



Update of MicroTCA Technology Lab Activities

Andreas Brunzel
2020-12-01

MicroTCA Workshop 2020



CONTENT

- Update MicroTCA Technology Lab
 - New Team Members, Service & Product Portfolio
 - New Products in 2021
- Moving towards virtual Training
- The Establishment of the Limited Company
- Outlook 2021 and beyond

Management



Andreas Brunzel



Nadja Mäder

- TechLab is growing, three new hires in 2020
- We have more open positions, we hire!

Hardware Development



Simone Farina



Johannes Zink

Firmware Development



Jan Marjanovic



Sven Stubbe

Software Development



Patrick Huesmann



Aaron Gornott

RF Engineering



Patrick Nonn

Robust Business Relationship

- Ongoing successful alliance with our Business partners
- Driving together the further development of the standard on a modular level
- Clear communication of upcoming changes in TechLab













Two “lighthouse projects” almost finished:



Turkish Accelerator & Radiation Laboratory, Ankara



NICA (Nuclotron-based Ion Collider Facility), Dubna

	Bevatech GmbH		CAEN ELS s.r.l.
	el-spec GmbH		EMCOMO Solutions AG
	N.A.T. GmbH		nVent Schroff
	powerBridge GmbH		Rohde & Schwarz
	Teledyne SP Devices		Struck Innovative Systeme GmbH
	VadaTech		WIENER Power Electronics GmbH

For more details:

https://techlab.desy.de/about_us/partners/index_eng.html

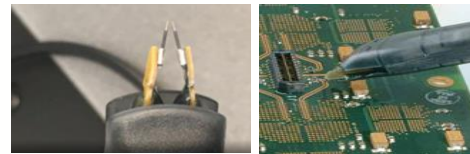
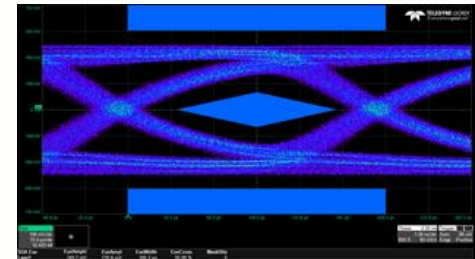
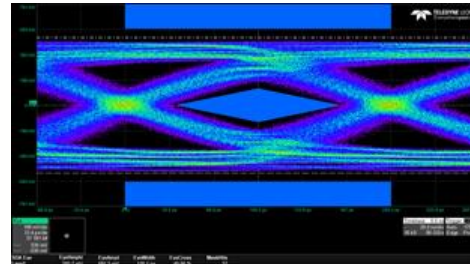
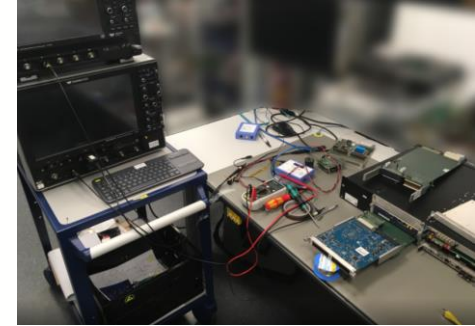
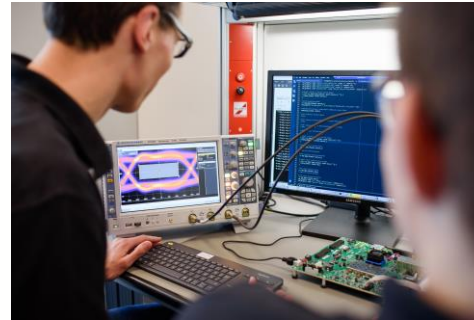
Focus on three areas

Service Portfolio

Developments in MicroTCA
(Hardware, Firmware, Software)

System Configuration
and Integration

High-end Test and Measurement,
Consulting & Training



Test and Measurement
Cutting-Edge Equipment

More details:

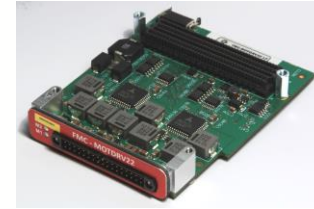
https://techlab.desy.de/services/measurement_services/index_eng.html

Established Products

- A wide set of boards already available for years
- Suitable for science and industrial applications
- Well known by the community
- GigE Vision camera interfacing for FPGAs, Vision Stack



DRTM-DWC8VM1



DFMC-MD22



DFMC-DS800



DRTM-AD84



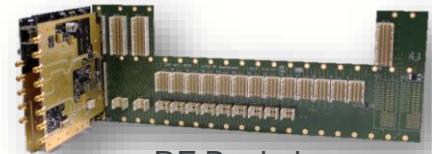
DAMC-FMC25



DAMC-TCK7



GigE Vision Stack



RF Backplane

New Products

Exciting Additions to our Portfolio

DMMC Stamp & Break-out Board

Q3/20

DAMC-FMC2ZUP

Q1/21

DAMC-FMC1Z7IO

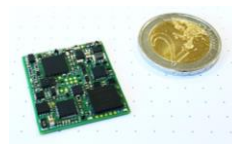
Q1/21

DAMC-DS812

Q3/21

DIPC-7050 (10GigE Vision)

Q1/20



DMMC Stamp

Fully integrated MicroTCA Management SoC, Drop-in



DAMC-FMC2ZUP

High performance Zynq UltraScale+ FMCp/FMC Carrier



DAMC-FMC1Z7IO

Cost-optimized FMC Carrier IO-Board



DAMC-DS812

Direct Sampling, low-latency Digitizer for beam diagnostics



DIPC-7050 - 10GigE Vision Stack

GigE Vision camera interfacing with FPGAs

Growing Demand for Training Sessions

- In 2020: 3x Basic Training (face-to-face), 1x Advanced (remote)
- Good opportunity to meet the users and to understand their requirements

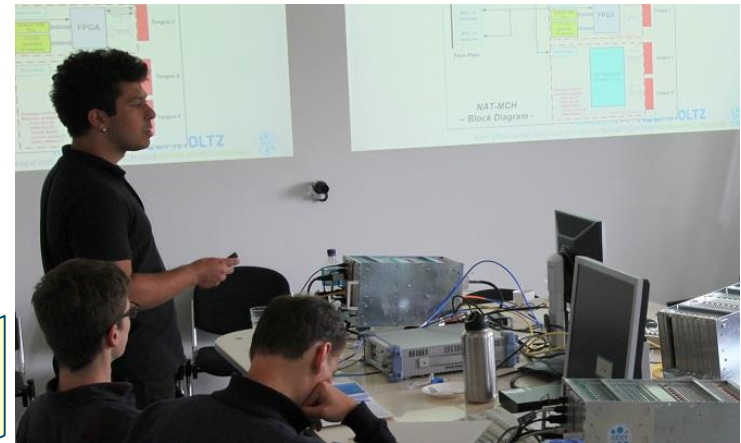
Training Portfolio

Basic Training in MicroTCA for
Beginners

Advanced Training in MicroTCA for
deep knowledge

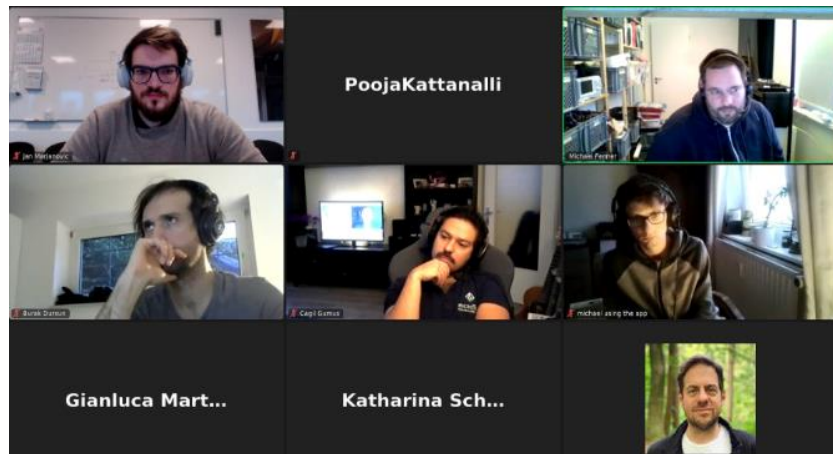
Highly customized Trainings
(In-house optional)

NEW



Upcoming MicroTCA Training Events

- Basic: 03. - 04. February 2021
- Advanced: 24. - 25. February 2021



The trainings are now held **virtually** via ZOOM and SSH (until further notice) !

LISA Phasemeter Simulator (DLR, Uni Hamburg & DESY)

- The LISA Phasemeter is based on MicroTCA ground-support equipment
- [First contact during a MTCA Training session](#)
- Reward: a long-term project for DESY and TechLab



For more details don't miss this session:


 2 Dec 2020, 13:30

 20m

 Virtual Workshop via Zoom

Speaker

 Prof. Oliver Gerberding (UNI/EXP (Uni Hamb...))



UHH — O. GERBERDING 27.11.2020

PROJECT OVERVIEW

LISA GROUND-SUPPORT EQUIPMENT: DEVELOPMENT OF A PHASEMETER SIMULATOR AND AN OPTICAL TOOLSET (DLR 50 OQ 2001)

Outlook Y2021, planned spin-off

- **Big challenge ahead:**
 - The TechLab will be restructured and become a limited company in Y2021 !
- **Why do we do this?**
 - Increasing claims from the global industry
 - Become compatible to work with big companies
 - Make things easier & more effective
 - Provide faster quotes and shorter response time
 - Gain full legal capacity (and responsibility)
- DESY/ TechLab has an impressive expertise in the field of experimental physics, this is a real advantage for our customers and a good reason to get in touch

Summary

- The MicroTCA market is growing, we do see new Accelerators and more Institutes (both mainly in Asia)
- We support these institutes to develop their own MicroTCA boards to be used in their own subsystems
- Y2020 was a busy and successful year for us, the TechLab develops well
- We target customers in the field of science/ research and industrial automation
- We will introduce five new products in Y2021 !
- We are aiming for fair and strategic partnership & collaboration



Thank you for your attention

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Services

- Custom Developments
- High-End Test & Measurement services
- System Configuration & Integration
- LLRF Design

Upcoming Events (remote)

MTCA Trainings

Basic: 3. - 4. February 2021

Advanced: 24. - 25. February 2021

Exhibitions & Conferences

- tbd