

Johannes Zink - Direct Sampling of RF Signals up to 3 GHz in MTCA.4

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Sampling high bandwidth signals above 1 GHz in MTCA.4 on an AMC digitizer with an analog front end located on the RTM side, requires a new type of Zone3 connection.

The analog classes based on differential pairs connectors suffer from intense cross talk if the signal frequency rises above 300 MHz.

DESY is planning to introduce a new analog class based on single ended coaxial connectors between AMC and RTM. The first board using this new coaxial

connectors will be the direct sampling digitizer DAMC-DS800. For evaluating and testing the concept of direct sampling in MTCA.4, DESY has built a cost efficient

direct sampling FMC digitizer board. A new concept for an analog Zone3 class for MTCA.4 and the AMC/FMC digitizers will be presented.

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