Update on the VFC

8th June 2016

The VFC fan club

Past, Present and Future

* Production of VFC-HPC (SRAM)
* Production of VFC-HD (SO-DIMM – no external memory)
* Production of the VFC-HD v2 (DDR3) – Under test
* Future production of VFC – Large contract

VFC-HPC (SRAM)

* Design cost: 19.9kCHF paid on 64724
* Production cost: 19.7kCHF paid on 64724
  * Actual cost per board: 1.7kCHF/board
  * 10 spare PCB were produced
* Fully equipped boards produced: 10
  * 2 instability monitor
  * 2 BTF
  * 4 DC-BCT
  * 2 to debug: bit stuck on the VME, PROM not programming the FPGA

VFC-HD v1 (SO-DIMM)

* Design cost: 20.8kCHF (9.1k Norcott, 11.7k bureau d'etude import) on 64940 (33.3% 2015), 64724 (33.3% 2015), 64279 (33.4% 2015)
* Production cost: 43kCHF on 64940 (33.3% 2015), 64724 (33.3% 2015), 64279 (33.4% 2015)
  * Actual cost per board: 1.4kCHF/board
  * 39 extra PCB produced
* Fully equipped boards produced: 16
  * 6 FBCT
  * 4 AWAKE
  * 1 Motor control
  * 1 Withe Rabbit development for B-train distribution
  * 1 JTAG test development team from EN
  * 1 VFC-HD test bench development
  * 1 to debug
  * 1 missing (?)

VFC-HD v2 DDR3 on board

* Design cost: 6474CHF on 64724
* Production cost: 61kCHF for 45 boards on 64940 (33.3% 2015), 64724 (33.3% 2015), 64279 (33.4% 2015)
  * Actual cost per board: 1.35kCHF
* 2 PCB already equipped and under test
* Board distribution: To be discussed on approved here !
  * 18 requested by FBCT and Diamond BLM to be equipped with the ordered mezzanine
  * 20 requested by the motor control project
  * 1 for the test bench development
  * 12 MOPOS development – deployment in one BA
  * 1 FW development
  * 1 Wire scanners development
  * 1 SPS BGI
  * *Total of 54 requests for 45 boards : need to prioritise*

Status of VFC production

* Norcott waiting our green ligth to finalise the production of 43 boards
  * Communication with DDR3 progressing but not finalised yet (Big Thanks to Jiri !)
* No new revision foreseen
* Discussion with FP started in April – Production of 1000 boards
  * MS documents to be finalised in June
  * MS launched in July
  * IT in end of August
  * Finance committee in March 2017
  * Production in batches of 20 boards pre-series for qualification at CERN and then batches of 250 boards every 2 months
  * Production should be completed by mid 2018 at latest
* Test bench in preparation – first bench already under qualification

Conclusion

* 3 versions of the VFC-high Pin count produced
  * SRAM (10/10), HD v1(16/39), HD v2(2/43)
  * Need to prioritize projects while waiting for the larger production
  * *An option – mounting possibly extra PCBs: 10 SRAM & 39 HD v1*
* Production cost not attributed to projects properly yet – would do TID
* Larger production (1000 boards) foreseen to happen in 2017-18

Discussion

VFC-HPC – SRAM

* 2 LHC instability monitor
* 2 LHC BTF
* 4 LHC DC-BCT
* 10 spares PCB

VFC-HD – 'no memory'

* *6 LHC FBCT*
* 4 AWAKE BPM
* 1 Motor control
* *1 Withe Rabbit development for B-train distribution*
* *1 JTAG test development team from EN*
* *1 VFC-HD test bench development*
* 39 spares PCB

VFC-HD – v2

* 18 requested by FBCT and Diamond BLM to be equipped with the ordered mezzanine
* 20 requested by the motor control project
* 1 for the test bench development
* 12 MOPOS development – deployment in one BA
* 1 FW development
* 1 Wire scanners development
* 1 SPS BGI
* *Total of 54 requests for 45 boards : need to prioritise*