

Bit number	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		
ID	D	D	D	D	D							C	B	B	B				A	A	A	A												
<b>Reset 0x01000002</b>	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0			
ID	R/W	Field	Value ID	Value	Description																													
		NotBusy	0	Not busy.																														
		Busy	1	An abstract command is currently being executed. This bit is set as soon as command is written, and is not cleared until that command has completed.																														
D	R	PROGBUFSIZE		Size of the Program Buffer, in 32-bit words. Valid sizes are 0 - 1.																														

## 8.26.1.18 DEBUGIF.ABSTRACTCMD

Address offset: 0x45C

Abstract command

Bit number	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		
ID	B	B	B	B	B	B	B	B	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
<b>Reset 0x00000000</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
ID	R/W	Field	Value ID	Value	Description																													
A	W	CONTROL		This Field is interpreted in a command specific manner, described for each abstract command.																														
B	W	CMDTYPE		The type determines the overall functionality of this abstract command.																														
		REGACCESS	0	Register Access Command																														
		QUICKACCESS	1	Quick Access Command																														
		MEMACCESS	2	Memory Access Command																														

## 8.26.1.19 DEBUGIF.ABSTRACTAUTO

Address offset: 0x460

Abstract Command Autoexec

This register is optional. Including it allows more efficient burst accesses. A debugger can detect whether it is support by setting bits and reading them back. Writing this register while an abstract command is executing causes cmderr to become 1 (busy) once the command completes (busy becomes 0).

Bit number	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
ID	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	A	A	A	A	A	A	A	A	A	A	A
<b>Reset 0x00000000</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ID	R/W	Field	Value ID	Value	Description																											
A	R	AUTOEXECDATAA		When a bit in this field is 1, read or write accesses to the corresponding data word cause the command in command to be executed again.																												
B	R	AUTOEXECPROGBUF		When a bit in this field is 1, read or write accesses to the corresponding progbuf word cause the command in command to be executed again.																												

## 8.26.1.20 DEBUGIF.CONFSTRPTR[n] (n=0..3)

Address offset: 0x464 + (n × 0x4)

Configuration String Pointer [n]

When confstrptrvalid is set, reading this register returns bits 31:0 of the configuration string pointer. Reading the other confstrptr registers returns the upper bits of the address. When system bus mastering is implemented, this must be an address that can be used with the System Bus Access module. Otherwise, this must be an address that can be used to access the configuration string from the hart with ID 0.32 RISC-V External Debug Support Version 0.14.0-DRAFT If confstrptrvalid is 0, then the confstrptr registers hold identifier information.