WDB and Decoupling CARD





WaveDREAM Board (WDB)



Preamp channel – Gain 10



PE4215

Gain	BW _{3db} (MHz)	Noise (mV)
1	940	0.37
10	880	0.40
100	300	1.2
100	500	1.7
100	800	3.3

Preamp channel – Gain 1



At gain 1, transfer performance is flat up about 0.9 GHz and then down 40db in less than a decade. Cross talk with this gain is not measurable (For the 2022 test beam we used a gain 2.5 which has a very similar transfer function)

Preamp channel – Gain 40



At gain 40, transfer performance is flat up about 1 GHz and then down 40db in less than a decade. Cross talk with this gain is about 2mV

WDS



- Server software using Mongoose C/C++ Framework
 - Easy low level calls for fast DAQ operations
 - Single executable with no need of dedicated http server
- WDB interface is similar to the interface of an oscilloscope with 16 channels.
- For each channel can:
 - Select the gain
 - Set a PZC
 - HV for SIPM

Material from differt talk's of Stefan Ritt

capture window is <u>850us@1.2GSPS</u> with 1024 sample. changing the sampling speed the acquisition window varies (recalibration is necessary)

WDS: Examples event screen



Channel selection panel Trigger selection pattern Gain selection

Each data file has been saved in binary format and then converted in root files



WDS: Root signal





WDS: Root signal



