

Sheet1

Roll	Vertical	Pitch				
AX	AY	AZ	Atan	Angle (degrees)	Vertical / roll or pitch	
-73	15632		-1.56613	-89.73223	AY/ AX	-214.136986
	15632	5836	1.21348	69.52739	AY/ AZ	2.67854695

Here are the inputs from your screen shot posted on 01/14/2019 22:58:04 in columns A, B, and C

The formula in column D is “=ATAN(B4/A4)” for Roll, and “=ATAN(B5/C5)” for pitch.

The formula in column E is “=D4\*(180/3.1416)” to convert the Atan (which is in radians) to degrees

The final Vertical / roll or pitch numbers are equivalent to the final Roll and Pitch numbers in your post. The discrepancy in magnitude is due to the readings being multiplied by a factor to improve precision when performing the calculations using integers.

The discrepancy in the value of the AY/AZ pitch result is most likely due to the calibration offset value.