

Bit number	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
ID	Q	P	P	P	P	P	P	P	O	N	M	L	K	J	I	H	G	F	E	D	C	B	A									
Reset 0x00040000	0	0	0	0	0	0	0	0	0	0	0	0	1	0																		
ID	R/W	Field		Value ID		Value		Description																								
		TEST			1			Test data register (test mode).																								
D	RW	COND BYPASS						Conditioning function bypass.																								
			NORMAL		0			the conditioning function is used (normal mode).																								
			BYPASS		1			the conditioning function is bypassed (to observe entropy source directly).																								
E	RW	INTENREP						Interrupt enable for Repetition Count Test failure.																								
F	RW	INTENPROP						Interrupt enable for Adaptive Proportion Test failure (1024-sample window).																								
G	RW	INTENFULL						Interrupt enable for FIFO full.																								
H	RW	SOFTRST						Software reset:																								
								This bit is not cleared automatically.																								
			NORMAL		0			Normal mode.																								
			CTEST		1			The continuous test, the conditioning function and the FIFO are reset.																								
I	RW	INTENPRE						Interrupt enable for AIS31 preliminary noise alarm.																								
J	RW	INTENALM						Interrupt enable for AIS31 noise alarm.																								
K	RW	FORCEACTIVEROS						Force oscillators to run when FIFO is full.																								
L	RW	HEALTHTESTBYPASS						Bypass NIST tests such that the results of the start-up and online test do not affect the FSM state.																								
M	RW	AIS31BYPASS						Bypass AIS31 tests such that the results of the start-up and online tests do not affect the FSM state.																								
N	RW	HEALTHTESTSEL						Select input to health test module:																								
			BEFORE		0			Before conditioning.																								
			AFTER		1			After conditioning.																								
O	RW	AIS31TESTSEL						Select input to the AIS31 test module:																								
			BEFORE		0			Before conditioning.																								
			AFTER		1			After conditioning.																								
P	RW	NB128BITBLOCKS						Number of 128 bit blocks used in AES-CBCMAC post-processing.																								
								This value cannot be zero.																								
Q	RW	FIFOWRITESTARTUP						Enable write of the samples in the FIFO during start-up.																								

7.8.1.7.25 RNGCONTROL.FIFOLEVEL

Address offset: 0x1004

FIFO level register.

Bit number	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
ID	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Reset 0x00000000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
ID	R/W	Field		Value ID		Value		Description																								
A	RW	FIFOLEVEL						Number of 32 bits words of random values available in the FIFO.																								
		RME						Any read to this register clears the FULLINT flag in the STATUS register, but does not affect this register content. Note that if the FIFO is still full, the status flag and interrupt will be set back up right away																								

7.8.1.7.26 RNGCONTROL.FIFOTHRESHOLD

Address offset: 0x1008

FIFO threshold register.