

Status of ToPix DAQ

Read-out and testing

November 11, 2015 | Alessandra Lai |

Past

Working but...

- lack of structure;
- hard coded settings and "magic" numbers in the code;
- max (reliable) readout frequency: $\simeq 50$ MHz;
- data from chip handled by *FairMQ*
 - cumbersome and not necessary for lab measurements;
 - nice to have for test beam.

Current status

Rewritten framework:

- big steps towards modularity, maintainability and usability;
- **max (reliable?) readout frequency: 160 MHz;**
- load and save settings/pixel masks from/to a (human readable) file;
- full configuration of the chip;
- various debug modes (e.g. access to single registers);
- readback of data works fine;
- work in progress to write out data to file without *MQ*;
- analysis of data and *FairMQ* to be included in a next step.

Future

- short term goal: stable system for lab measurements
→ on its way;
- ready for full characterization of ToPix4: end of 2015;
- multichip operation: beginning 2016;
- ready for test beam: end of February 2016;
- Alessandra's availability from now on ✓.