Smart Oscilloscope

ARROWHEAD TOOLS

Measurement of electrical parameters of the power supply
Capturing up to 930 ms with a sampling rate of 1 GS/s
Hardware accelerated data analysis

- MIN, MAX, RMS, Mean, Frequency/Period
- 33x speedup compare to ARM Cortex-A53

TE0808-6EG SoM
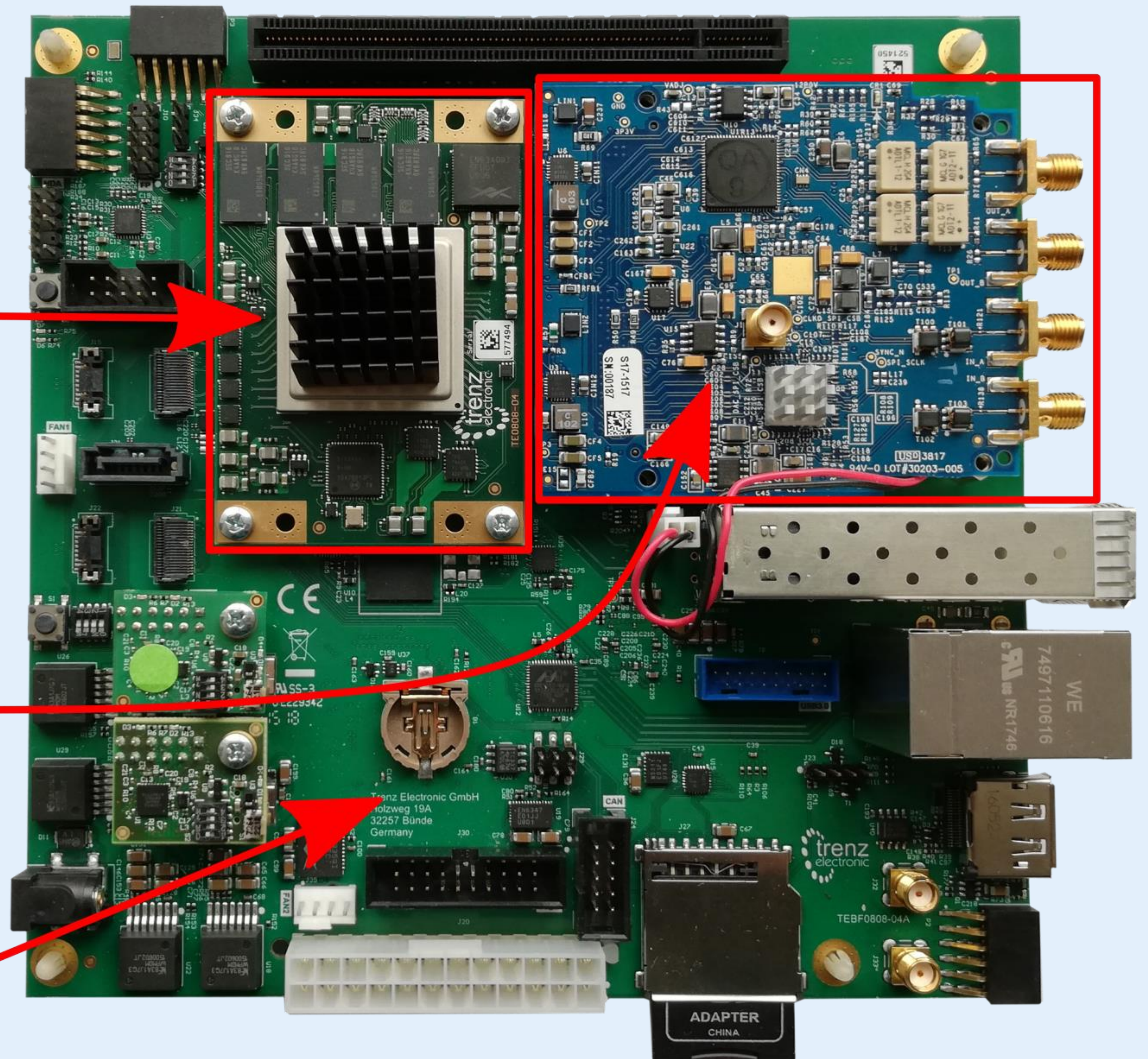- Zynq UltraScale+ ZU6EG
- 4 GB DDR4
- 1Gb Ethernet
Petalinux kernel 2018.2
Debian 10.3 Buster (aarch64)
C++ AH Provider of Service
Service - MIN, MAX, RMS, Mean
  Period, Frequency
ETH_GUI-NUCLEO-Capture Bridge

AD-FMCDAQ2-EBZ FMC
- AD9680 dual, 14-bit, 1.0 GSPS,
  JESD204B ADC
- AD9144 quad, 16-bit, 2.8 GSPS,
  JESD204B DAC

TEBF0808 Carrier
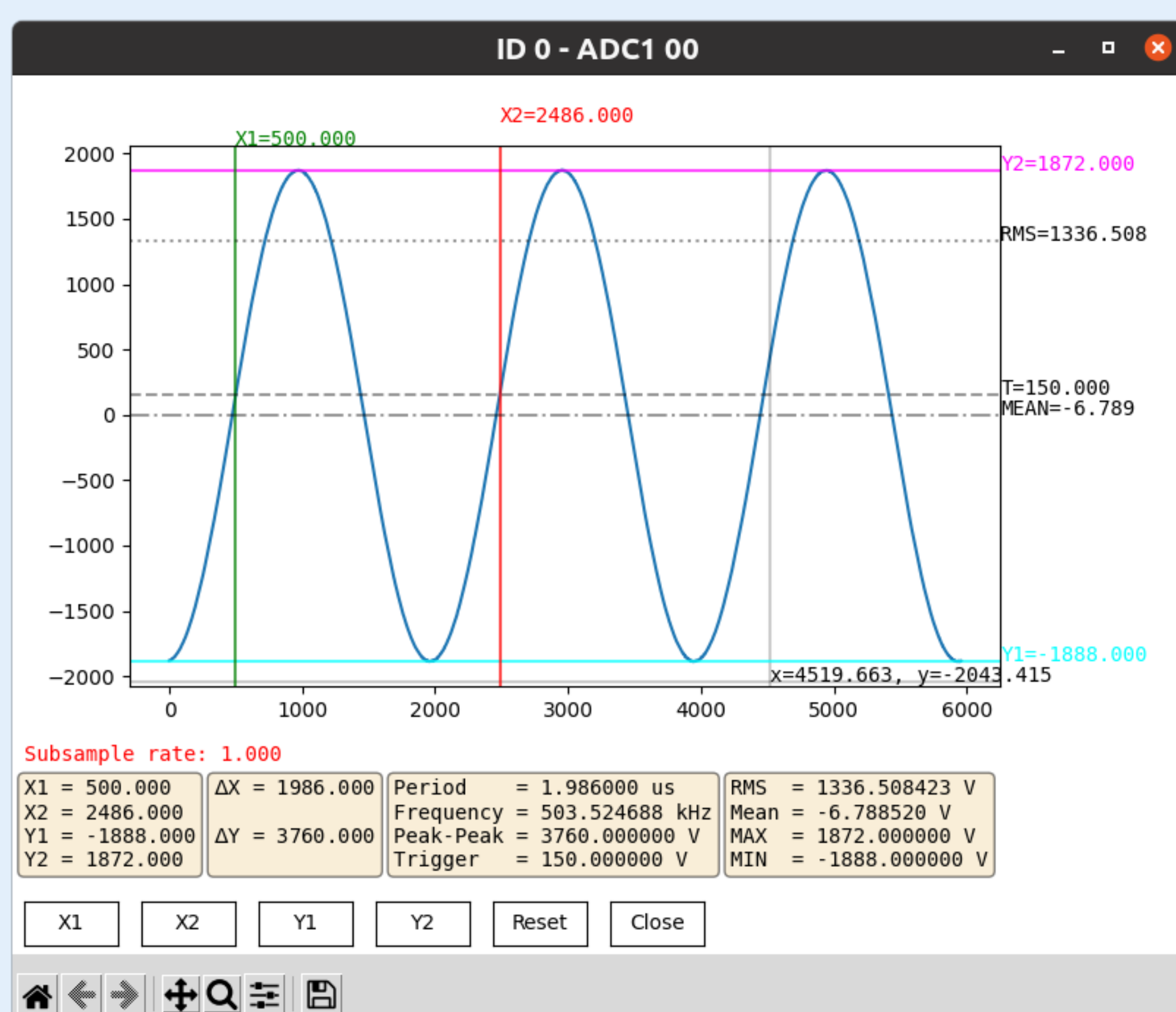- FMC HPC, 2x USB, I^{2}C
- Display Port (up to 1080p)
- ETH - RJ45

UC10 GUI

HW Config	Specification	New Test	Delete Test #0	Start Test #0	Start All Tests	Save All Tests	Report

ÚTIA signal processing arçelik

	TEST MODE			AC SOURCE						LOAD - Prodigit										Capture - FMC ADC1/ADC2		
ID	KIKUSUI Mode Select	Prodigit Mode Select	Prodigit Transition Channel Select	VSET1 [V]	VSET2 [V]	MAINS FREQ [Hz]	CH1	CH2	CH3	CH1 ISET1 [A]	CH1 ISET2 [A]	CH2 ISET1 [A]	CH2 ISET2 [A]	CH3 ISET1 [A]	CH3 ISET2 [A]	High Current Duration [A/us]	Low Current Duration [A/us]	Current Slope Rising [ms]	Current Slope Falling [ms]	HW Config	Voltage	Trigger
0	Constant	Constant	CH1	0	0	0	✓	☐	☐	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	ADC1 00	Voltage 1/10x	150.0 V
1	OFF/NO Transition	OFF/ON Transition	CH1	0	0	0	✓	☐	☐	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	ADC2	Voltage 1/100x	200.0 V
2	Voltage Transition	Dynamic	CH2	0	0	0	✓	☐	☐	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0	0	ADC1 01	Voltage 1/10x	300.0 V

Connection: 10.42.0.47:8888
Ready

ID 0 - ADC1 00

X1=500.000   X2=2486.000
Y2=1872.000
RMS=1336.508
T=150.000
MEAN=-6.789
x=4519.663, y=-2043.415
Y1=-1888.000

Subsample rate: 1.000

X1 = 500.000	ΔX = 1986.000	Period = 1.986000 us	RMS = 1336.508423 V
X2 = 2486.000		Frequency = 503.524688 kHz	Mean = -6.788520 V
Y1 = -1888.000	ΔY = 3760.000	Peak-Peak = 3760.000000 V	MAX = 1872.000000 V
Y2 = 1872.000		Trigger = 150.000000 V	MIN = -1888.000000 V

X1	X2	Y1	Y2	Reset	Close

UC10 Report

ID	Reference	RMS [V]	MEAN [V]	MAX [V]	MIN [V]	PERIOD [s]	Frequency [Hz]	
0	ADC1 00	1336.5084228515625 PASS	-6.788519859313965 FAIL	1872.0 PASS	-1888.0 PASS	1.9859999156324193e-6	503524.6875	Plot

Close

Remote GUI to control the device
- Communicates via ethertnet
- PASS/FAIL decision

Arrowhead provider of service
- MIN, MAX, RMS, Mean, Frequency/Period

http://sp.utia.cz