XFEL Machine Protection System (MPS) based on MicroTCA

Location:
Hamburg / Germany
MPS Design Goals and Implementation I - MOM308

Micro TCA distributed data processing

**XFEL** 3.4 km **SFP**  **FLASH** 0.3 km redundancy

hot-swap configuration, no programming

**ILC** 31 km remote firmware update reliability

**RS422** galvanic isolation **DOOCS**

scalability **FPGA** low maintenance

**manpower reduction** cost reduction

fiber optics
Micro TCA  distributed data processing
XFEL  3.4 km  SFP  FLASH  0.3 km  redundancy
hot-swap  configuration, no programming
ILC  31 km  remote firmware update	no redundancy
RS422  galvanic isolation
FPGA
scalability
manpower reduction
fiber optics
cost reduction
THANK YOU
MOM308
MPS Design Goals and Implementation II - MOM308
Sven Karstensen, DESY Hamburg | ICALEPCS 2015 | Page 18