Improving the ADC board
Outline

- Context and needs
- First problem
- Second problem
- New board
- Results
Context and needs

- Two boards
- Multiplexers, termination, operational amplifier
- Distortion
- Too noisy
First problem

Distortion of the signal
First problem

Simulation of the operational amplifier

No distortion shown
First problem

With and without the multiplexer

Residual resistor of the multiplexer

Current in the termination
First problem

Fix the multiplexer problem  move terminations
First problem

New amplifier: LMH6518

- High impedance input
- Programmable low pass filter
- Programmable gain
Second problem

Supplied directly
Second problem

With the second board
Second problem

To fix the problem

- Cliquez pour modifier les styles du texte du masque
- Deuxième niveau
- Troisième niveau
- Quatrième niveau
- Cinquième niveau

Noisy 5V → DC/DC converter → RLC filter → LDO

5V → 3.3V
New board

- Multilayered circuit board
- Two types of ground
- Mechanical connector
New board

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DC/DC converter
Results

- Debugging

- Tests
Thank you for your attention.