SCHEDULE_TYPE

Type:

System Parameter (MC_CONFIG)

Description:

This parameter changes the multi-tasking scheduling used when running programs.

Bit 0 disables the scheduling algorithm that allows another program to run while the scheduled program is in a sleep state. A sleep state can be started through a pause in the program using, for example, WAIT or WA.

When bit 1 is set and SERVO_PERIOD is 2000, the firmware doubles the number of interrupts per servo cycle. This should be used in the MC464 when SERVO_PERIOD is set to 2000 μs and faster communications is required. The system process can then handshake with the communications processor every millisecond.

Bit 2 can be used when evaluating the MC664-X to see how the axes and programs will perform on the lower cost MC664.

The value is saved in Flash memory in the MC464 but must be included in the MC_CONFIG script for all other Motion Coordinators.

Value:

Bit		Operation	Value
0	0	Use new scheduling algorithm to make best use of CPU time e.g. any program executing a WA command will not be available for execution again until the WA period is complete. (default)	1
	1	Revert to old style scheduling such that any active process will execute even when executing a WA command for example. *This setting should only be used when upgrading projects from older controllers and the scheduling system causes problems with the program timings.*	
1	0	Use standard process scheduling at 2000 μs servo period. (default)	2
	1	When SERVO_PERIOD is set to 2000, schedule double processes. In the MC464 this enables communications like DeviceNet to run at the same rate as it does with shorter servo periods. (V2.0209 and later)	
2	0	MC664-X only; use full quad-core processor operation. (default)	4

	1	MC664-X only; forces the MC664-X to start in single core mode. This emulates the performance of the MC664 single core Motion Coordinator.	
3	0	TCP/IP process shares with other SYS processes. (default)	8
	1	TCP/IP process runs on second core and shares with motion kernel. [1]	
4	0	Protocol Scheduler shares with other SYS processes. (default)	16
	1	Protocol Scheduler runs on second core and shares with motion kernel. [1]	
5	0	EtherCAT Async process shares with other SYS processes. (default)	32
	1	EtherCAT Async process runs on second core and shares with motion kernel. [1]	
6	0	2 Highest numbered user processes are Fast Tasks. (default)	64
	1	All user processes are Slow Tasks. This gives equal priority to all user programs.	
7	0	Uniplay HMI server runs in System Process on Core 0. (default)	128
	1	Run Uniplay HMI server on Core 1. [1]	
8 [2]	0	Allow IEC programs to automatically enable 'flat' scheduling where there are only Slow Tasks, no Fast Tasks. (default)	256
	1	Prevent IEC programs to automatically enable 'flat' scheduling. The 2 highest numbered user processes are Fast Tasks.	
20 [3]	0	Process 20 runs on Core 0 (default)	
	1	Process 20 runs on Core 1. This can be used to help balance the processing of user programs in multi-core processors. [1]	
21 [3]	0	Process 21 runs on Core 0 (default)	
	1	Process 21 runs on Core 1. This can be used to help balance the processing of user programs in multi-core processors. [1]	

[1] *Multi-core processors only, e.g. MC6N-ECAT and Flex-6 Nano*

[2] *Firmware V2.0303 and later*

[3] Firmware V2.0313 and later