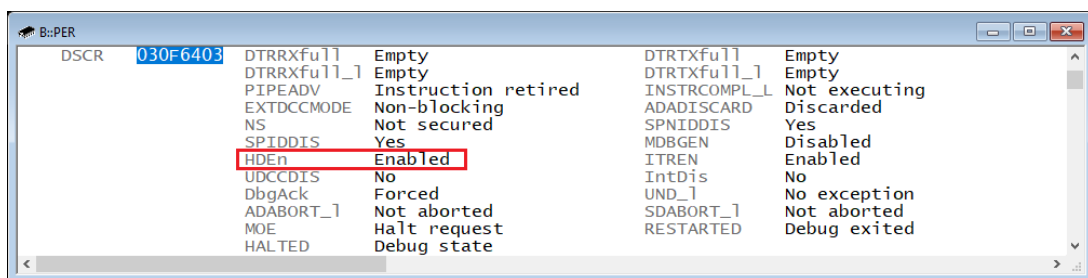


## [Arm] Is there a register on Cortex cores that can be used by the target program to detect if a debugger is connected?

2023-05-22 - Comments (0) - Arm

There is a register called DBGDSCR (Debug Status and Control Register) which can be used for this purpose. In fact, if the debugger connects to the core, it will set the bit 14 "DBGDSCR.HDen" ("Halting debug-mode enable" bit). This bit is cleared on reset.



Field	Value	Field	Value
DSCR	030F6403	DTRTXfull	Empty
DTRRXfull	Empty	DTRTXfull_1	Empty
PIPEADV	Instruction retired	INSTRCOMPL_1	Not executing
EXTDCCMODE	Non-blocking	ADADISCARD	Discarded
NS	Not secured	SPNIDDIS	Yes
SPIDDIS	Yes	MDBGEN	Disabled
<b>HDen</b>	<b>Enabled</b>	ITREN	Enabled
UDCCDIS	No	IntDis	No
DbgAck	Forced	UND_1	No exception
ADABORT_1	Not aborted	SDABORT_1	Not aborted
MOE	Halt request	RESTARTED	Debug exited
HALTED	Debug state		

### Cortex-M:

For stop mode debugging the debugger usually sets inside the DHCSR the C\_DEBUGEN flag (bit 0). Stop mode debugging is usually the standard way to debug Arm cores using our tools. DHCSR is a debug register inside the SCS block of each Cortex-M core at address 0xE00EDF0. It should be readable by the target application, too.

But please be aware: the flag will be set immediately, when connecting using SYSTEM.Up/Go/Attach and will be kept set even on SYSTEM.Down.

Tags

Arm Cortex