

MRS

Move System Register to general-purpose register allows the PE to read an AArch64 System register into a general-purpose register.

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
1	1	0	1	0	1	0	1	0	0	1	1	o0	op1			CRn			CRm			op2			Rt						
												L																			

MRS <Xt>, (<systemreg>|s<op0>_<op1>_<Cn>_<Cm>_<op2>)

```
AArch64.CheckSystemAccess('1':o0, op1, CRn, CRm, op2, Rt, L);
```

```
integer t = UInt(Rt);
```

```
integer sys_op0 = 2 + UInt(o0);
```

```
integer sys_op1 = UInt(op1);
```

```
integer sys_op2 = UInt(op2);
```

```
integer sys_crn = UInt(CRn);
```

```
integer sys_crm = UInt(CRm);
```

Assembler Symbols

<Xt> Is the 64-bit name of the general-purpose destination register, encoded in the "Rt" field.

<systemreg> Is a System register name, encoded in the "o0:op1:CRn:CRm:op2".

The System register names are defined in '[AArch64 System Registers in the System Register XML](#)'.

<op0> Is an unsigned immediate, encoded in "o0":

o0	<op0>
0	2
1	3

<op1> Is a 3-bit unsigned immediate, in the range 0 to 7, encoded in the "op1" field.

<Cn> Is a name 'Cn', with 'n' in the range 0 to 15, encoded in the "CRn" field.

<Cm> Is a name 'Cm', with 'm' in the range 0 to 15, encoded in the "CRm" field.

<op2> Is a 3-bit unsigned immediate, in the range 0 to 7, encoded in the "op2" field.

Operation

[AArch64.SysRegRead](#)(sys_op0, sys_op1, sys_crn, sys_crm, sys_op2, t);

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