

# Spreads.TimePeriod bits layout

<https://github.com/buybackoff/Spreads/tree/master/src/Period>

	Tick T	Milli L	Sec S	Min I	Hour H	Day D	Week W* (7D)	Month M	Quarter Q* (3M)	Year Y* (12M)	
63	1	is tick?								0	
62		0	0	0	1	1	<-	1	<-	<-	Period
61		0	1	1	0	0	<-	1	Unit period**	<-	
60		1	0	1	0	1	<-	0	<-	<-	
59											
58											Period
57											
56											
55											
54		Number of base periods in a period, 0-1023. E.g. for 1 week it is 7, for 1 quarter it is 3, for 1 year it is 12									
53											
52											
51											
50											
49											Start Time in UTC
48											
47											
46											
45											
44		Months since zero (1/1/1900, 0-4096), takes 12 bits									
43											
42											
41											
40											
39											Start Time in UTC
38											
37											
36	Number of ticks since zero (1/1/1900)										
35		Days in a month (0-30), takes 5 bits									
34											
33											
32											
31											
30											
29											
28											
27											
26											Start Time in UTC
25											
24											
23											
22											
21											
20											
19											
18											
17											
16											Start Time in UTC
15											
14											
13											
12											
11											
10											
9											
8											
7											Start Time in UTC
6											
5											
4											
3											
2											
1											
0											
		Not used. If ever more precision is needed, here could be 1/50 of msec/ticks - 2 nsecs for point in time or 20 microsec for periods. There is a redundant UnitPeriod zero (bin 000) value that is currently used for Ticks, but 63rd bit duplicates it. Do not bother with it now.									Optional additional info

\* a shortcut for a composite period

\*\* base period of 7 (111 in bin) is eternity, used for static/constant values