MTCAWS 2018

Keynote
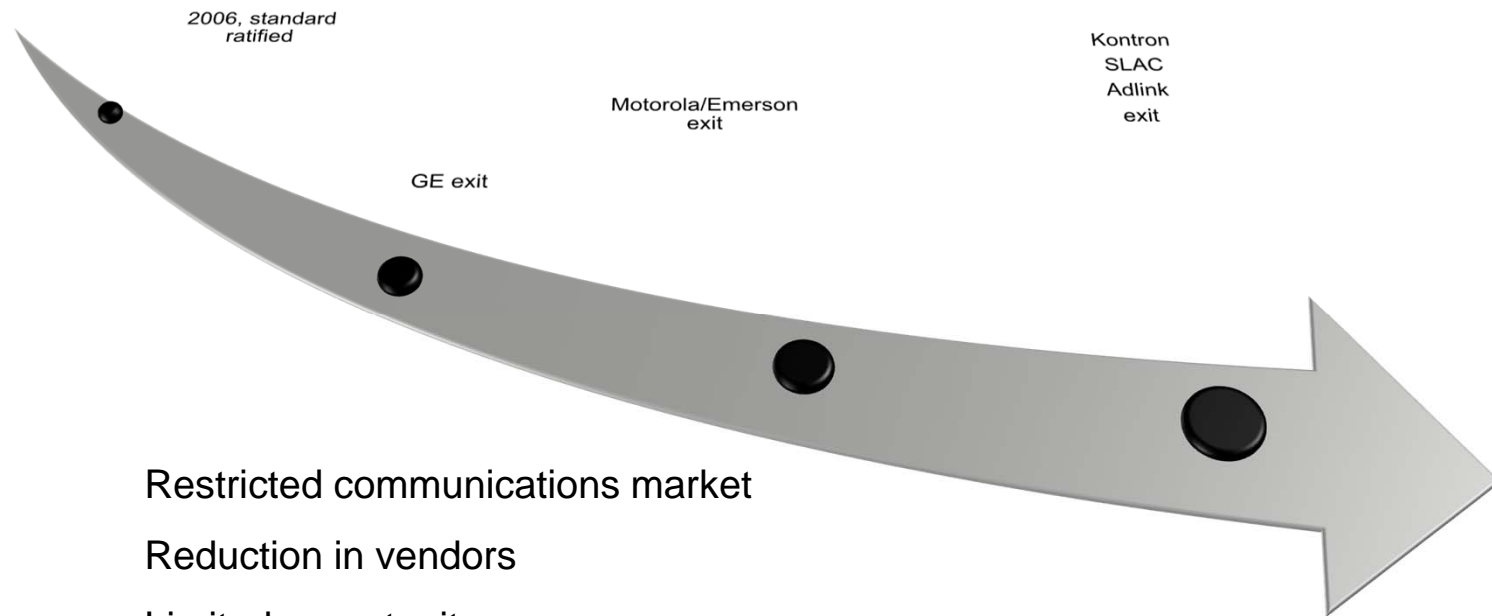MicroTCA Market Growth

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VadaTech – One Slide Summary

Largest supplier of MicroTCA equipment, providing all elements of the platform to support major commercial and mil/aero customers worldwide.
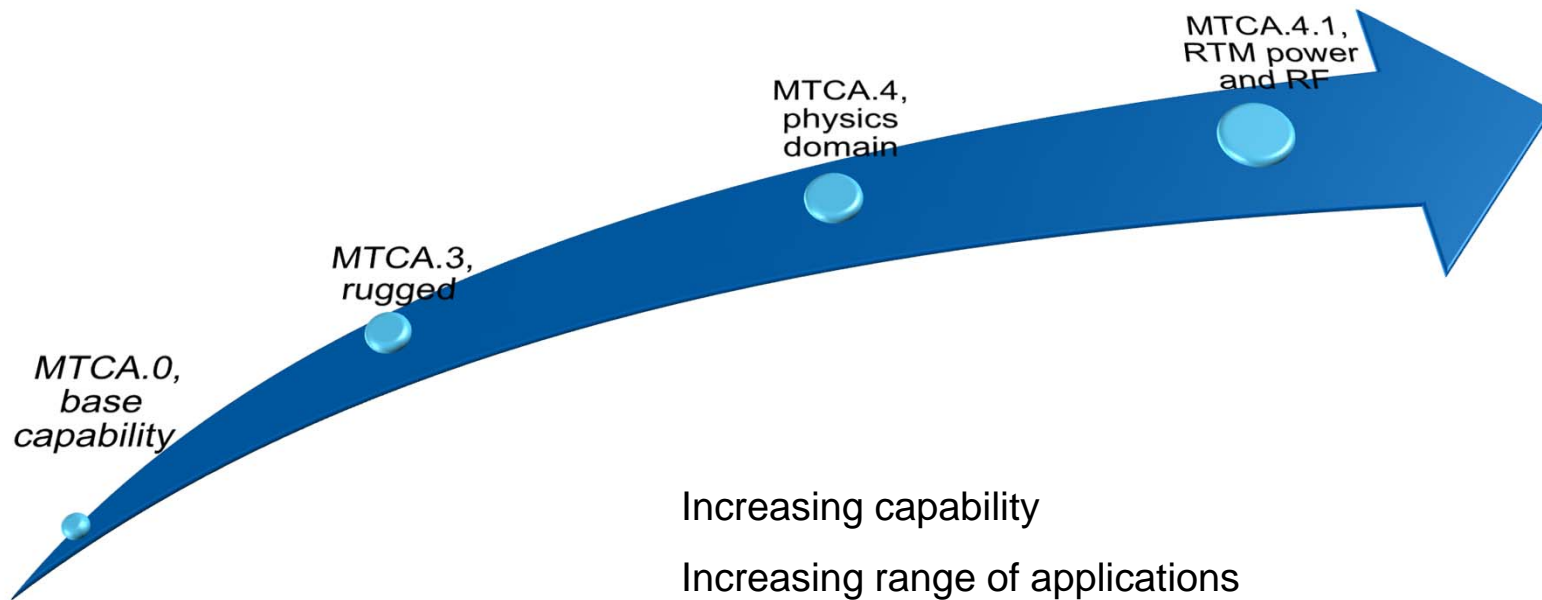
An Outsider's view of history

2006, standard ratified

Kontron
SLAC
Adlink
exit

Motorola/Emerson exit

GE exit

Restricted communications market

Reduction in vendors

Limited opportunity

An Insider's view of history

MTCA.4.1,
RTM power
and RF

MTCA.4,
physics
domain

MTCA.3,
rugged

MTCA.0,
base
capability

Increasing capability

Increasing range of applications

Increasing opportunity

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MicroTCA is everywhere, you just don't see it

Communications, 100GbE

- What
  - Compact platform, 100GbE network interface
- Why MTCA?
  - Size, modularity, platform management
- Takeaway
  - MicroTCA supports edge of network worldwide
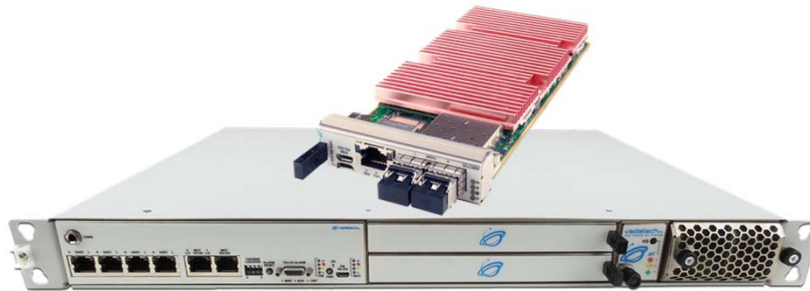
5G Mobile Comms, Test

- What
  - Wireless network development
- Why MTCA?
  - Architecture, bandwidth, power (4400W)
- Takeaway
  - MicroTCA can support up to 360W per slot (front module 200W, RTM 160W)

Broadcast

- What
  - Virtual studios for local radio
- Why MicroTCA?
  - Availability, remote platform management
- Takeaway
  - Versatility of MicroTCA suits numerous applications outside of traditional communications networks

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4G Mobile Comms, Test

- What
  - Wireless test set
- Why MTCA?
  - Architecture, modularity
- Takeaway
  - MicroTCA is sometimes disguised within customer equipment

"Reproduced with Permission, Courtesy of Keysight Technologies, Inc."

Medical

- What
  - Video processing for robotic-assisted surgery
- Why MTCA?
  - Performance, reliability
- Takeaway
  - Critical applications require service offering as well as product

Satellite Test (SATCOM)

- What
  - Automated satellite testing, recorder and play back
- Why MicroTCA?
  - Performance, including signal conversion, compact and flexible
- Takeaway
  - Modems are different for each application and it allows a common platform

Cyber Security

- What
  - Encryption and deep packet inspection
- Why MicroTCA?
  - Network processors, configuration flexibility
- Takeaway
  - MicroTCA architecture comes in all shapes and sizes

Flight Simulators/Trainers

- What
  - Emulate aircraft network in flight simulators
- Why MicroTCA?
  - Size, architecture
- Takeaway
  - 1U MicroTCA provides much better performance density than competing form factors

Defence

- What
  - Airborne, UAV, ground mobile, submarine – networking, signal analysis, radar, electronic warfare
- Why MicroTCA
  - Smaller, cheaper and better defined than competing standards
- Takeaway
  - Rugged standards give broad application base

Current Status, MicroTCA

MicroTCA is currently used to…

- Helps train pilots

- Deliver nation-wide broadcast

- Maintain cyber security

- Secure borders and infrastructure

- Test the latest generation of mobile phones

- Develop the next generation of mobile phones

- Help save lives

uTCA.4
ZYNQ UltraSCALE+ dual FMC

Double-width MCH 40GbE

Very high end storage
Wire speed read/write
RAID 0, 1, 5, 6

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Current Status, VadaTech

- VadaTech is $40M+ (2018) company, anticipating $80M in 2020
  - Total of 100,000 SQF of R&D and manufacturing facility world wide
- MicroTCA is the driving force behind the company
- MicroTCA platforms range from $10K to $500K
- MicroTCA market is open for new suppliers

HQ at Las Vegas Nevada

Six SMT Lines

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The future, 100G

- We started by looking at history of MTCA, what about the future?

- 100G backplane already standardized in ATCA

- Increased power already supported via Tongue 2 (AMC) and MTCA.4.1 (RTM)

- Backplane connector remains the bottleneck, since limited to 12.5 Gbps per lane

- **VadaTech is anticipating 100G MTCA backplane by Q4 2019**

Any Questions?

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