

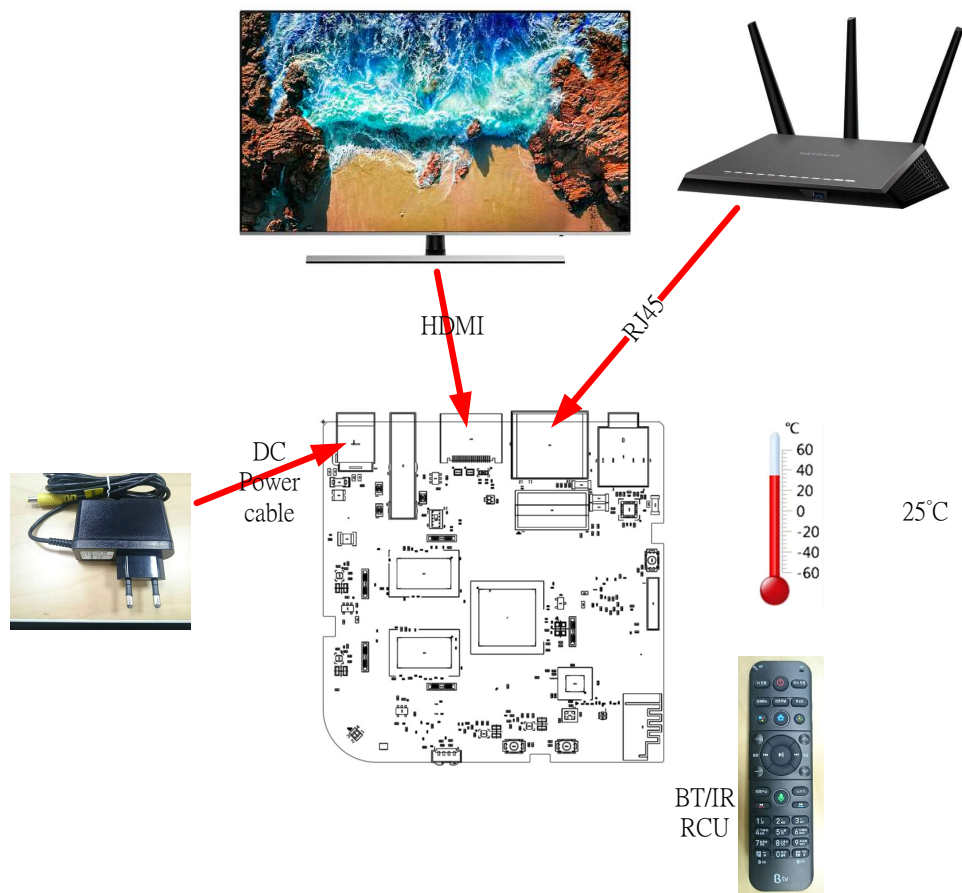
BFX-AT100

Hardware Unit Test Report

Power Ripple Test

Hardware version	FW version	Sample No.
V015	4.9.113 #29 Fri May 10 19:27:56 CST 2019 Build BFX_AT100-eng 9 PI 20190510 release-keys	S/N:

1. Power Test Setup (1)



1.1 Test Condition

BOX play 4K video via Ethernet by using YouTube. HDMI output port connects to TV through HDMI cable. The temperature is about 25 degrees.

1.2 Result and Picture

Power Rail	Specification (+-5%)	Test Result (mV)	Figure	Pass/Fail
	Max Ripple (mV)			
PP_PWR_IN (5V)	250	114	Figure 1	Pass
HDMI_PW (5V)	250	100	Figure 2	Pass
USB_5V (5V)	250	104	Figure 3	Pass
VDD_EE(0.8V)	40	30	Figure 4	Pass
VDDCPU*	50	38	Figure 5	Pass
P3V3 (3.3V)	165	46	Figure 6	Pass
P2V5 (2.5V)	125	18	Figure 7	Pass
P1V8 (1.8V)	90	10	Figure 8	Pass
EMMC_VDDQ (1.8V)	90	22	Figure 9	Pass
P1V2 (1.2V)	60	30	Figure 10	Pass

Note * VDDCPU power rail is using voltage identification and control by PWM. This report is fix in 1V.

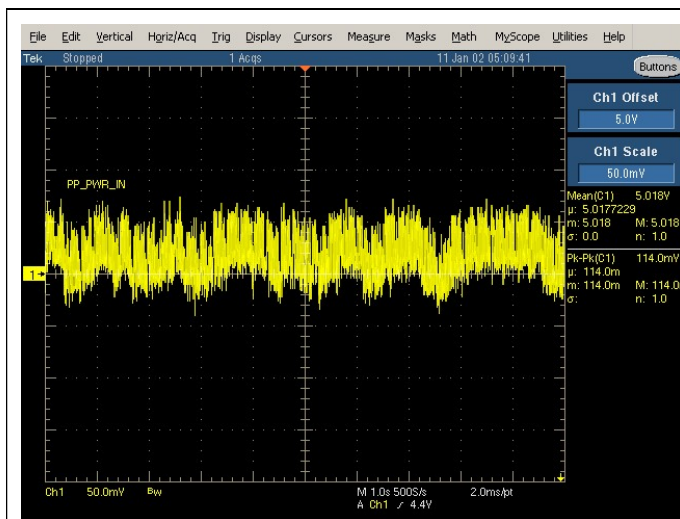


Fig. 1: PP_PWR_IN

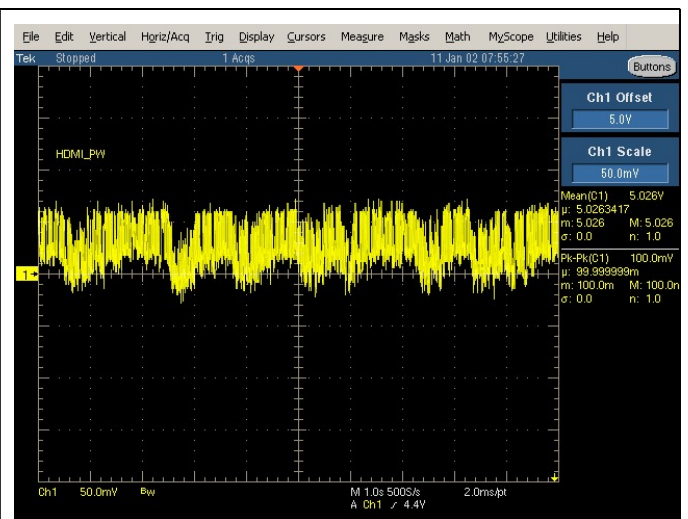


Fig. 2: HDMI_PW

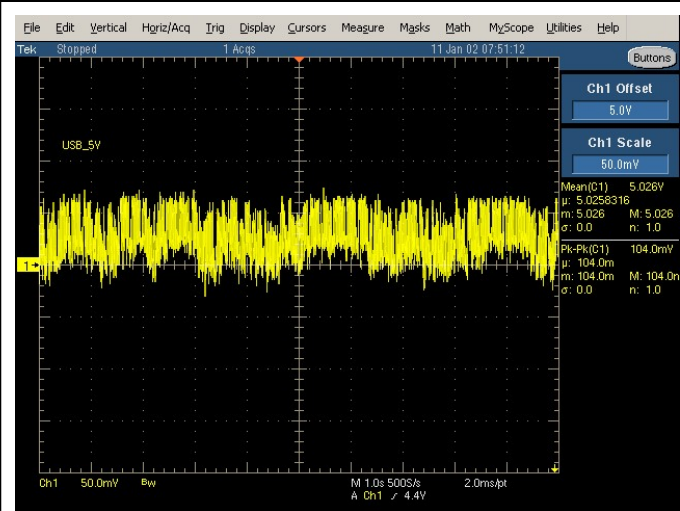


Fig. 3: USB_5V

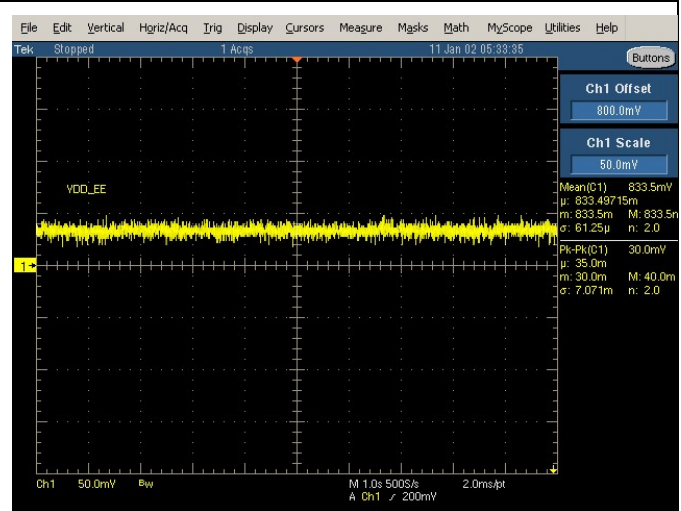


Fig. 4: VDD_EE

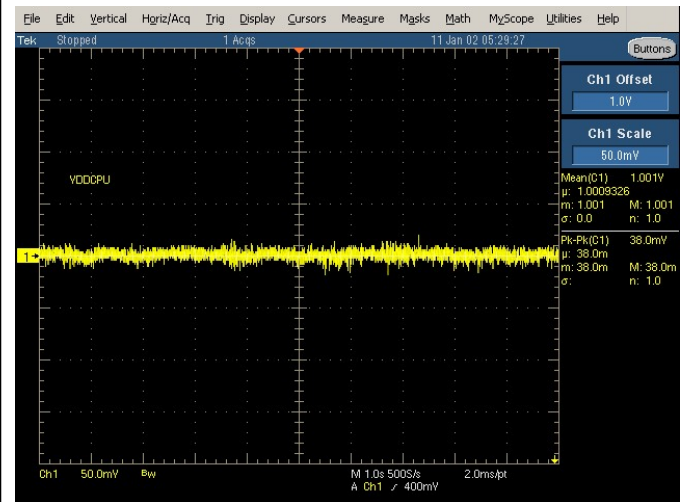


Fig. 5: VDDCPU

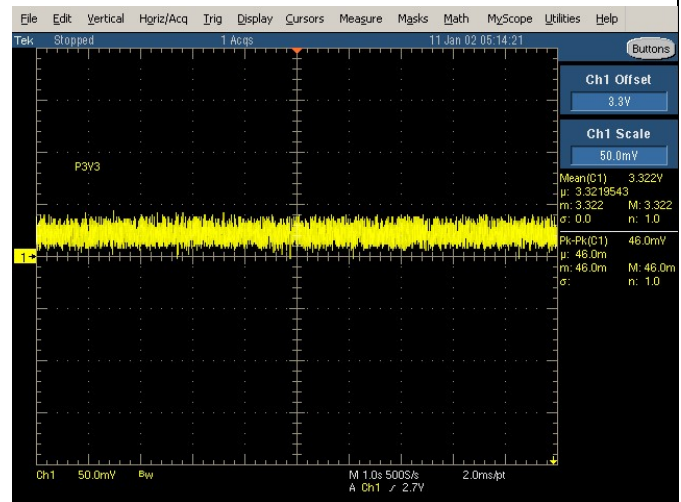


Fig. 6: P3V3

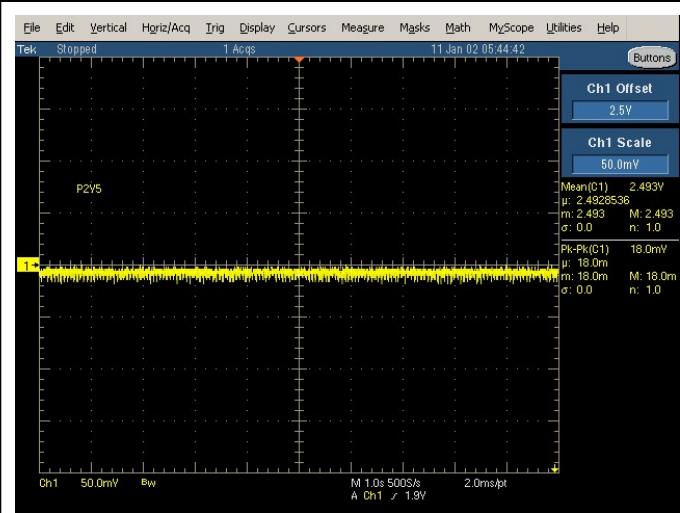


Fig. 7: P2V5



Fig. 8: P1V8

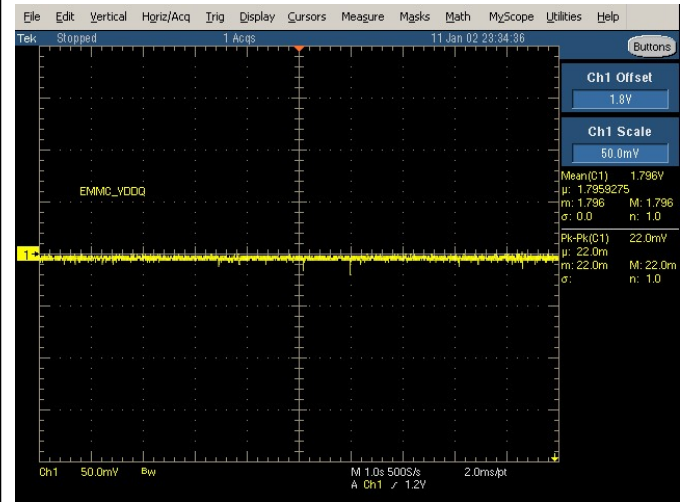


Fig. 9: EMMC_VDDQ

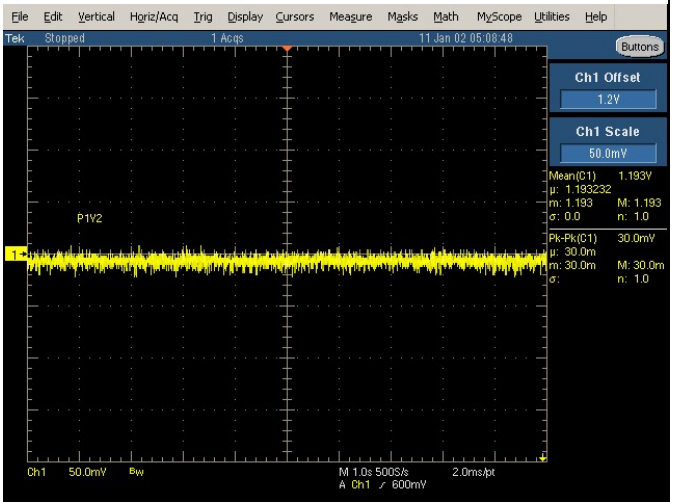
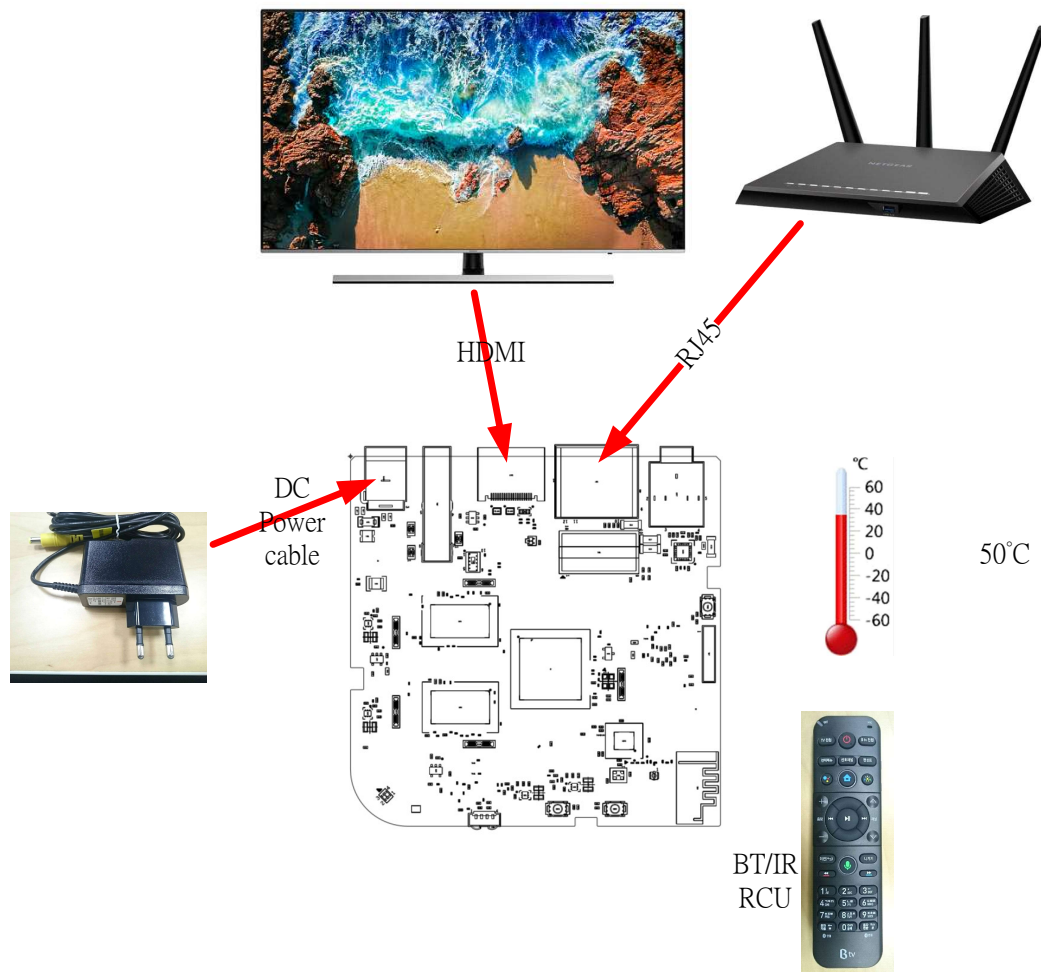


Fig. 10: P1V2

2. Power Test Setup (2)



2.1 Test Condition

BOX play 4K video via Ethernet by using YouTube. HDMI output port connects to TV through HDMI cable. The temperature is about 50 degrees.

2.2 Result and Picture

Power Rail	Specification (+-5%)	Test Result (mV)	Figure	Pass/Fail
	Max Ripple (mV)			
PP_PWR_IN (5V)	250	214	Figure 12	Pass
HDMI_PW (5V)	250	120	Figure 13	Pass
USB_5V (5V)	250	136	Figure 14	Pass
VDD_EE(0.8V)	40	36	Figure 15	Pass
VDDCPU*	50	32	Figure 16	Pass
P3V3 (3.3V)	165	52	Figure 17	Pass
P2V5 (2.5V)	125	22	Figure 18	Pass
P1V8 (1.8V)	90	12	Figure 19	Pass
EMMC_VDDQ (1.8V)	90	26	Figure 20	Pass
P1V2 (1.2V)	60	32	Figure 21	Pass

Note * VDDCPU power rail is using voltage identification and control by PWM. This report is fix in 1V.

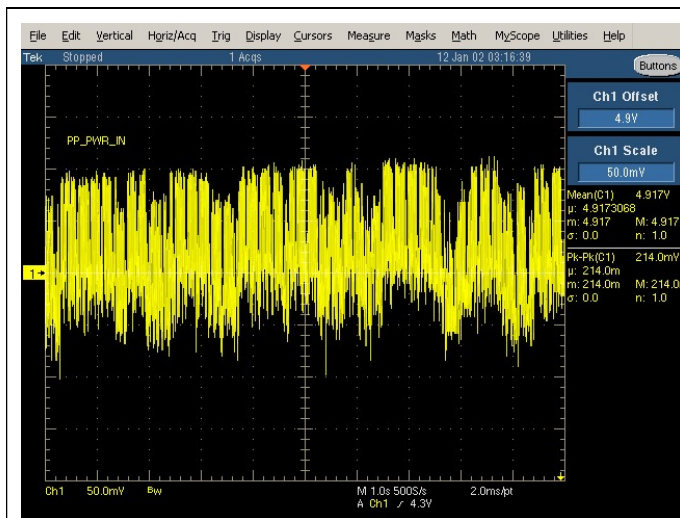


Fig. 12: PP_PWR_IN

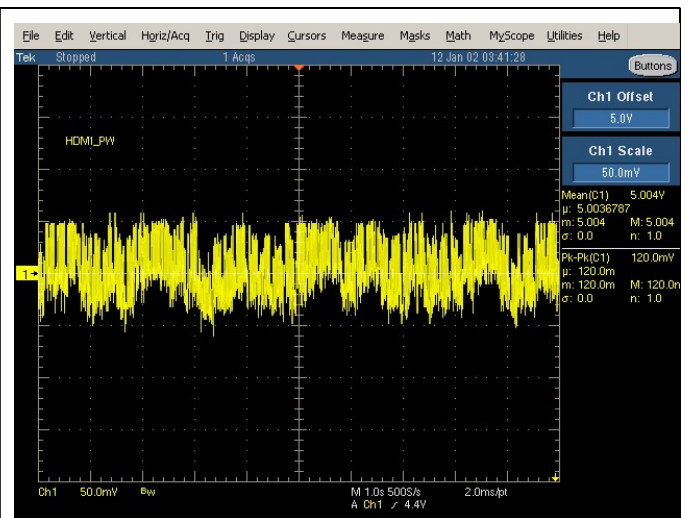


Fig. 13: HDMI_PW

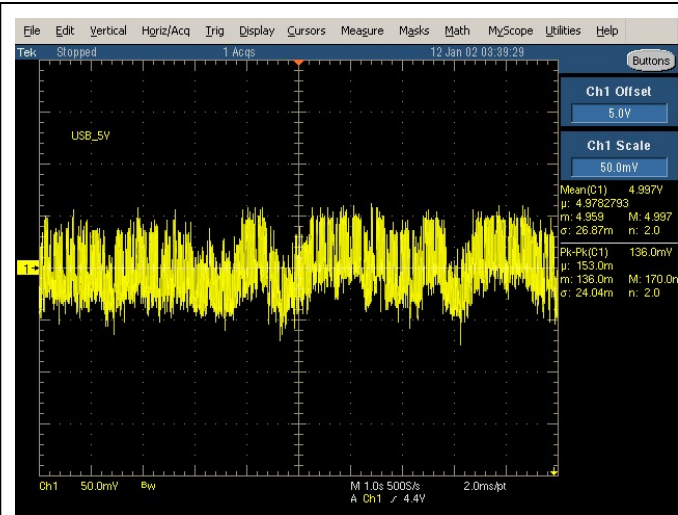


Fig. 14: USB_5V

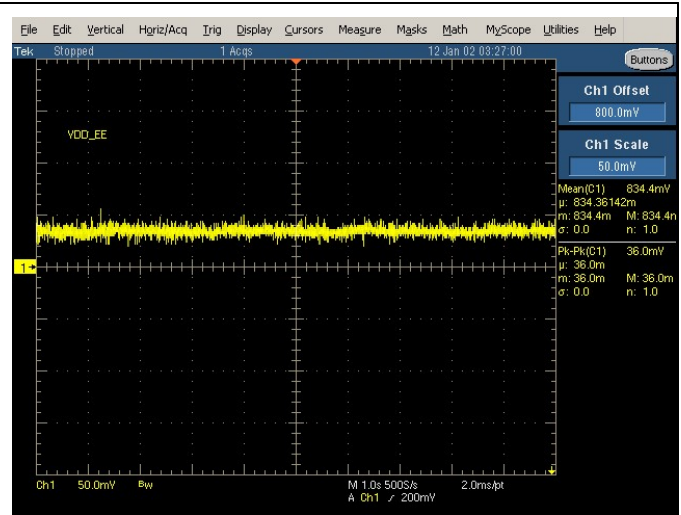


Fig. 15: VDD_EE

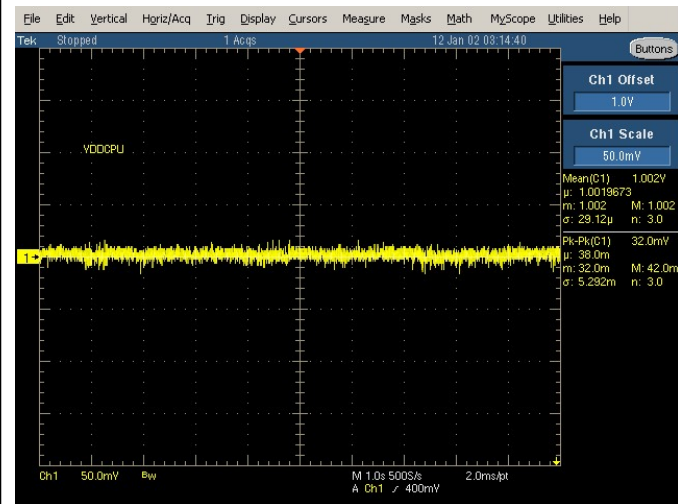


Fig. 16: VDDCPU

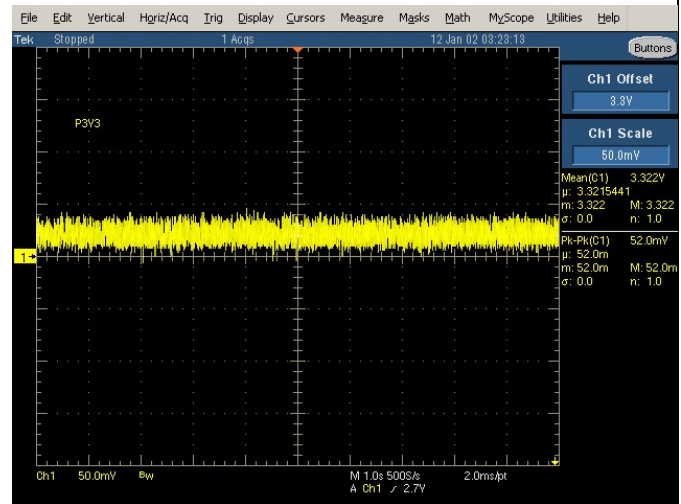


Fig. 17: P3V3

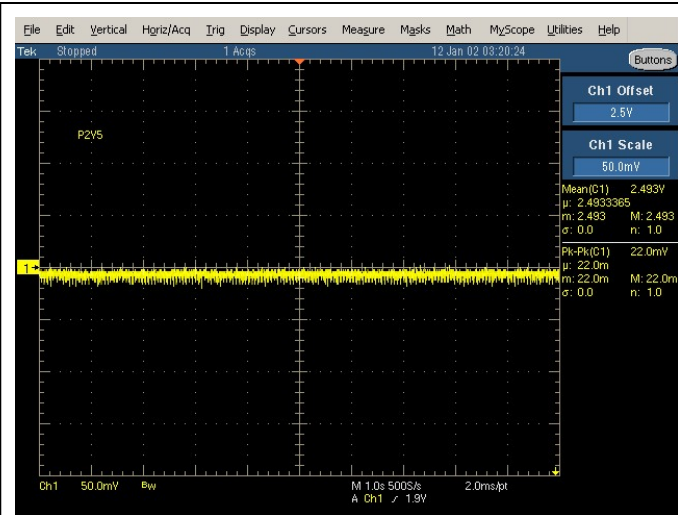


Fig. 18: P2V5

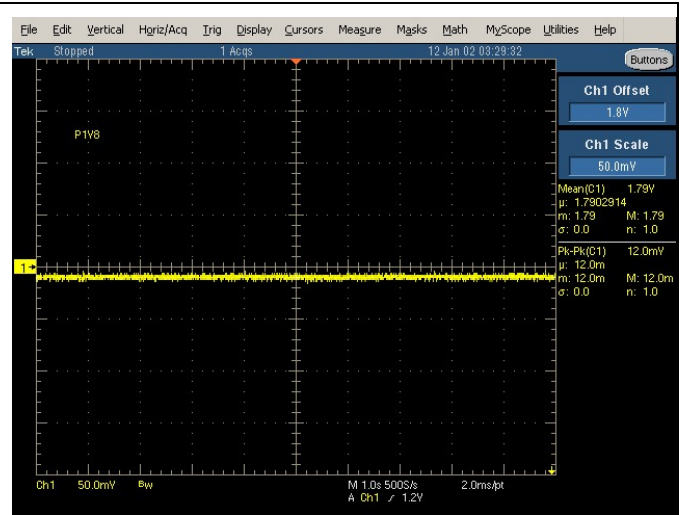


Fig. 19: P1V8

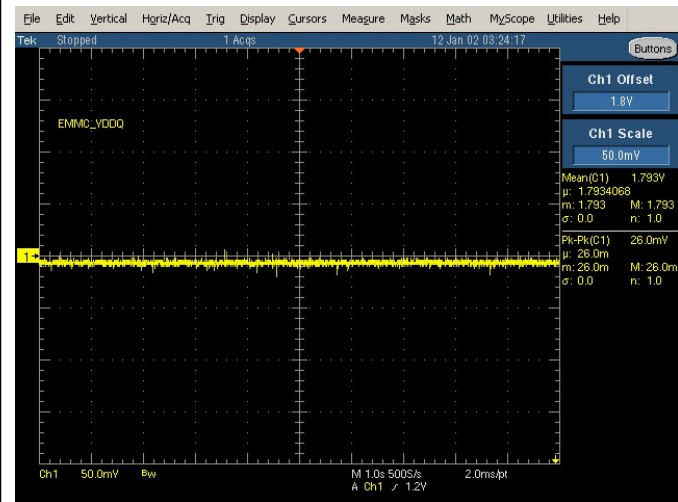


Fig. 20: EMMC_VDDQ

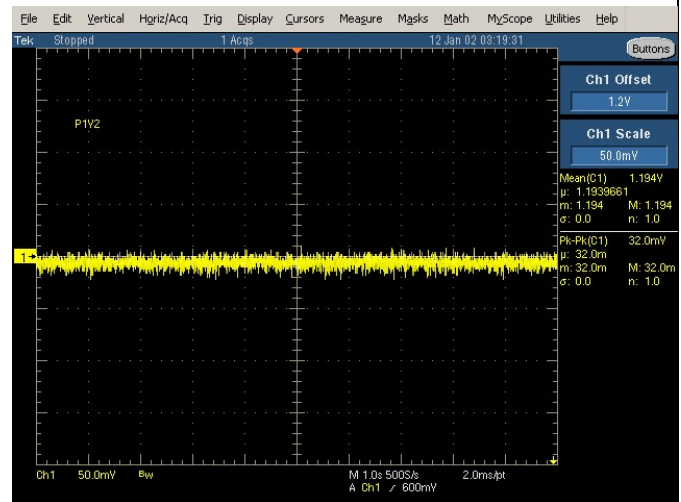
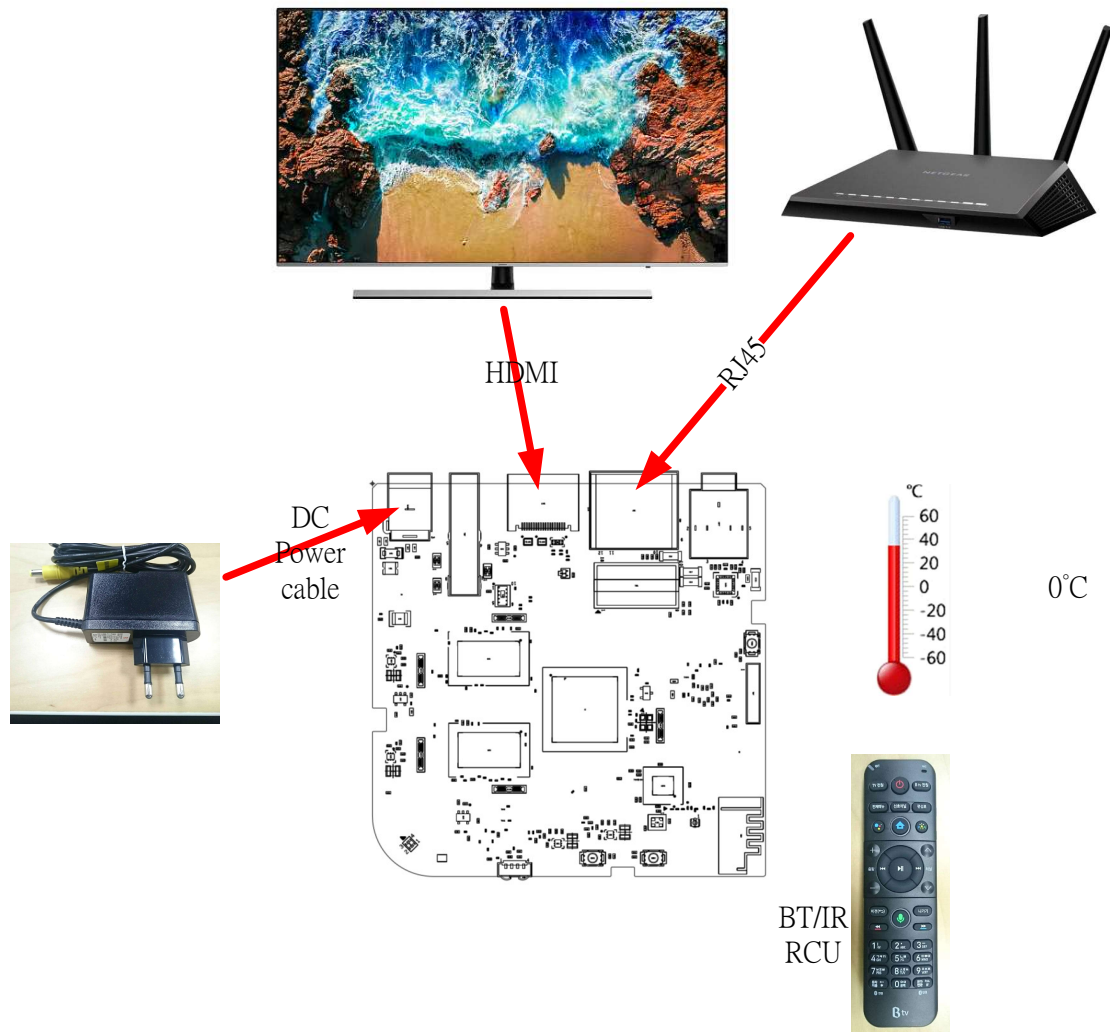


Fig. 21: P1V2

3. Power Test Setup (3)



3.1 Test Condition

BOX play 4K video via Ethernet by using YouTube. HDMI output port connects to TV through HDMI cable. The temperature is about 0 degrees.

3.2 Result and Picture

Power Rail	Specification (+-5%)	Test Result (mV)	Figure	Pass/Fail
	Max Ripple (mV)			
PP_PWR_IN (5V)	250	176	Figure 22	Pass
HDMI_PW (5V)	250	92	Figure 23	Pass
USB_5V (5V)	250	60	Figure 24	Pass
VDD_EE(0.8V)	40	28	Figure 25	Pass
VDDCPU*	50	38	Figure 26	Pass
P3V3 (3.3V)	165	40	Figure 27	Pass
P2V5 (2.5V)	125	20	Figure 28	Pass
P1V8 (1.8V)	90	14	Figure 29	Pass
EMMC_VDDQ (1.8V)	90	14	Figure 30	Pass
P1V2 (1.2V)	60	36	Figure 31	Pass

Note * VDDCPU power rail is using voltage identification and control by PWM. This report is fix in 1V.

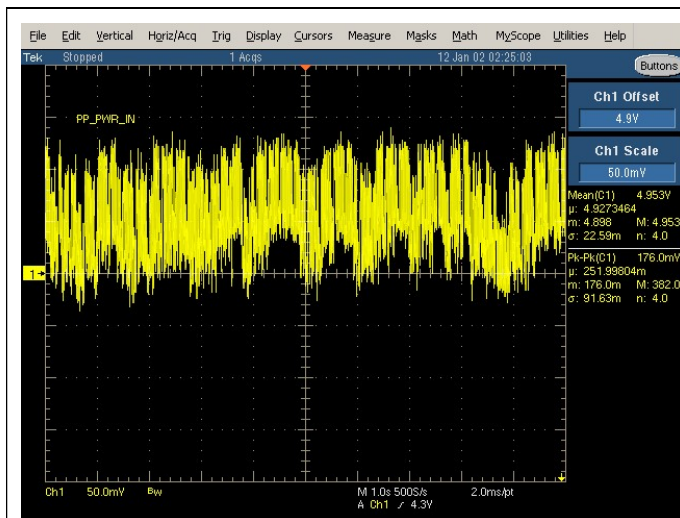


Fig. 22: PP_PWR_IN

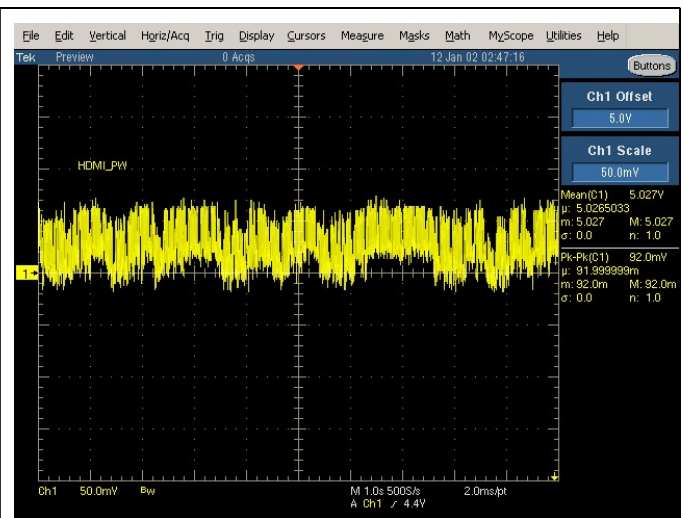


Fig. 23: HDMI_PW

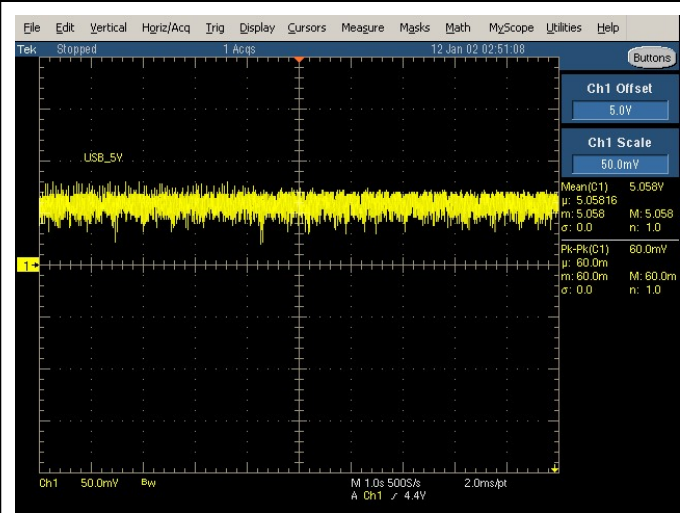


Fig. 24: USB_5V



Fig. 25: VDD_EE

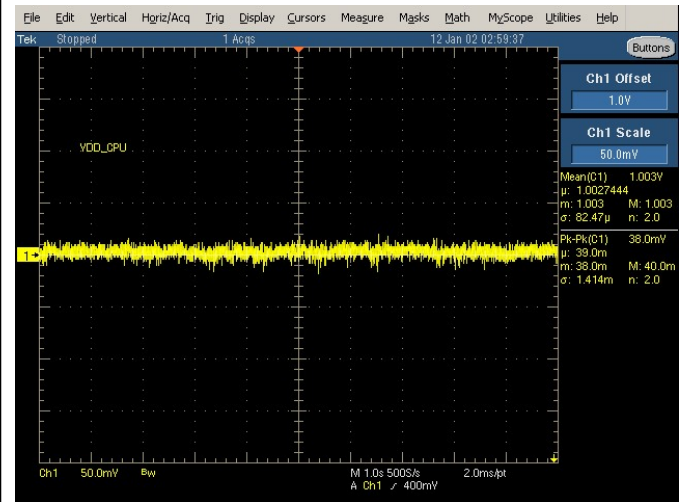


Fig. 26: VDDCPU

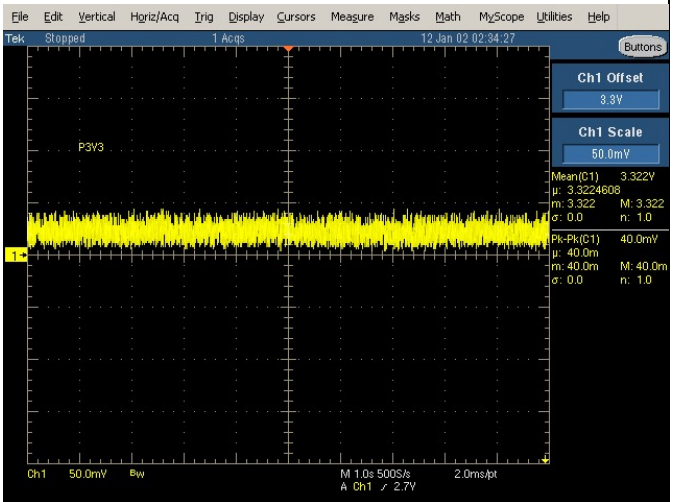


Fig. 27: P3V3

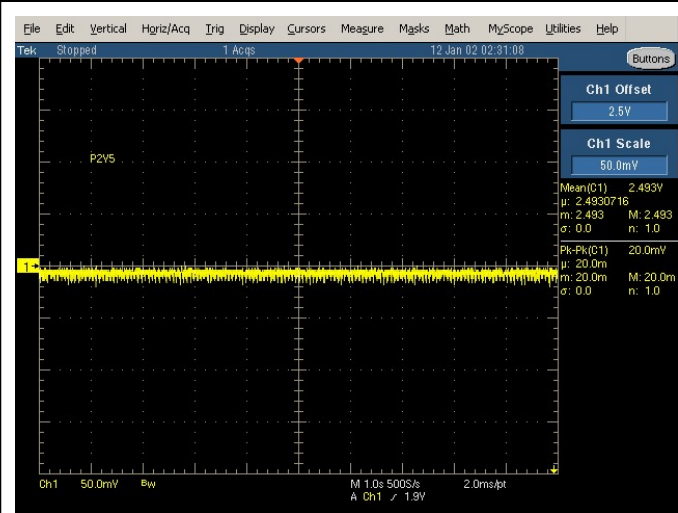


Fig. 28: P2V5

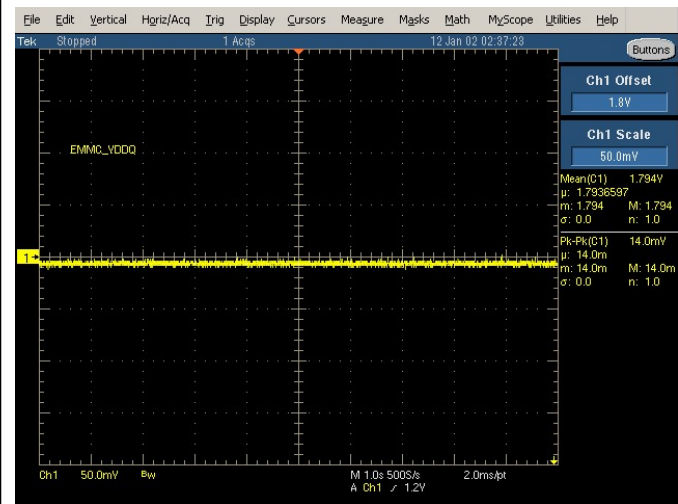


Fig. 30: EMMC_VDDQ

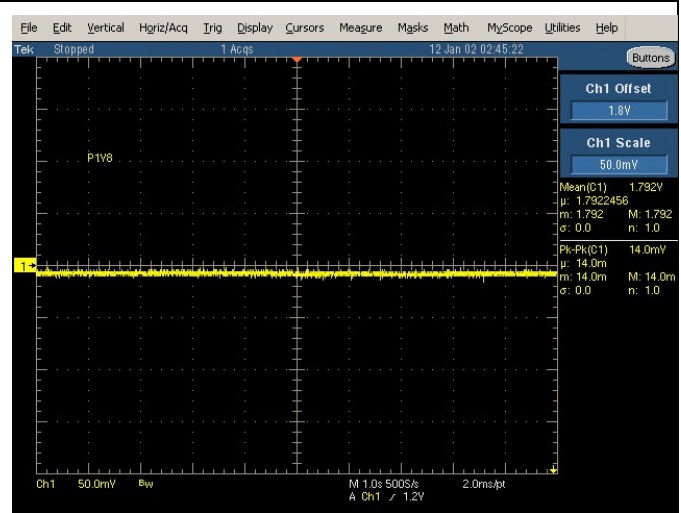


Fig. 29: P1V8

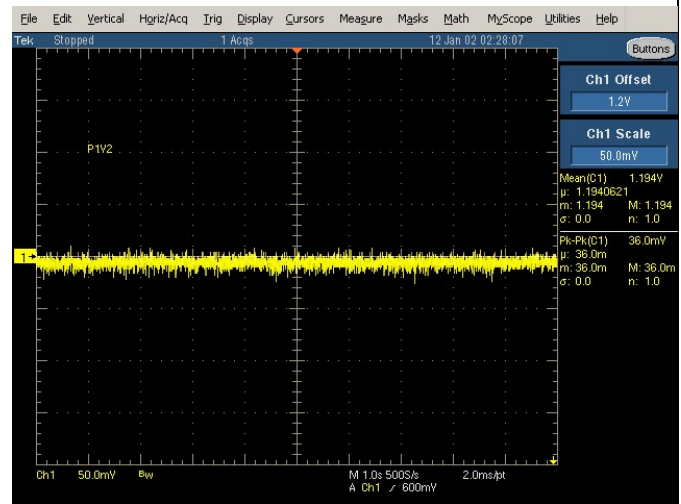


Fig. 31: P1V2