

24.8.14 ATmega88P Boot Loader Parameters

In [Table 24-7](#) through [Table 24-9](#), the parameters used in the description of the self programming are given.

Table 24-7. Boot Size Configuration, ATmega88P

BOOTSZ1	BOOTSZ0	Boot Size	Pages	Application Flash Section	Boot Loader Flash Section	End Application Section	Boot Reset Address (Start Boot Loader Section)
1	1	128 words	4	0x000 - 0xF7F	0xF80 - 0xFFFF	0xF7F	0xF80
1	0	256 words	8	0x000 - 0xEFF	0xF00 - 0xFFFF	0xEFF	0xF00
0	1	512 words	16	0x000 - 0xDFF	0xE00 - 0xFFFF	0xDFF	0xE00
0	0	1024 words	32	0x000 - 0xBFF	0xC00 - 0xFFFF	0xBFF	0xC00

Note: The different BOOTSZ Fuse configurations are shown in [Figure 24-2 on page 280](#).

Table 24-8. Read-While-Write Limit, ATmega88P

Section	Pages	Address
Read-While-Write section (RWW)	96	0x000 - 0xBFF
No Read-While-Write section (NRWW)	32	0xC00 - 0xFFFF

For details about these two section, see ["NRWW – No Read-While-Write Section" on page 278](#) and ["RWW – Read-While-Write Section" on page 278](#)

Table 24-9. Explanation of Different Variables used in [Figure 24-3](#) and the Mapping to the Z-pointer, ATmega88P

Variable		Corresponding Z-value ⁽¹⁾	Description
PCMSB	11		Most significant bit in the Program Counter. (The Program Counter is 12 bits PC[11:0])
PAGEMSB	4		Most significant bit which is used to address the words within one page (32 words in a page requires 5 bits PC [4:0]).
ZPCMSB		Z12	Bit in Z-register that is mapped to PCMSB. Because Z0 is not used, the ZPCMSB equals PCMSB + 1.
ZPAGEMSB		Z5	Bit in Z-register that is mapped to PAGEMSB. Because Z0 is not used, the ZPAGEMSB equals PAGEMSB + 1.
PCPAGE	PC[11:5]	Z12:Z6	Program counter page address: Page select, for page erase and page write
PCWORD	PC[4:0]	Z5:Z1	Program counter word address: Word select, for filling temporary buffer (must be zero during page write operation)

Note: 1. Z15:Z13: always ignored

Z0: should be zero for all SPM commands, byte select for the LPM instruction.

See ["Addressing the Flash During Self-Programming" on page 282](#) for details about the use of Z-pointer during Self-Programming.