Test Description	MicroPython	ESP-IDF	Note
Baseline Measurement			
1_PPK2_No_Connection_SourceMeter_3300mV (Screenshot 1)	71.94 nA	71.94 nA	Test performed on PPK2 without any connection to evaluate the board internal consumption
2_PPK2_USB_Cable_Connection_SourceMeter_3300mV (Screenshot 2)	71.93 nA	71.93 nA	Test performed on PPK2 with USB cable connection without any code to evaluate the cable consumption
3_ErasedBoardConnection_USB_Port	18.87 mA	10.94 mA (Screenshot 3)	No code running just erase the board and evaluate the internal development board energy consumption while connected to USB port for data transfer
4_ErasedBoardConnection_COM_Port	18.97 mA	12.98 mA (Screenshot 4)	No code running just erase the board and evaluate the internal development board energy consumption while connected to COM port for RxTx serial communication
5_InfiniteLightSleep(Delay)_COM_Port	18.88 mA	18.89 mA (Screenshot 5)	Running an infinite loop without any other application to evaluate power consumption
6_InfiniteDeepSleep_COM_Port	2.40 mA	2.48 mA (Screenshot 6)	Running an infinte deepsleep to evaluate development board connection on DeepSleep
Non-Volatile Storage Tests			
NVS_DeepSleep_Consumption	2.40mA Average current in Deep Sleep (ScreenShot 7)	2.49mA Average current in Deep Sleep (ScreenShot 24)	Deepsleep energy consumption while we use NVS
NVS_OpenReadUpdateClose_Consumption	223.31µC - 224.80µC Approximately 10ms (ScreenShot 8, 9)	249.97µC - 257.48µC Approximately 10ms (ScreenShot 25, 26)	Open and Initializing NVS, Read Saved Value, Update Value, Close Access (Time)
Function Inlining Tests			
FunctionInlining_1000000_InlineFunction	5000.102 milliseconds (5.000102 microseconds per invocation) (ScreenShot 10)	44.37 milliseconds (0 microseconds per invocation) (ScreenShot 27)	We use function call or inline the function by adding (4444444444 + 5555555555)
FunctionInlining_1000000_CallFunction	15316.22 milliseconds (15.31622 microseconds per invocation) (ScreenShot 11)	52 milliseconds (0 microseconds per invocation) (ScreenShot 28)	
FunctionInlining_10000000_InlineFunction	49994.96 milliseconds (4.999496 microseconds per invocation) (ScreenShot 12)	446 milliseconds (0 microseconds per invocation) (ScreenShot 29)	
FunctionInlining_10000000_CallFunction	153156.8 milliseconds (15.31568 microseconds per invocation) (ScreenShot 13)	470 milliseconds (0 microseconds per invocation) (ScreenShot 30)	
LoopUnrolling Addition + Serial Print Tests			
LoopUnrolling_1000_Sample_Roll_1	3107.196 milliseconds (3107.196 microseconds per invocation) (ScreenShot 14)	2932 milliseconds (2932 microseconds per invocation) (ScreenShot 31)	We add (4444444444 + 5555555555) and print it to serial port
LoopUnrolling_1000_Sample_Roll_10	3113.546 milliseconds (3113.546 microseconds per invocation) (ScreenShot 15)	2932 milliseconds (2932 microseconds per invocation) (ScreenShot 32)	
LoopUnrolling_10000_Sample_Roll_1	32046.65 milliseconds (3204.665 microseconds per invocation) (ScreenShot 16)	30677 milliseconds (3067 microseconds per invocation) (ScreenShot 33)	
LoopUnrolling_10000_Sample_Roll_10	32041.61 milliseconds (3204.161 microseconds per invocation) (ScreenShot 17)	30677 milliseconds (3067 microseconds per invocation) (ScreenShot 34)	
LoopUnrolling_100000_Sample_Roll_1	329166.8 milliseconds (3291.668 microseconds per invocation) (ScreenShot 18)	315750 milliseconds (3157 microseconds per invocation) (ScreenShot 35)	
LoopUnrolling_100000_Sample_Roll_10	329167.4 milliseconds (3291.674 microseconds per invocation) (ScreenShot 19)	315752 milliseconds (3157 microseconds per invocation) (ScreenShot 36)	
LoopUnrolling Addition Tests			
LoopUnrolling_1000000_Sample_Roll_1	4330.632 milliseconds (4.330632 microseconds per invocation) (ScreenShot 20)	52.32 milliseconds (0 microseconds per invocation) (ScreenShot 37)	We add (4444444444 + 5555555555) by unrolling the loop of 1 and 10
LoopUnrolling_1000000_Sample_Roll_10	1576.597 milliseconds (1.576597 microseconds per invocation) (ScreenShot 21)	12.53 milliseconds (0 microseconds per invocation) (ScreenShot 38)	
LoopUnrolling_10000000_Sample_Roll_1	43301.2 milliseconds (4.330121 microseconds per invocation) (ScreenShot 22)	446 milliseconds (0 microseconds per invocation) (ScreenShot 39)	
LoopUnrolling_10000000_Sample_Roll_10	15760.21 milliseconds (1.576021 microseconds per invocation) (ScreenShot 23)	52.14 milliseconds (0 microseconds per invocation) (ScreenShot 40)	