

RTPC

Generation \odot

Demodulation \otimes

$$f_{\text{sampling}} = 50\text{kHz}$$

$$f = 10\text{kHz}$$

$$V = \sin(2\pi ft)$$

Phase
tuning

ϕ_0

CPS_1_H_DEMOD

CPS_1_H_RAW

CPS_REF

CPS_LINE_RAW

CPS_LINE

DAQBOX

DAC

ADC

Input
amplification

Output
differential &
amplification

Lab

V_0

Vacuum

C_L

C_R

EM

V_{out}

$$x = G(x) \cdot \text{CPS_1_H_DEMOD_i} = G(x) \cdot V_{\text{CPS}}$$

