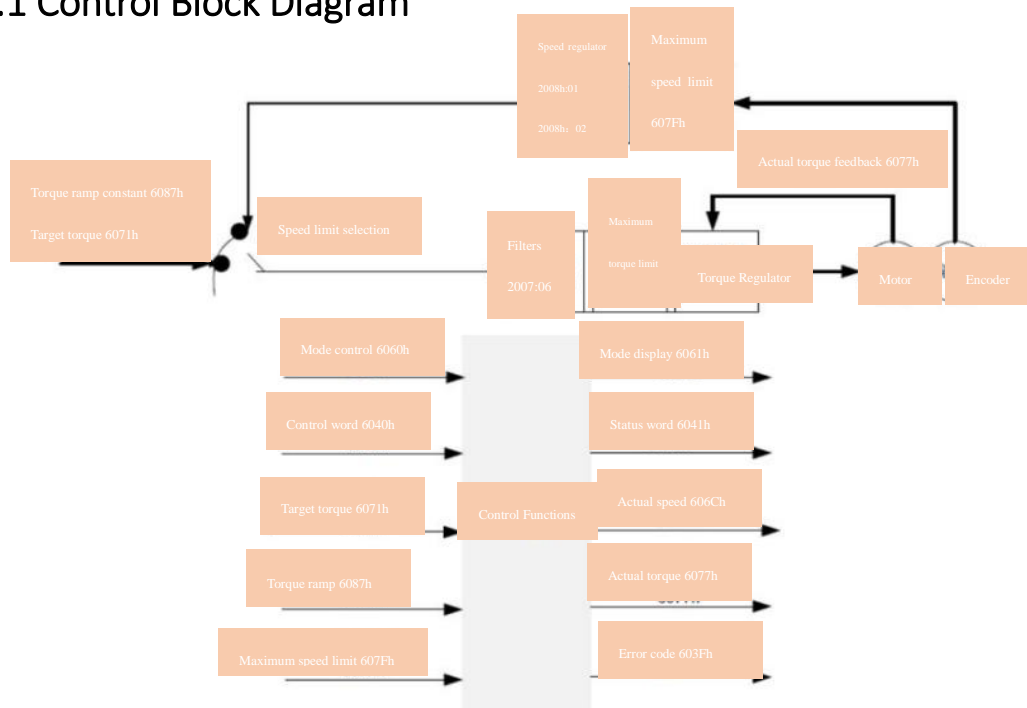


# Contour Torque Mode

In this mode, the upper controller sends the target torque 6071h and the torque ramp constant 6087h to the servo driver, and the torque regulation is performed internally by the servo. When the speed reaches the limit value, it enters the speed regulation phase, but the maximum output is regulated not to exceed the torque command limit value。

## 1.1 Control Block Diagram



## 1.2 Related object settings

Control word 6040h		
Bit	Name	Description
0	Servo ready	Bit0-Bit3 are 1, which means start
1	Connect main circuit power	
2	Quick stop	
3	Servo running	

Status word 6041h		
Bit	Name	Description
10	Target arrival	0: Target torque reached 1: Target torque not reached
11	Software internal position overrun	0: Position feedback is not over the limit 1: Position feedback exceeds the limit

15	Fast shutdown	0: Home return to zero is not completed 1: Home return to zero completed
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Index (hex)	Subindex (hex)	Name	Access	Size	Unit	Setting range	Default value
603F	00	Error Code	RO	UINT16		0-66535	
6040	00	Control word	RW	UINT16		0-66535	
6041	00	Status word	RO	UINT16		0-66535	
6060	00	Operation mode	RW	INT8		0-10	
6061	00	Mode display	RO	INT8		0-10	
606C	00	Actual speed	RO	INT32	Command unit/s		
6071	00	Target torque	RW	INT16	0.1%	-5000-5000	
6072	00	Maximum torque command	RW	UINT16	0.1%	0-0x0FA0	0X0BBB
6074	00	Torque command	RO	INT16	0.1%		0
6077	00	Actual torque	RO	INT16	0.1%	-5000-5000	0
607F	00	Maximum speed	RW	UINT32	Command unit/s		
6087	00	Torque ramp	RW	UINT32	0.1%/s		
2007	06	Torque filtering time	RW	UINT16	0.01ms	0-65535	79
2008	01	Speed Loop Gain	RW	UINT16	0.1HZ	1-20000	250
	02	Speed loop integration time	RW	UINT16	0.01ms	15-51200	3183

#### Torque arrival signal setting

When the difference between the torque and the reference value is greater than the value of 2007h:17, the valid reach signal TOQREACH is output, and bit10 of status word 6041 is set to 1. When the difference between the torque and the reference value is less than the value of 2007h:18, the output is invalid, and bit10 of status word 6041 is cleared to zero.

Index (hex)	Subindex (hex)	Name	Access	Size	Unit	Setting range	Default value
2007	16	Torque reaches base value	RW	UINT16	0.1%	0-8000	0
2007	17	Torque reaches effective value	RW	UINT16	0.1%	0-8000	200
2007	18	Torque reaches invalid value	RW	UINT16	0.1%	0-8000	100

### 1.3 Speed limit in profile torque mode

speed limit determined by 607Fh and the maximum motor speed H00\_15.

Forward and reverse speed:  $V = \min\{607Fh, H00\_15\}$ .