authentication in network environments.



Project Vault, designed by Google, is a secure computer entirely packed onto a microSD card that can be plugged into any system whether its a desktop or a mobile phone. Once the chip is installed, the chat application just opens the virtualized two-file system with the read/write I/O.

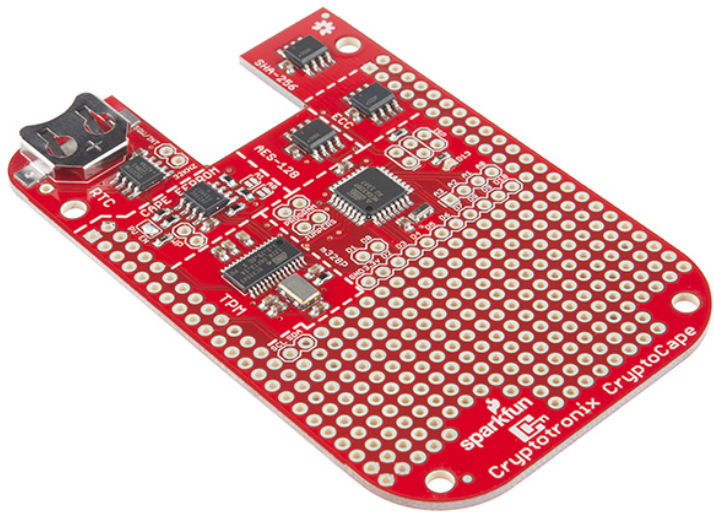


IETF crypto in a FPGA.



The hardware design features the Freescale i.MX53 processor, supporting advanced security features such as secure boot and ARM TrustZone.

The USB armory hardware is supported by standard software environments and requires very little customization effort. In fact vanilla Linux kernels and standard distributions run seamlessly on the tiny USB armory board.



conclusion

- ▶ diversity rules!
- ▶ lots of work for all of us
- ▶ interesting times ahead

Questions