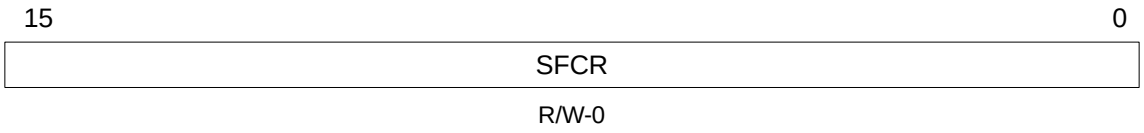
Аппаратный генератор углов v0.01.
Техническое справочное руководство.

Suppression Filter Compare Register (HWASFCR)

Offset = **00h**

Suppression Filter Compare Register (HWASFCR)



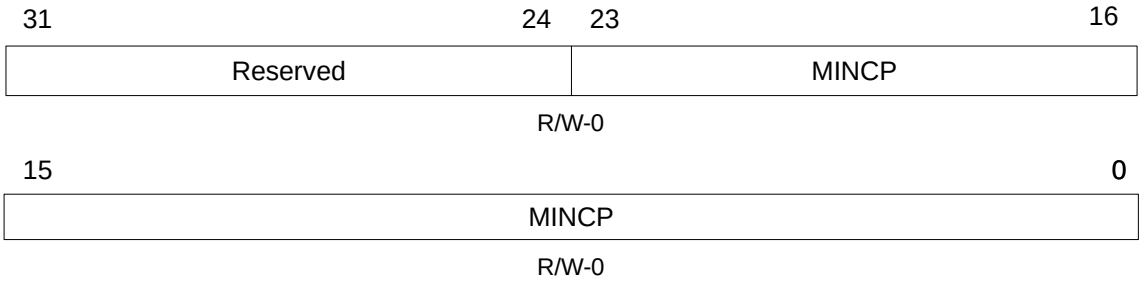
LEGEND: R/W = Read/Write; -n = value after reset

Bit	Field	Value	Description
15-0	SFCR		Counter Compare Value

Minimum Capture Period Register (HWAMINCPR)

Offset = **02h (15:0),** Offset **= 04h (31:16)**

Minimum Capture Period Register (HWAMINCPR)



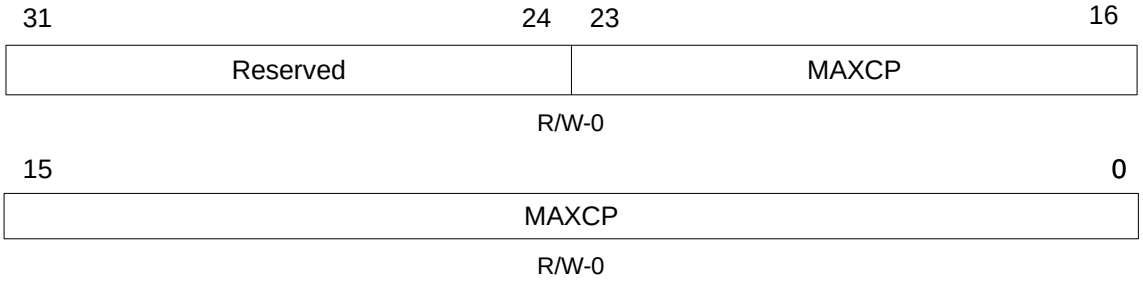
LEGEND: R/W = Read/Write; -n = value after reset

Bit	Field	Value	Description
31-24	Reserved		
23-0	MINCP	0-FFFFFFh	Minimum Capture Period Value

Maximum Capture Period Register (HWAMAXCPR)

Offset = **06h (15:0),** Offset **= 08h (31:16)**

Maximum Capture Period Register (HWAMAXCPR)



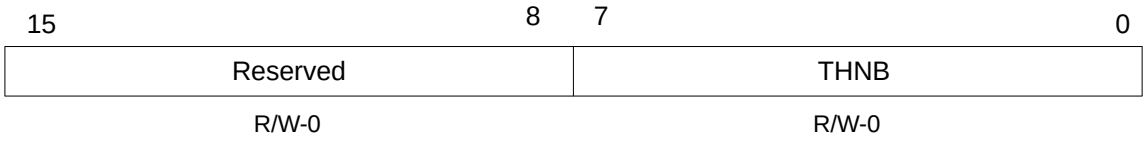
LEGEND: R/W = Read/Write; -n = value after reset

Bit	Field	Value	Description
31-24	Reserved		
23-0	MAXCP	0-FFFFFFh	Maximum Capture Period Value

HWAG Teeth Number Register (HWATHNB)

Offset = **0Ah**

HWAG Teeth Number Register (HWATHNB)



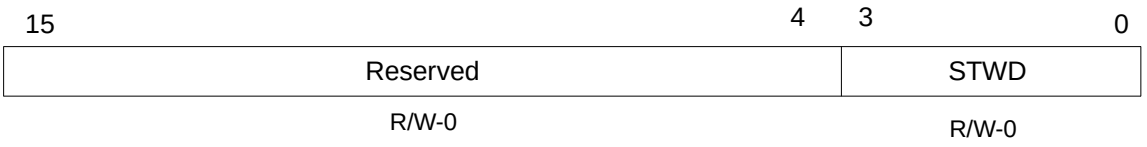
LEGEND: R/W = Read/Write; -n = value after reset

Bit	Field	Value	Description
15-8	Reserved	0	Reads return 0.
7-0	THNB	0-FFh	Teeth Number. Sets the teeth number with the maximum value of the toothed wheel. This must be equal to N-1 real teeth (that is, 57 for a 60-2 toothed wheel).

HWAG Step Width Register (HWASTWD)

Offset = **0Ch**

HWAG Step Width Register (HWASTWD)



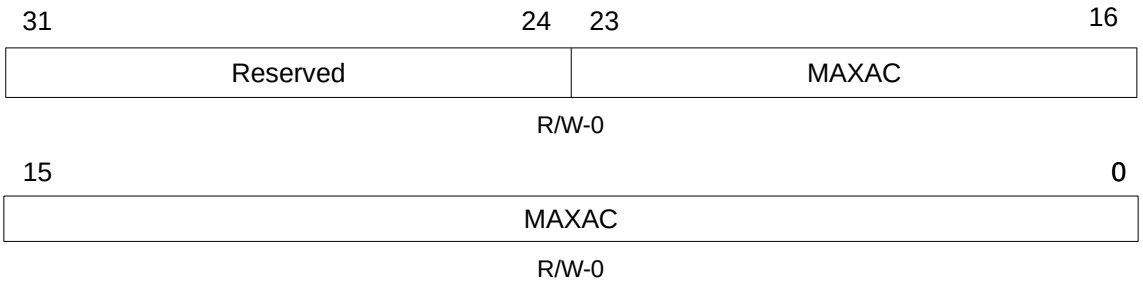
LEGEND: R/W = Read/Write; -n = value after reset

Bit	Field	Value	Description
15-4	Reserved	0	Reads return 0.
3-0	STWD	0-Ffh 0h 1h 2h : Eh Fh	Step Width. Sets the step width for the tick generation, dividing the period into K steps. (131072, 65536, ..., 8, 4). The step count is decoded from the three LSBs using the following encoding: 4 ticks per period 8 ticks per period 16 ticks per period : 65536 ticks per period 131072 ticks per period

Maximum Angle Counter Register (HWAMAXACR)

Offset = **0Eh (15:0),** Offset **= 10h (31:16)**

Maximum Angle Counter Register (HWAMAXACR)



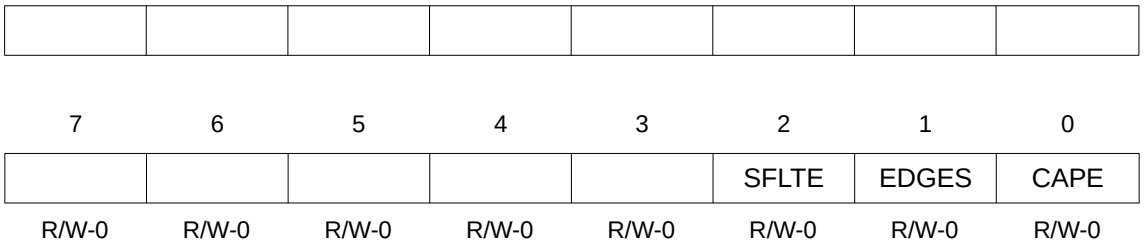
LEGEND: R/W = Read/Write; -n = value after reset

Bit	Field	Value	Description
31-24	Reserved		
23-0	MAXAC	0-FFFFFFh	Maximum Angle Counter Value

Global Configuration Set Register 0 (HWAGCSR0)

Offset = **80h**

Global Configuration Set Register 0 (HWAGCSR0)



LEGEND: R/W = Read/Write; -n = value after reset

Bit	Field	Value	Description
2	SFLTE	0 1	Suppression Filter Enable. Read: Suppression Filter is disabled. Write: Writes have no effect. Read: Suppression Filter is enabled. Write: Suppression Filter is enabled.
1	EDGES	0 1	Edge Select. Read: Rise edge selected. Write: Writes have no effect. Read: Fall edge selected. Write: Fall edge selected.
0	CAPE	0 1	Capture Enable. Read: Capture disabled. Write: Writes have no effect. Read: Capture enabled. Write: Capture enabled.

Global Configuration Clear Register 0 (HWAGCCR0)

Offset = **82h**

Global Configuration Clear Register 0 (HWAGCCR0)

7	6	5	4	3	2	1	0
					SFLTE	EDGES	CAPE
R/W-0	R/W-0	R/W-0	R/W-0	R/W-0	R/W-0	R/W-0	R/W-0

LEGEND: R/W = Read/Write; -n = value after reset

Bit	Field	Value	Description
2	SFLTE	0 1	Suppression Filter Enable. Read: Suppression Filter is disabled. Write: Writes have no effect. Read: Suppression Filter is enabled. Write: Suppression Filter is disabled.
1	EDGES	0 1	Edge Select. Read: Rise edge selected. Write: Writes have no effect. Read: Fall edge selected. Write: Rise edge selected.
0	CAPE	0 1	Capture Enable. Read: Capture disabled. Write: Writes have no effect. Read: Capture enabled. Write: Capture disabled.

Interrupt Enable Set Register (HWAIESR)

Offset = **84h**

Interrupt Enable Set Register (HWAIESR)

7	6	5	4	3	2	1	0
				GDNTIE	GAPIE	POVFIE	CAPIE
R/W-0	R/W-0	R/W-0	R/W-0	R/W-0	R/W-0	R/W-0	R/W-0

LEGEND: R/W = Read/Write; -n = value after reset

Bit	Field	Value	Description
2		0 1	Read: Write: Writes have no effect. Read: Write:
1	POVFIE	0 1	Period counter overflow interrupt enable. Read: Period counter overflow interrupt disabled. Write: Writes have no effect. Read: Period counter overflow interrupt enabled. Write: Period counter overflow interrupt enabled.
0	CAPIE	0 1	Capture Interrupt Enable. Read: Capture Interrupt disabled. Write: Writes have no effect. Read: Capture Interrupt enabled. Write: Capture Interrupt enabled.

Interrupt Enable Clear Register (HWAIECR)

Offset = **86h**

Interrupt Enable Clear Register (HWAIECR)

7	6	5	4	3	2	1	0
				GDNTIE	GAPIE	POVFIE	CAPIE
R/W-0	R/W-0	R/W-0	R/W-0	R/W-0	R/W-0	R/W-0	R/W-0

LEGEND: R/W = Read/Write; -n = value after reset

Bit	Field	Value	Description
2		0 1	Read: Write: Writes have no effect. Read: Write:
1	POVFIE	0 1	Period counter overflow interrupt enable. Read: Period counter overflow interrupt disabled. Write: Writes have no effect. Read: Period counter overflow interrupt enabled. Write: Period counter overflow interrupt disabled.
0	CAPIE	0 1	Capture Interrupt Enable. Read: Capture Interrupt disabled. Write: Writes have no effect. Read: Capture Interrupt enabled. Write: Capture Interrupt disabled.

Interrupt Flag Register (HWAIFR)

Offset = **88h**

Interrupt Flag Register (HWAIFR)

7	6	5	4	3	2	1	0
				GDNTIF	GAPIF	POVFIF	CAPIF
R/W-0	R/W-0	R/W-0	R/W-0	R/W-0	R/W-0	R/W-0	R/W-0

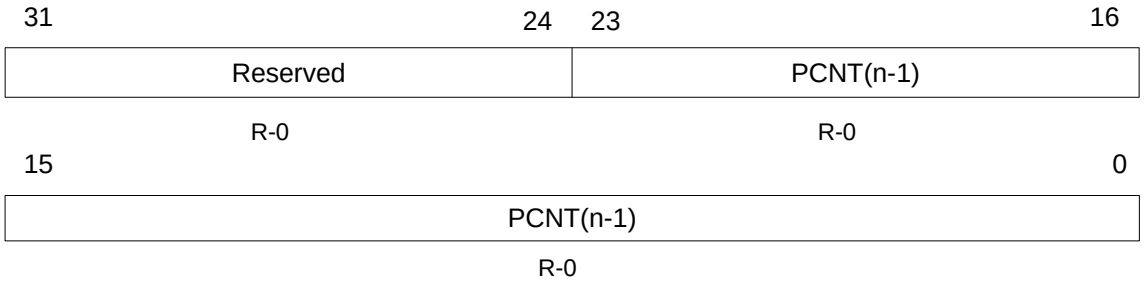
LEGEND: R/W = Read/Write; -n = value after reset

Bit	Field	Value	Description
3	GDNTIF	0 1	Gap During Normal Tooth Interrupt Flag. Read: No interrupt is pending. Write: Writes have no effect. Read: Gap During Normal Tooth Interrupt is pending. Write: Clear Gap During Normal Tooth Interrupt Flag
2	GAPIF	0 1	Gap Interrupt Flag. Read: No interrupt is pending. Write: Writes have no effect. Read: Gap Interrupt is pending. Write: Clear Gap Interrupt Flag.
1	POVFIF	0 1	Period counter Overflow Interrupt Flag. Read: No interrupt is pending. Write: Writes have no effect. Read: Period counter Overflow Interrupt is pending. Write: Clear Period counter Overflow Interrupt Flag.
0	CAPIF	0 1	Capture Interrupt Flag. Read: No interrupt is pending. Write: Writes have no effect. Read: Capture Interrupt is pending. Write: Clear capture interrupt flag.

HWAG Previous Tooth Period Value Register (HWAPCNT1)

Offset = **8Ah (15:0),** Offset = **8Ch (31:16)**

HWAG Previous Tooth Period Value Register (HWAPCNT1)



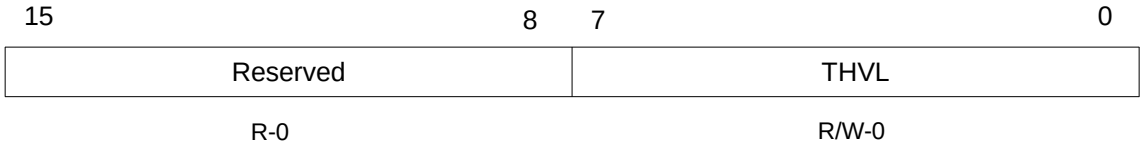
LEGEND: R = Read; -n = value after reset

Bit	Field	Value	Description
31-24	Reserved	0	Reads return 0.
23-0	PCNT(n-1)	0-FFFFFFh	Period (n-1) Value. Gives the period value of the previous tooth.

HWAG Current Teeth Number Register (HWATHVL)

Offset = **8Eh**

HWAG Current Teeth Number Register (HWATHVL)



LEGEND: R/W = Read/Write; -n = value after reset

Bit	Field	Value	Description
15-8	Reserved	0	Reads return 0.
7-0	THVL	0-FFh	Teeth Value. Provides the current teeth number.