Speed Poster: MicroTCA.4 Piezo Driver "DRTM-PZT4" and its applications

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MicroTCA.4 Piezo Driver "DRTM-PZT4" has been developed to support laser synchronization and special diagnostic (SD) applications foreseen for XFEL facility. The Piezo Driver is capable of driving 4 piezo actuators with voltages up to ±80 V. The solid state power amplifiers are driven using 18-bit DACs and sampling rates of 1 MSPS. The bandwidth of the driver is remotely tuneable using programmable low pass filters. The DRTM-PZT4 unit provides the information of piezo output voltage and current. Two independent test setups have been built to test 4-channel Piezo Driver performance. In the paper we are presenting EOD laser lock to 1.3 GHz FLASH master oscillator using bipolar piezo stretcher (fine tuning). The piezo motor based course tuning has been applied for the long term laser stability measurements. The preliminary results of active stabilization of 3.6 km fibre link laboratory setup are shown.

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