

## EDDEVARCH, External Debug Device Architecture register

The EDDEVARCH characteristics are:

### Purpose

Identifies the programmers' model architecture of the external debug component.

### Configuration

When FEAT\_DoPD is implemented, EDDEVARCH is in the Core power domain. Otherwise, EDDEVARCH is in the Debug power domain.

Implementation of this register is optional.

### Attributes

EDDEVARCH 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
ARCHITECT											PRESENT	REVISION				ARCHPART															

#### ARCHITECT, bits [31:21]

Defines the architecture of the component. For debug, this is Arm Limited.

Bits [31:28] are the JEP106 continuation code, 0x4.

Bits [27:21] are the JEP106 ID code, 0x3B.

Reads as 0b01000111011.

Access to this field is **RO**.

#### PRESENT, bit [20]

Indicates that the DEVARCH is present.

Reads as 0b1.

Access to this field is **RO**.

## REVISION, bits [19:16]

Defines the architecture revision. For architectures defined by Arm this is the minor revision.

For debug, the revision defined by Armv8 is 0x0.

All other values are reserved.

Reads as 0b0000.

Access to this field is **RO**.

## ARCHVER, bits [15:12]

Architecture Version. Defines the architecture version of the component. Defined values are:

ARCHVER	Meaning
0b0110	Armv8 debug architecture.
0b0111	Armv8 debug architecture with Virtualization Host Extensions.
0b1000	Armv8.2 debug architecture, FEAT_Debugv8p2.
0b1001	Armv8.4 debug architecture, FEAT_Debugv8p4.
0b1010	Armv8.8 debug architecture, FEAT_Debugv8p8.
0b1011	Armv8.9 debug architecture, FEAT_Debugv8p9.

EDDEVARCH.ARCHVER and EDDEVARCH.ARCHPART are also defined as a single field, EDDEVARCH.ARCHID, so that EDDEVARCH.ARCHVER is EDDEVARCH.ARCHID[15:12].

FEAT\_VHE adds the functionality identified by the value 0b0111.

FEAT\_Debugv8p2 adds the functionality identified by the value 0b1000.

FEAT\_Debugv8p4 adds the functionality identified by the value 0b1001.

FEAT\_Debugv8p8 adds the functionality identified by the value 0b1010.

FEAT\_Debugv8p9 adds the functionality identified by the value 0b1011.

From Armv8.1, when FEAT\_VHE is implemented the value 0b0110 is not permitted.

From Armv8.2, the values 0b0110 and 0b0111 are not permitted.

From Armv8.4, the value 0b1000 is not permitted.

From Armv8.8, the value 0b1001 is not permitted.

From Armv8.9, the value 0b1010 is not permitted.

## ARCHPART, bits [11:0]

Architecture Part. Defines the architecture of the component.

ARCHPART	Meaning
0xA15	Armv8-A debug architecture.

EDDEVARCH.ARCHVER and EDDEVARCH.ARCHPART are also defined as a single field, EDDEVARCH.ARCHID, so that EDDEVARCH.ARCHPART is EDDEVARCH.ARCHID[11:0].

Armv8-A debug architecture.

Access to this field is **RO**.

## Accessing EDDEVARCH

**EDDEVARCH can be accessed through the external debug interface:**

Component	Offset	Instance
Debug	0xFBC	EDDEVARCH

This interface is accessible as follows:

- When FEAT\_DoPD is not implemented or IsCorePowered(), accesses to this register are **RO**.
- Otherwise, accesses to this register generate an error response.

[AArch32  
Registers](#)

[AArch64  
Registers](#)

[AArch32  
Instructions](#)

[AArch64  
Instructions](#)

[Index by  
Encoding](#)

[External  
Registers](#)

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