



vadatech
THE POWER OF VISION

MTCA.4 – Flexible Platform Configurations

Corporate Fundamentals

- Company founded 2004
- Privately owned, financially sound
- Backed by over 25 years experience of product innovation
- AS 9100 Certified
- Corporate HQ and manufacturing in Henderson NV, USA
- Subsidiaries in Europe and Asia Pacific
- Worldwide distribution



MicroTCA Standards

Cloud Computing



Telecomm



Industrial, ATE,
Transportation



Defense



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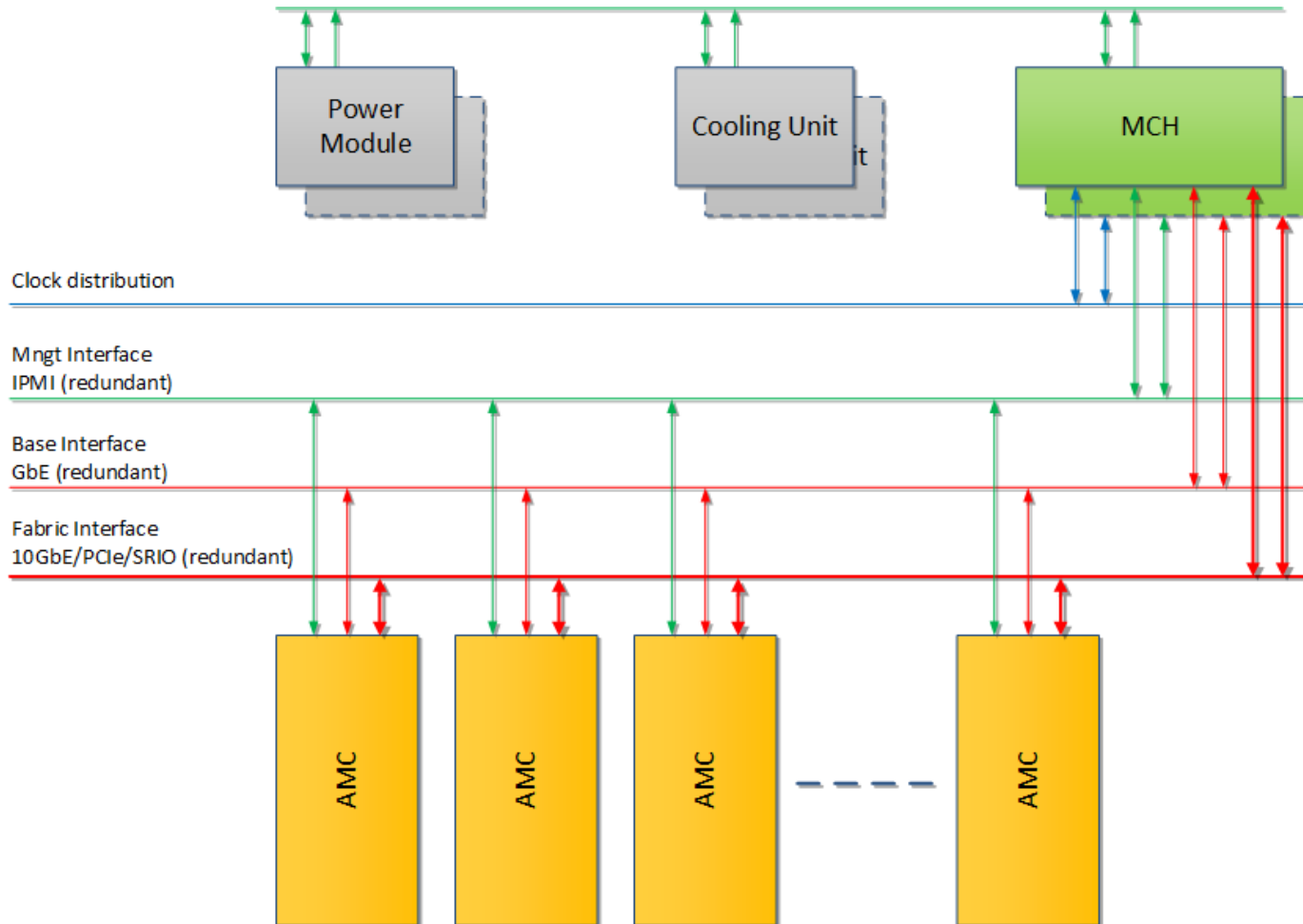
Research/
Physics



MTCA.4

- Rear I/O
- Precision timing

Simplified MicroTCA Architecture



Does this Translate?



Does this Translate?



The world is your oyster means that you can achieve anything you want in life or go anywhere because you have the opportunity or ability to do so.

A World of Choices

- Distributed
 - Localised acquisition and processing
- Centralised
 - Concentrated capability in a central location
- Hybrid form factors
 - Mixing form factors to optimise performance

Distributed Architecture



4+4-slot
dual MCH



8 slots
PCIe x8, Gen3

- 1U and 2U systems; compact with effective cooling
- 2 – 8 AMC slots, some or all with μ RTM
- Robust, production-ready designs

Centralised Architecture



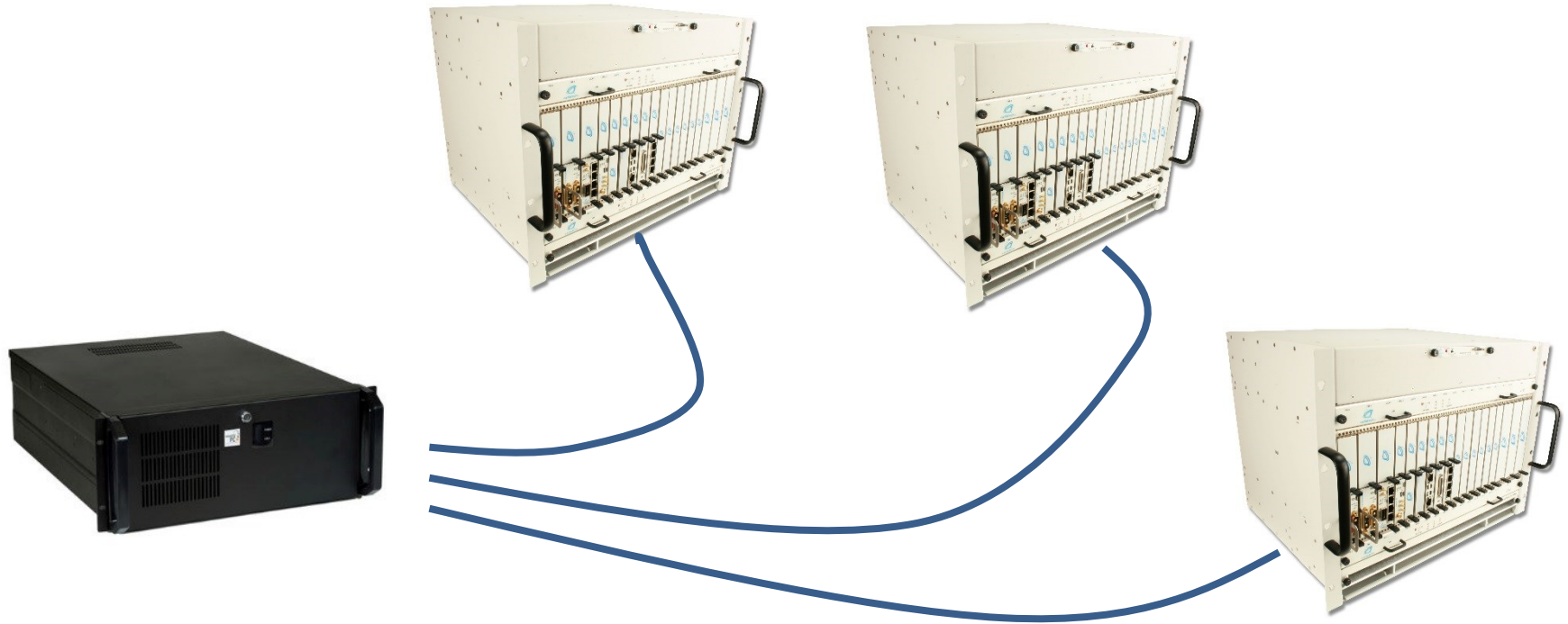
VT811
12-slot
full redundancy



VT813
12-slot
up to 4400W

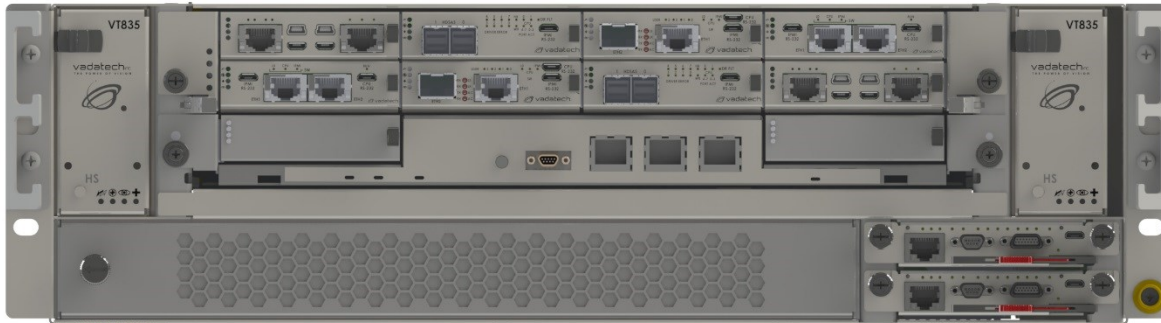
- 8U systems, full redundancy, flexible cabling options
- 12 AMC slots, all with μ RTM
- Strong thermal design, aluminium chassis

Hybrid Architecture – PC/MTCA



- Industrial PC – high-end Intel processors
- Distributed acquisition with MTCA.4
- PCIe Gen3 over fibre, 500m+ connections

Hybrid Architecture – ATCA/MTCA



VT835

1 ATCA slot

8 mid-size AMC slots

- 3U system, combines power of ATCA w/ flexibility of MicroTCA
- 8 AMC slots, all MTCA.0 (no μ RTM)
- Redundant ShMM, cooling, power

DAQ Solutions



AMC521

16-ch, 250MSPS
8-ch, 650 KSPS



AMC520

10-ch, 125MSPS
I/O from RTM



AMC520

1-ch, 2.5GSPS
5GHz bandwidth

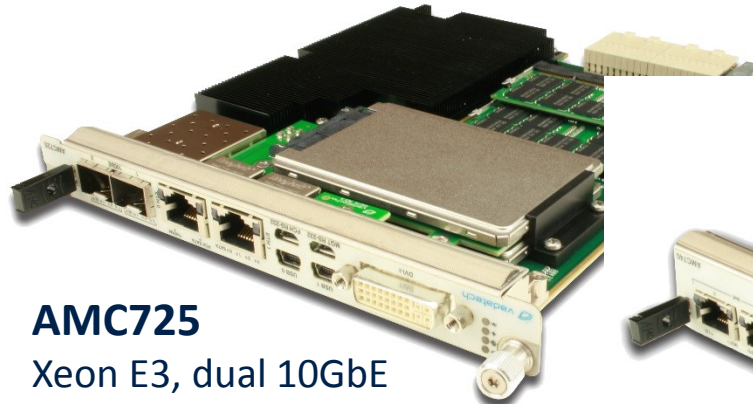
- AMC up to 250MSPS, 4-, 8- or 10-channel at 16 bits
- FMC up to 2.5GSPS
- Flexible gain/impedance selection on μ RTMs

Processing Solutions



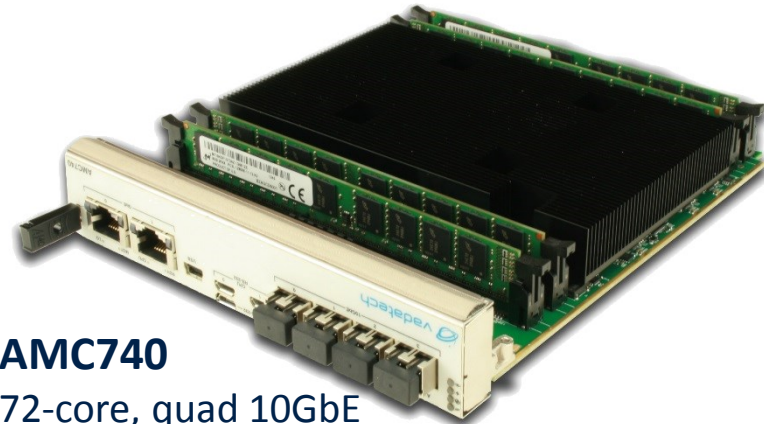
AMC720

Xeon E3, dual GbE
16GB DDR3



AMC725

Xeon E3, dual 10GbE
Optional dual SSD



AMC740

72-core, quad 10GbE
Up to 64GB DDR3

- PrAMC based on Intel, Freescale, Cavium, Tiler, GPGPU...
- Options for dual SSD and expansion via μ RTM
- Ethernet interfaces at up to 100 GbE

Custom Solutions

- AMC.0 IPMI compliant MMC
 - Reference design with software
 - 32-bit RISC processor
 - Integrated 512K flash, WDT, A/D, dual I2C, dual SPI, etc.
 - Payload communication via any of the interfaces
 - No up-front costs, no royalties
 - GCC tool chain
- FMC Carriers
 - Single FMC (Virtex-7, Kintex-7, Zynq-7, Artix-7)
 - Dual FMC (Virtex-7, Kintex-7)



VT026

Summary

- System Architecture
 - Distributed – compact chassis
 - Centralised – large high-power chassis
 - Hybrid form factor – PC processing, MTCA acquisition
- Data Acquisition
 - MTCA.0, MTCA.4, FMC – up to 2.5 GSPS
- Processing
 - Intel, Freescale, Xilinx, Altera
- Strong supplier choice offering a wealth of options

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