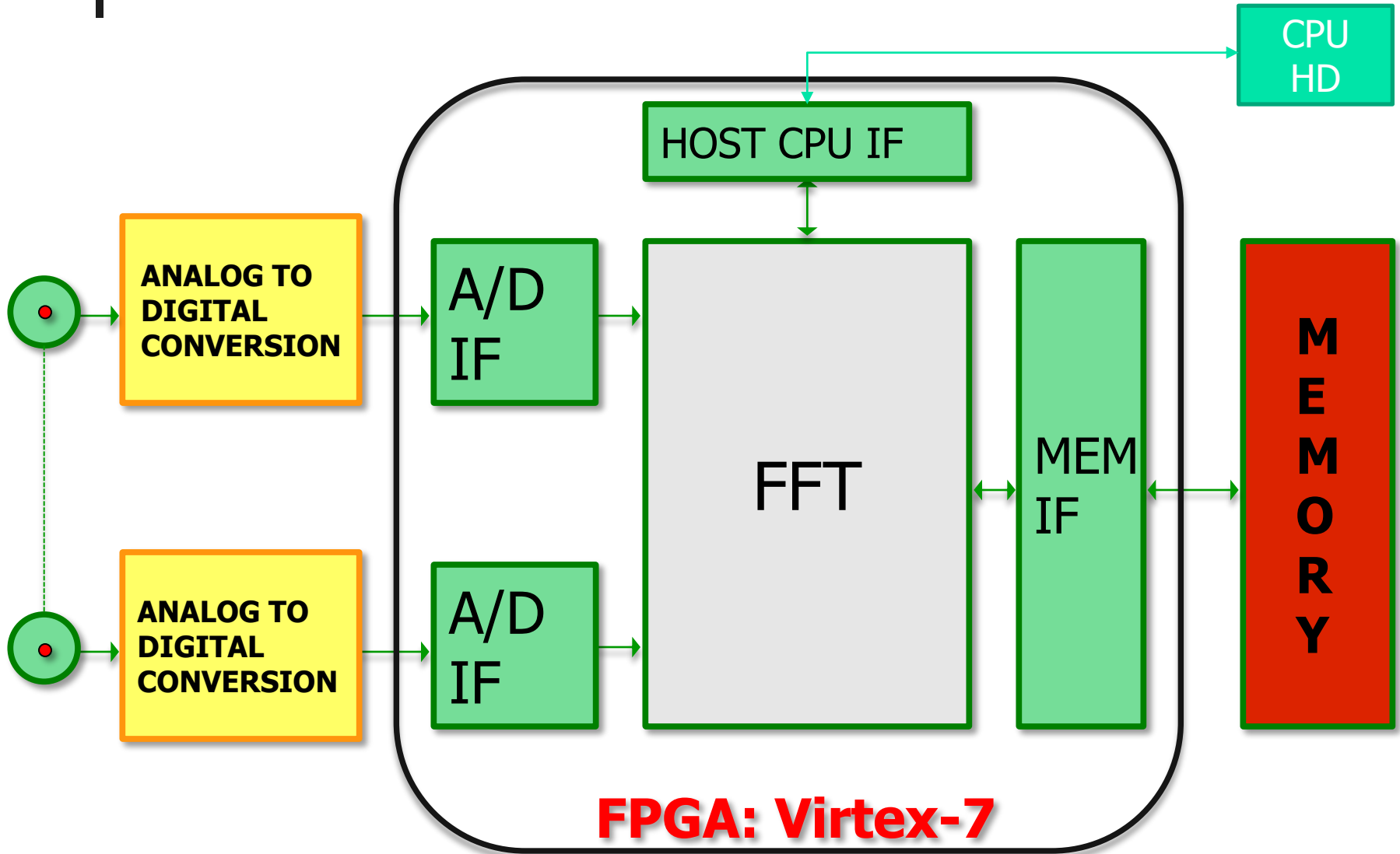# 4DSP

PROTOTYPING FPGA CENTRIC SYSTEMS WITH FMCs

PIERRICK VULLIEZ – CTO & FOUNDER AT 4DSP

Agenda

- Project requirements

- Exploring a potential solution

- Is there a faster way to get this project going?

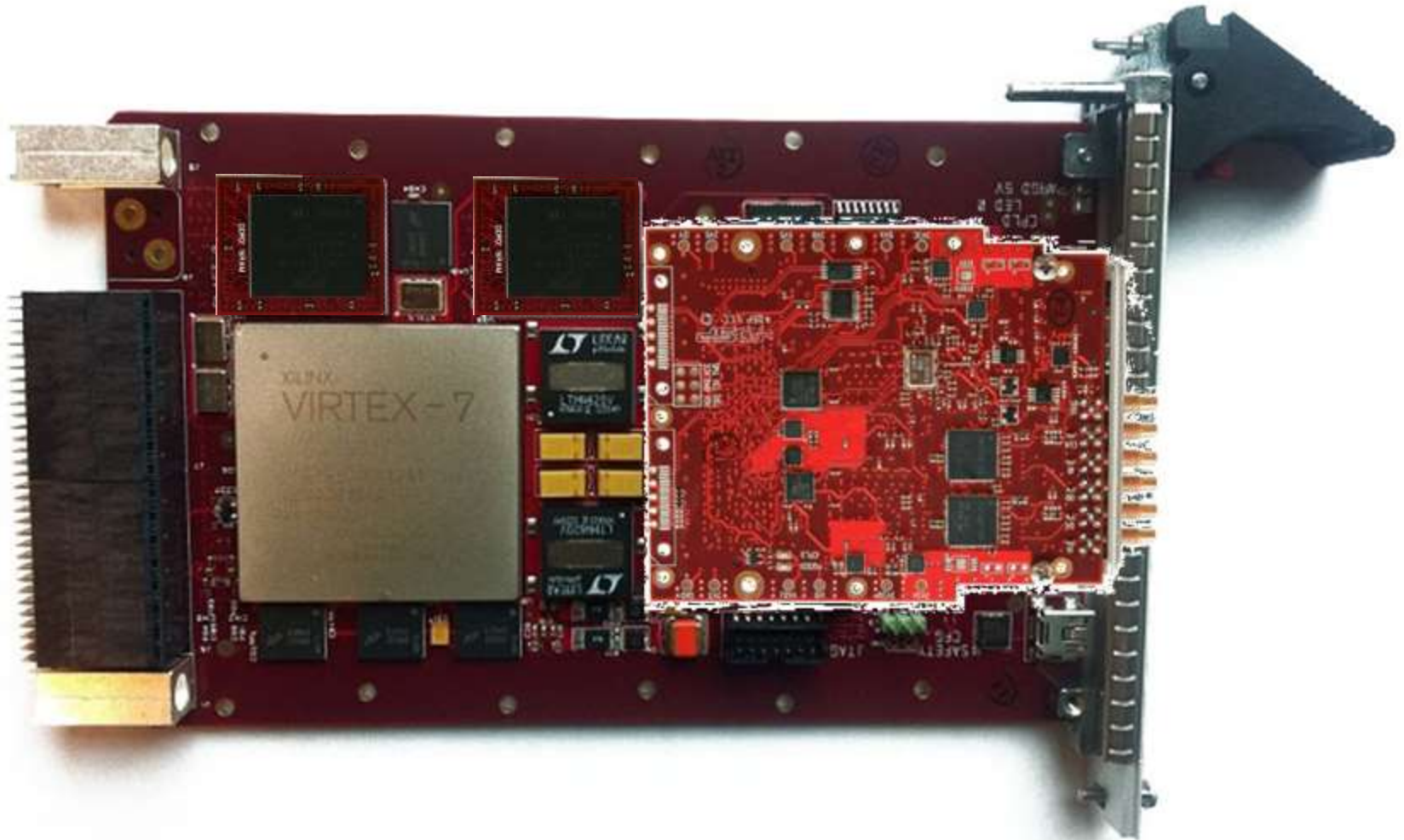- FMC: a sure bet for a solution ready on time

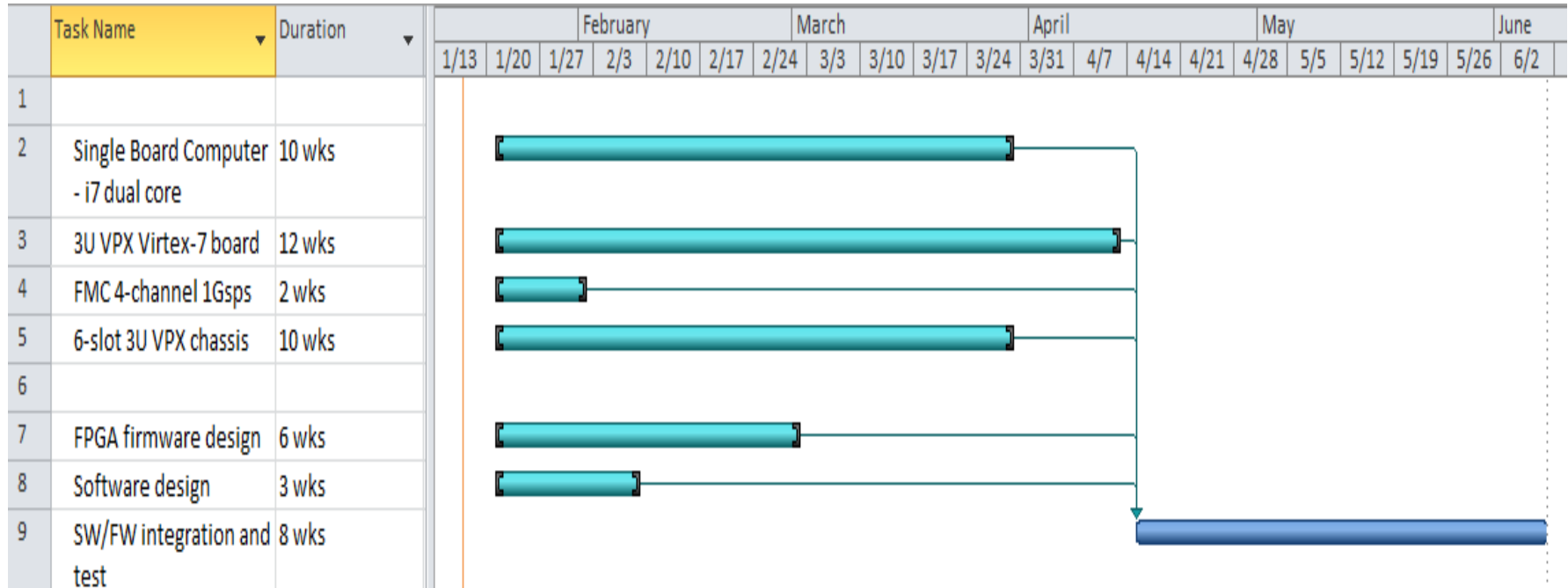# Typical DAQ architecture

Exploring a potential solution

Exploring a potential solution

Exploring a potential solution

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Exploring a potential solution

A different DAQ platform

FMC126
- VITA 57.1 FMC
- 4x 1.25Gsps A/D or 1x 5Gsps
- External trigger and clock

VC707
- Virtex-7 FPGA
- 1GB DDR3 SDRAM
- 2x FMC sites
- 1x Ethernet
- x8 PCIe

FMC116
- VITA 57.1 FMC
- 16x 250Msps A/D
- External trigger and clock

Laptop Computer

Ethernet

Desktop PC

PCIe
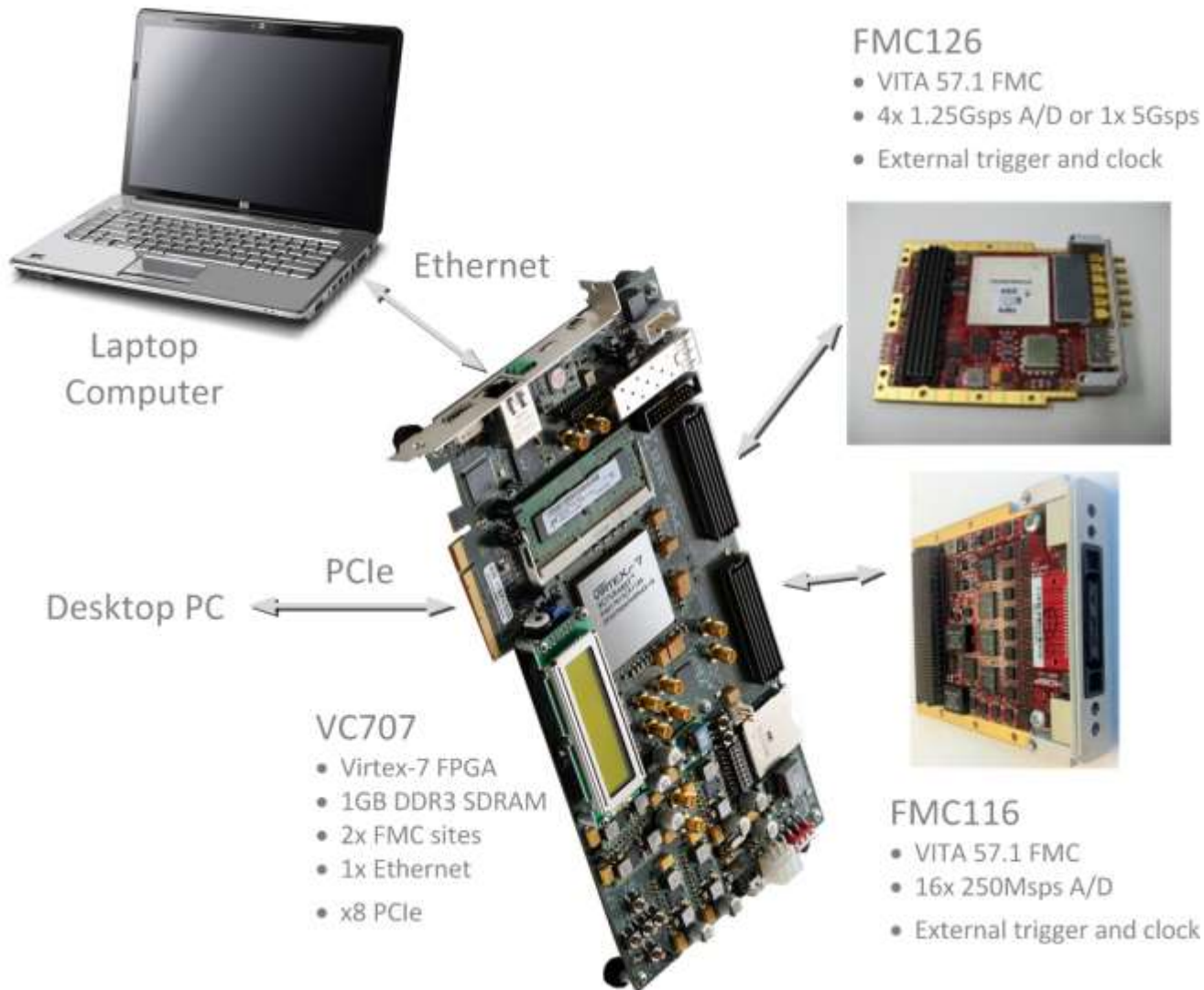
A different schedule too

	Task Name	Duration
1		
2	Single Board Computer - i7 dual core	10 wks
3	3U VPX Virtex-7 board	12 wks
4	FMC 4-channel 1Gsps	2 wks
5	6-slot 3U VPX chassis	10 wks
6		
7		
8	Desktop PC or Laptop	0 wks
9	VC707	2 wks
10	FMC 4-channel 1Gsps	2 wks
11		
12		
13	FPGA firmware design	8 wks
14	Software design	3 wks
15	SW/FW integration and test	6 wks
16	Migrating to target system and test	2 wks
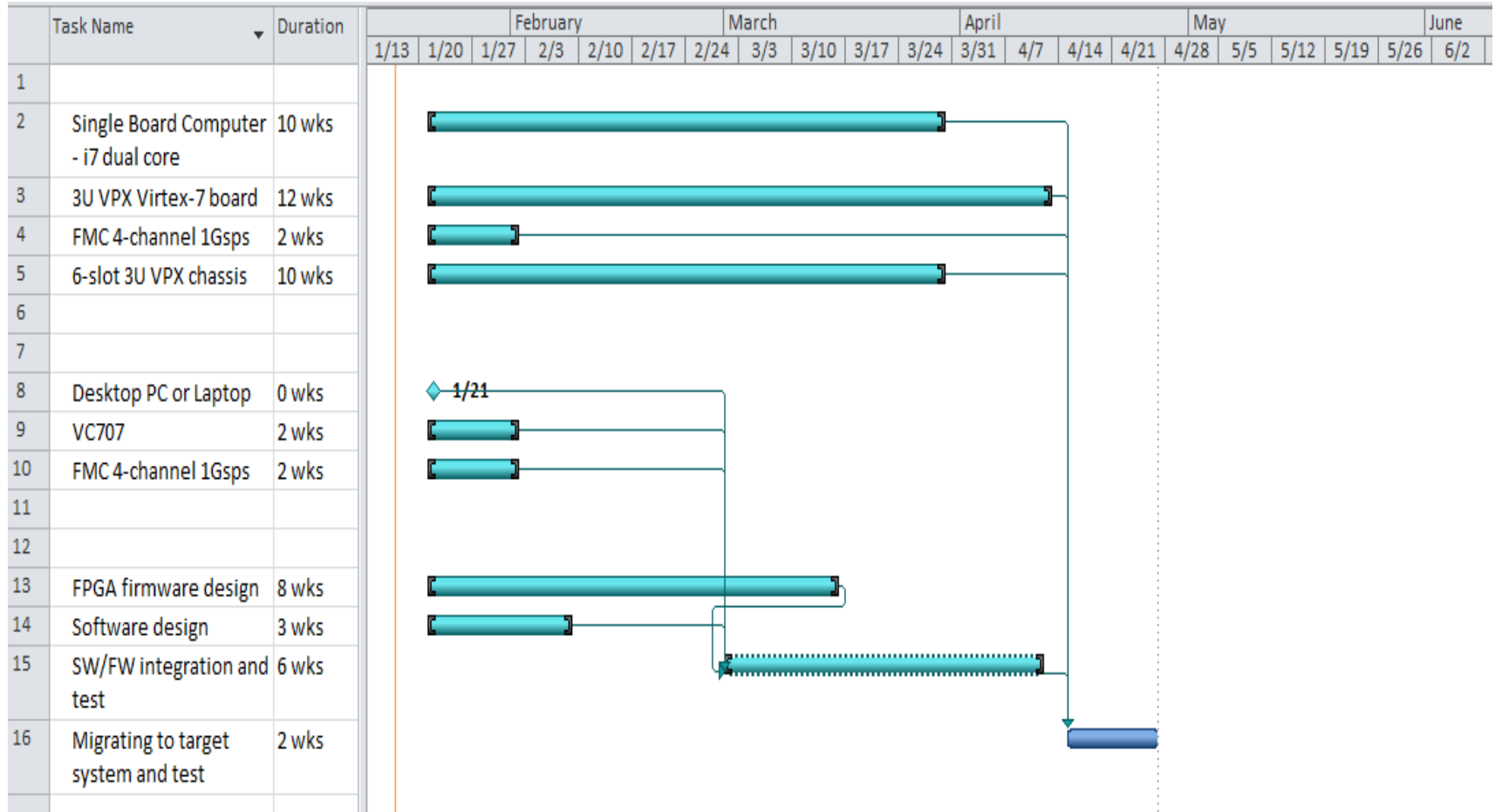
FMCs: It's becoming a trend

- FMC sites are available on most Xilinx development boards

- 60+ FMC and FMC carriers from a dozen vendors

- A/D, D/A, RF, Video, TI DSPs, touch screen, optical, etc…

- Becoming easier to integrate FMC and FMC carrier cards from different vendors (VITA 57.2)

- Reduces overall risk and cost for the most demanding applications

Thank you

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Thank you!

4DSP