

PMCNTEN, Performance Monitors Count Enable register

The PMCNTEN characteristics are:

Purpose

Enables the Cycle Count Register, PMU.PMCCNTR_EL0, and any implemented event counters [PMEVCNTR<n>](#).

Configuration

External register PMCNTEN bits [63:0] are architecturally mapped to AArch64 System register [PMCNTENSET_EL0\[63:0\]](#) when FEAT_PMUv3_EXT64 is implemented, or FEAT_PMUv3p9 is implemented or FEAT_PMUv3_ICNTR is implemented.

External register PMCNTEN bits [63:0] are architecturally mapped to AArch64 System register [PMCNTENCLR_EL0\[63:0\]](#) when FEAT_PMUv3_EXT64 is implemented, or FEAT_PMUv3p9 is implemented or FEAT_PMUv3_ICNTR is implemented.

External register PMCNTEN bits [31:0] are architecturally mapped to AArch32 System register [PMCNTENSET\[31:0\]](#).

External register PMCNTEN bits [31:0] are architecturally mapped to AArch32 System register [PMCNTENCLR\[31:0\]](#).

This register is present only when FEAT_PMUv3_EXT64 is implemented. Otherwise, direct accesses to PMCNTEN are res0.

Attributes

PMCNTEN is a 64-bit register.

This register is part of the [PMU](#) block.

Field descriptions

63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36
RES0																											
C	P30	P29	P28	P27	P26	P25	P24	P23	P22	P21	P20	P19	P18	P17	P16	P15	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4
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

Bits [63:33]

Reserved, res0.

F0, bit [32]

When FEAT_PMUv3_ICNTR is implemented:

PMU.PMICNTR_EL0 counter enable. Enables the instruction counter.

F0	Meaning
0b0	PMU.PMICNTR_EL0 disabled.
0b1	PMU.PMICNTR_EL0 enabled.

The reset behavior of this field is:

- On a Warm reset, this field resets to an architecturally unknown value.

Otherwise:

Reserved, res0.

C, bit [31]

PMU.PMCCNTR_EL0 enable. Enables the cycle counter register.
Possible values are:

C	Meaning
0b0	PMU.PMCCNTR_EL0 is disabled.
0b1	PMU.PMCCNTR_EL0 enabled.

The reset behavior of this field is:

- On a Warm reset, this field resets to an architecturally unknown value.

P<n>, bit [n], for n = 30 to 0

Event counter enable for PMU.PMEVCNTR<n>_EL0.

If PMU.PMCFGR.N is less than 31, bits [30:PMU.PMCFGR.N] are RAZ/WI.

P<n>	Meaning
0b0	PMU.PMEVCNTR<n>_EL0 is disabled.
0b1	PMU.PMEVCNTR<n>_EL0 is enabled.

The reset behavior of this field is:

- On a Warm reset, this field resets to an architecturally unknown value.

Accessing PMCNTEN

Accesses to this register use the following encodings:

Accessible at offset 0xC10 from PMU

- When DoubleLockStatus(), or !IsCorePowered(), or OSLockStatus() or !AllowExternalPMUAccess(), accesses to this register generate an error response.
- Otherwise, accesses to this register are **RW**.

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