MPAMF_IMPL_IDR, MPAM Implementation-Specific Partitioning Feature Identification Register

The MPAMF IMPL IDR characteristics are:

Purpose

Indicates the implementation-defined partitioning and monitoring features and parameters of the MSC.

MPAMF_IMPL_IDR_s indicates implementation defined partitioning and monitoring features accessed from the Secure MPAM feature page. MPAMF_IMPL_IDR_ns indicates those accessed from the Non-secure MPAM feature page. MPAMF_IMPL_IDR_rt indicates implementation defined partitioning and monitoring features accessed from the Root MPAM feature page. MPAMF_IMPL_IDR_rl indicates those accessed from the Realm MPAM feature page.

If <u>MPAMF_IDR</u>.HAS_RIS is 1, this register gives the implementation-specific features and parameters of the resource instance selected by <u>MPAMCFG_PART_SEL</u>.RIS for any features that are specific to the resource.

Configuration

This register is present only when FEAT_MPAM is implemented and MPAMF_IDR.HAS_IMPL_IDR == 1. Otherwise, direct accesses to MPAMF_IMPL_IDR are res0.

The power and reset domain of each MSC component is specific to that component.

Attributes

MPAMF_IMPL_IDR is a 32-bit register.

Field descriptions

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 IMPLFEAT

IMPLFEAT, bits [31:0]

All 32 bits of this register are available to be used as the implementer sees fit to indicate the presence of implementation defined MPAM features in this MSC and to give additional implementation-specific read-only information about the parameters of implementation-specific MPAM features to software.

If RIS is implemented, this register indicates the implementationspecific features and parameters of the resource instance selected by MPAMCFG PART SEL.RIS.

Accessing MPAMF_IMPL_IDR

This register is within the MPAM feature page memory frames. In a system that supports Secure, Non-secure, Root, and Realm memory maps, there must be MPAM feature pages in all four address maps.

MPAMF IMPL IDR is read-only.

MPAMF_IMPL_IDR must be readable from the Non-secure, Secure, Root, and Realm MPAM feature pages.

MPAMF_IMPL_IDR is permitted to have the same contents when read from the Secure, Non-secure, Root, and Realm MPAM feature pages unless the register contents are different for the different versions:

- MPAMF_IMPL_IDR_s is permitted to have either the same or different contents to MPAMF_IMPL_IDR_ns, MPAMF_IMPL_IDR_rt, or MPAMF_IMPL_IDR_rl.
- MPAMF_IMPL_IDR_ns is permitted to have either the same or different contents to MPAMF_IMPL_IDR_rt or MPAMF_IMPL_IDR_rl.
- MPAMF_IMPL_IDR_rt is permitted to have either the same or different contents to MPAMF_IMPL_IDR_rl.

There must be separate registers in the Secure (MPAMF_IMPL_IDR_s), Non-secure (MPAMF_IMPL_IDR_ns), Root (MPAMF_IMPL_IDR_rt), and Realm (MPAMF_IMPL_IDR_rl) MPAM feature pages.

When <u>MPAMF_IDR</u>.HAS_RIS is 1, MPAMF_IMPL_IDR shows the configuration of implementation-specific features for the resource instance selected by <u>MPAMCFG_PART_SEL</u>.RIS. Fields that mention RIS in their field descriptions have values that track the implemented properties of the resource instance. Fields that do not mention RIS are constant across all resource instances.

MPAMF_IMPL_IDR can be accessed through the memory-mapped interfaces:

Component Frame		Offset	Instance	
MPAM	MPAMF_BASE_s	0x0028	MPAMF_IMPL_IDR_s	

Accesses on this interface are **RO**.

Component	Frame	Offset	Instance
MPAM	MPAMF_BASE_ns	0x0028	MPAMF_IMPL_IDR_ns

Accesses on this interface are RO.

Component	Frame	Offset	Instance
MPAM	MPAMF_BASE_rt	0x0028	MPAMF_IMPL_IDR_rt

When FEAT RME is implemented, accesses on this interface are RO.

Component Frame		Offset	Instance	
MPAM	MPAMF_BASE_rl	0x0028	MPAMF_IMPL_IDR_rl	

When FEAT RME is implemented, accesses on this interface are RO.

AArch32	AArch64	AArch32	AArch64	Index by	<u>External</u>
<u>Registers</u>	<u>Registers</u>	<u>Instructions</u>	<u>Instructions</u>	Encoding	<u>Registers</u>

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