



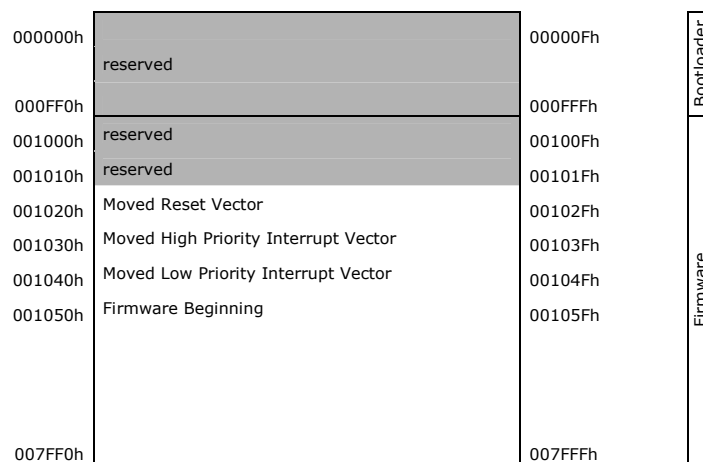
HOME AUTOMATION

## 1. Memory Organization

There are three types of memory in UNIV 1.0 device:

- Program memory
- Data RAM
- Data EEPROM

### 1.1. Program memory



User must not use the reserved part of code.

**Moved Reset Vector** – the address which is accessed after device reset.

**Moved High Priority Interrupt Vector** – the address of high interrupt vector. The high interrupt can be freely used by user, it is not used by bootloader. By default high interrupt is disable.

**Moved Low Priority Interrupt Vector** – the address of low interrupt vector. The low interrupt can not be used by user. It is used by bootloader to receive CAN messages from the bus. Once the message is received it is save to the buffer in RAM memory and processor points at this vector.

**1.2. Data RAM**

Bootloader uses marked cells of Bank0 RAM memory. Bank1 is copied from EEPROM. Banks 2-5 can be used by user. Banks 13-15 contain Special Function Registers.

000000h	General Purpose Registers	Bank 0
0000FFh	HAPCAN Bootloader Registers	
000100h	General Purpose Registers (on reset it is copied EEPROM)	Bank 1
0001FFh	General Purpose Registers	Bank 2
000200h		
0002FFh	General Purpose Registers	Bank 3
000300h		
0003FFh	General Purpose Registers	Bank 4
000400h		
0004FFh	General Purpose Registers	Bank 5
000500h		
0005FFh	Unimplemented Read as '0'	Bank 6
000600h		
0006FFh		
000700h		
0007FFh		
000800h		
0008FFh		
000900h		
0009FFh		
000A00h		
000AFFh	Bank 10	
000B00h	Bank 11	
000BFFh	Bank 12	
000C00h	Special Function Registers	Bank 13
000CFFh		
000D00h	Special Function Registers	Bank 14
000DFFh		
000E00h	Special Function Registers	Bank 15
000EFFh		
000F00h	Special Function Registers	
000FFFh		



- memory which can be used by user



- memory used by bootloader – must not be used by user

BANK 0 - GPR-General Purpose Registers (BSR=0x0)

00h																	00Fh
01h																	01Fh
02h	RXBCON	FRAME	BITS	NODE	GROUP	RXBDLC	D0	D1	D2	D3	D4	D5	D6	D7			02Fh
03h																	03Fh
04h																	04Fh
05h																	05Fh
06h																	06Fh
07h																	07Fh
08h																	08Fh
09h																	09Fh
0A0h																	0AFh
0B0h																	0BFh
0C0h																	0CFh
0D0h																	0DFh
0E0h																	0EFh
0F0h																	0FFh

**RXBCON** - **D7** - CAN Receive Buffer. Received from the bus message is saved in these registers.

**1.2.1. Register values on bootloader reset**

**1.3. Data EEPROM**

00h																	0Fh
10h																	1Fh
20h							Node No	Group No									2Fh
30h	DSCR0	DSCR1	DSCR2	DSCR3	DSCR4	DSCR5	DSCR6	DSCR7	DSCR8	DSCR9	DSCR10	DSCR11	DSCR12	DSCR13	DSCR14	DSCR15	3Fh
40h																	4Fh
50h																	5Fh
60h																	6Fh
70h																	7Fh
80h																	8Fh
90h																	9Fh
A0h																	AFh
B0h																	BFh
C0h																	CFh
D0h																	DFh
E0h																	EFh
F0h																	FFh

**Node No** **Group No** - Node identifier