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Category	■FAQ □SOP	Related OS	N/A
Abstract	WISE-4000, How to convert the Unix timestamp into real time and date		
Keyword	WISE, Unix, Timestamp, Conversion, Time, Excel		
Related Product	WISE-4012, WISE-4012E, WISE-4050, WISE-4060		

■ Problem Description:

In the data logger (*Figure 1*) in my “WISE_Cloud_Log” folder in Dropbox, I can see the I/O status of my WISE module being uploaded to the cloud successfully.

However, there’s a column “TIM” in my CSV file, what’s the meaning of this column?
How do I know the exactly time of each data?

What’s the formula that could convert this time stamp into format of time and date in Excel?

PE	TIM	DI_0	DI_1	DO_0	DO_1	AI_0 Val	AI_0 Evt	AI_1 Val	AI_1 Evt
P	1436426514	0	0	0	0	0	0	0	0
P	1436426574	0	0	0	0	0	0	0	0
P	1436426634	0	0	0	0	0	0	0	0
P	1436426694	0	0	0	0	0	0	0	0
P	1436426754	0	0	0	0	0	0	0	0
P	1436426814	0	0	0	0	0	0	0	0
P	1436426874	0	0	0	0	0	0	0	0
P	1436426934	0	0	0	0	0	0	0	0
P	1436426994	0	0	0	0	0	0	0	0
P	1436427054	0	0	0	0	0	0	0	0
P	1436427114	0	0	0	0	0	0	0	0
P	1436427174	0	0	0	0	0	0	0	0
P	1436427234	0	0	0	0	0	0	0	0
P	1436427294	0	0	0	0	0	0	0	0
P	1436427354	0	0	0	0	0	0	0	0
P	1436427414	0	0	0	0	0	0	0	0
P	1436427474	0	0	0	0	0	0	0	0
P	1436427534	0	0	0	0	0	0	0	0
P	1436427594	0	0	0	0	0	0	0	0
P	1436427654	0	0	0	0	0	0	0	0
P	1436427714	0	0	0	0	0	0	0	0
P	1436427774	0	0	0	0	0	0	0	0

Figure 1

■ Brief Solution - Step by Step:

The timestamp for WISE cloud data logger is recorded in the Unix time stamp format.

The Unix time stamp is a way to track time as a running total of seconds. This count starts at the Unix Epoch on January 1st, 1970 at UTC. Therefore, the Unix time stamp is merely the number of seconds between a particular date and the Unix Epoch. It should also be pointed out that this point in time technically does not change no matter where you are located on the globe. This is very useful to computer systems for tracking and sorting dated information in dynamic and distributed applications both online and client side.

To convert the Unix into UTC (Coordinated Universal Time), just follow the *Equation 1*:

Where **B2** is the location of your Unix time stamp cell and **n** is your time zone.

$$= (B2/86400) + 25569 + (n/24)$$

Equation 1

Take *Figure 2* as an example, the Unix time stamp at cell B2 can be converted into local time in the cell B9 and date in the cell B10. (Make sure your cells are formatted for time and date)

The time zone in this example equals to 8 for the time zone in Taipei, Taiwan (GMT+8).

		B9			=(B2/86400)+25569+(8/24)	
	A	B	C	D	E	
1	PE	TIM	DI_0	DI_1	DO_0	
2	P	1438330796	0	0	0	
3						
4						
5						
6						
7						
8						
9		4:19:56 PM				
10		2015/7/31				

Figure 2