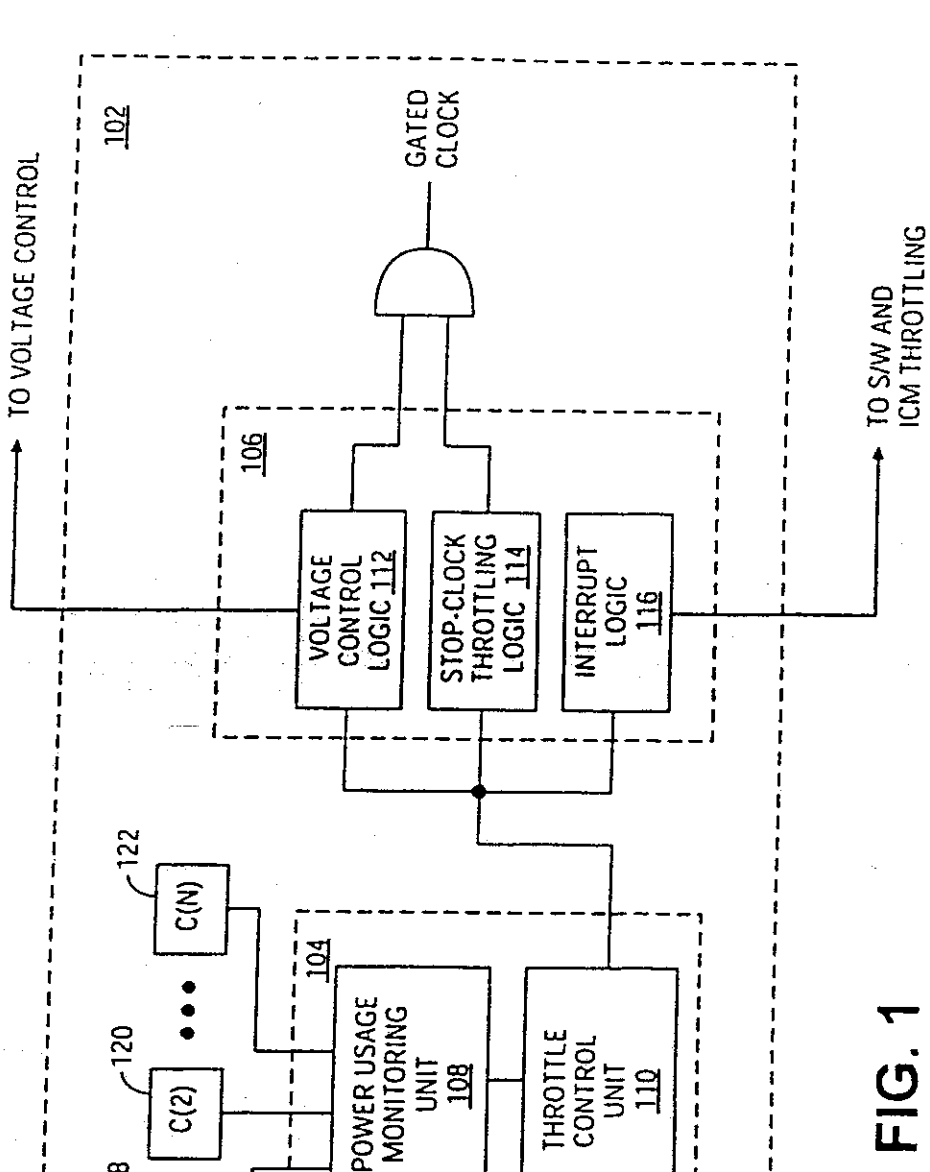

102
TO VOLTAGE CONTROL
GATED CLOCK
TO S/W AND ICM THROTTLING
106
VOLTAGE CONTROL LOGIC 112
STOP-CLOCK THROTTLING LOGIC 114
INTERRUPT LOGIC 116
104
POWER USAGE MONITORING UNIT 108
THROTTLE CONTROL UNIT 110
C(1) 118
C(2) 120
C(N) 122

FIG. 1

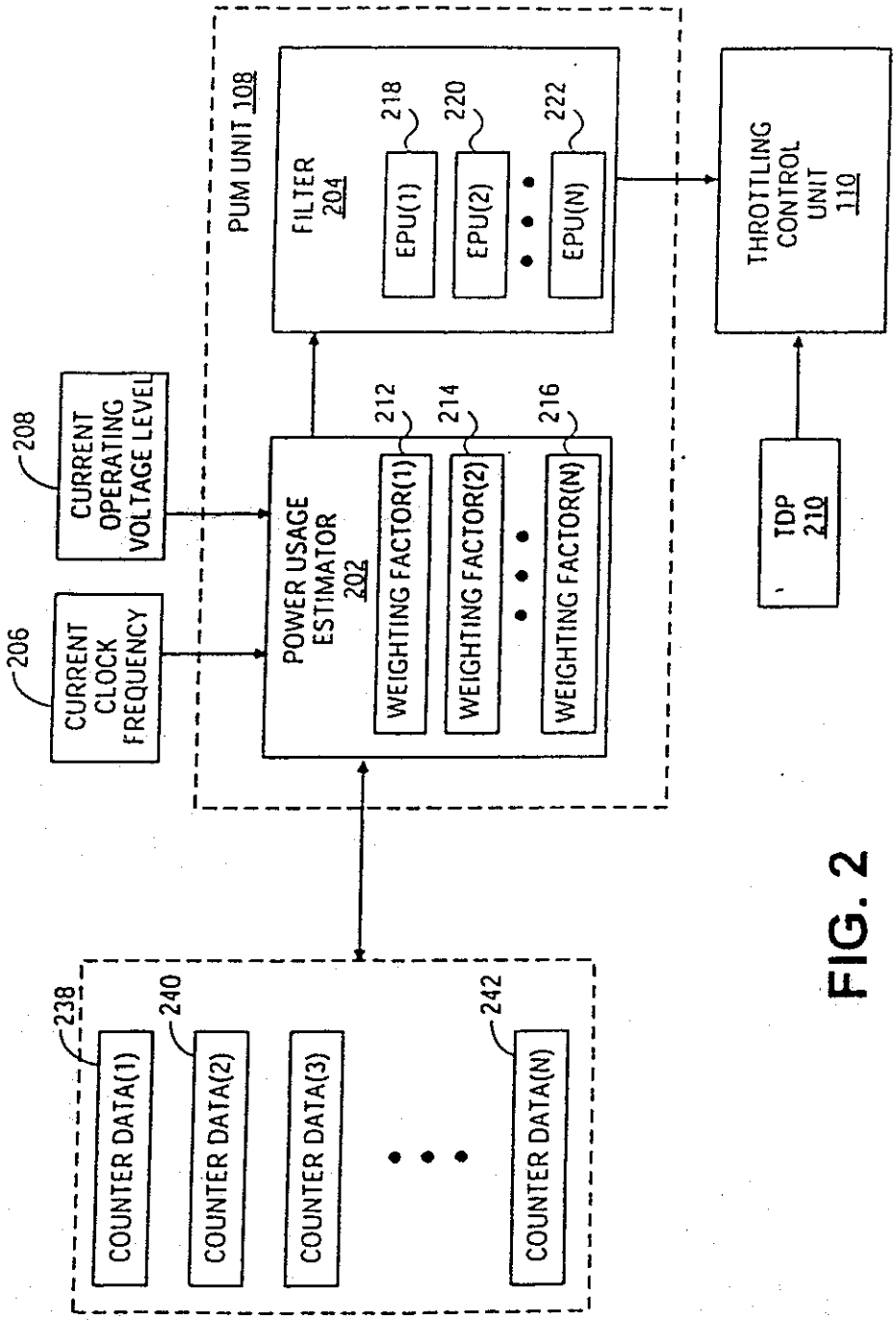

PUM UNIT 108
FILTER 204
EPU(1)
EPU(2)
EPU(N)
218
220
222
THROTTLING CONTROL UNIT 110
TDP 210
POWER USAGE ESTIMATOR 202
WEIGHTING FACTOR(1)
WEIGHTING FACTOR(2)
WEIGHTING FACTOR(N)
212
214
216
CURRENT OPERATING VOLTAGE LEVEL
208
CURRENT CLOCK FREQUENCY
206
COUNTER DATA(1)
COUNTER DATA(2)
COUNTER DATA(3)
COUNTER DATA(N)
238
240
242

FIG. 2

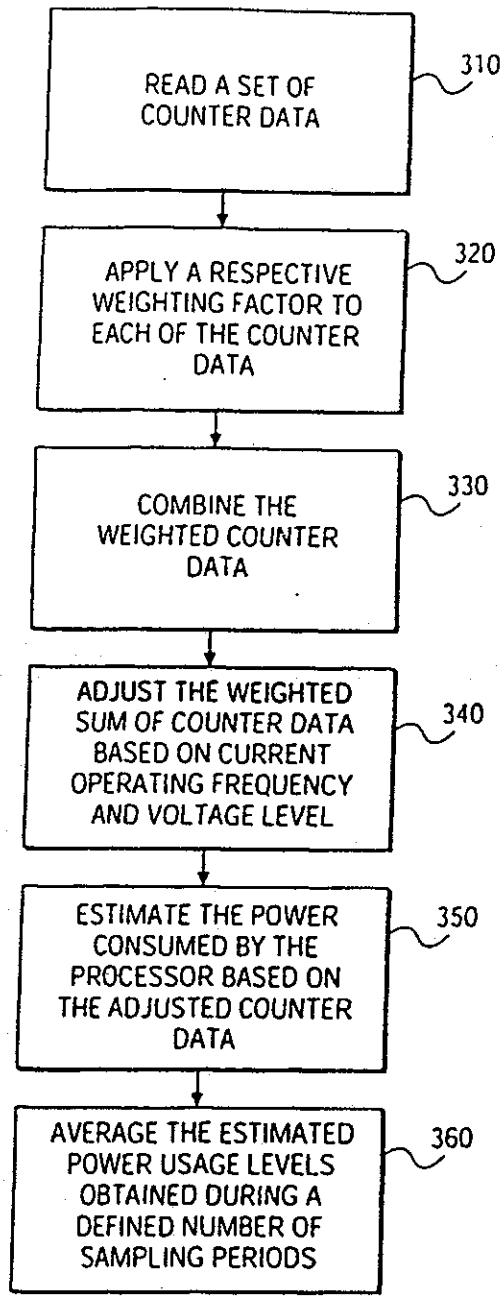

READ A SET OF COUNTER DATA
310
APPLY A RESPECTIVE WEIGHTING FACTOR TO EACH OF THE COUNTER DATA
320
COMBINE THE WEIGHTED COUNTER DATA
330
ADJUST THE WEIGHTED SUM OF COUNTER DATA BASED ON CURRENT OPERATING FREQUENCY AND VOLTAGE LEVEL
340
ESTIMATE THE POWER CONSUMED BY THE PROCESSOR BASED ON THE ADJUSTED COUNTER DATA
350
AVERAGE THE ESTIMATED POWER USAGE LEVELS OBTAINED DURING A DEFINED NUMBER OF SAMPLING PERIODS
360

FIG. 3