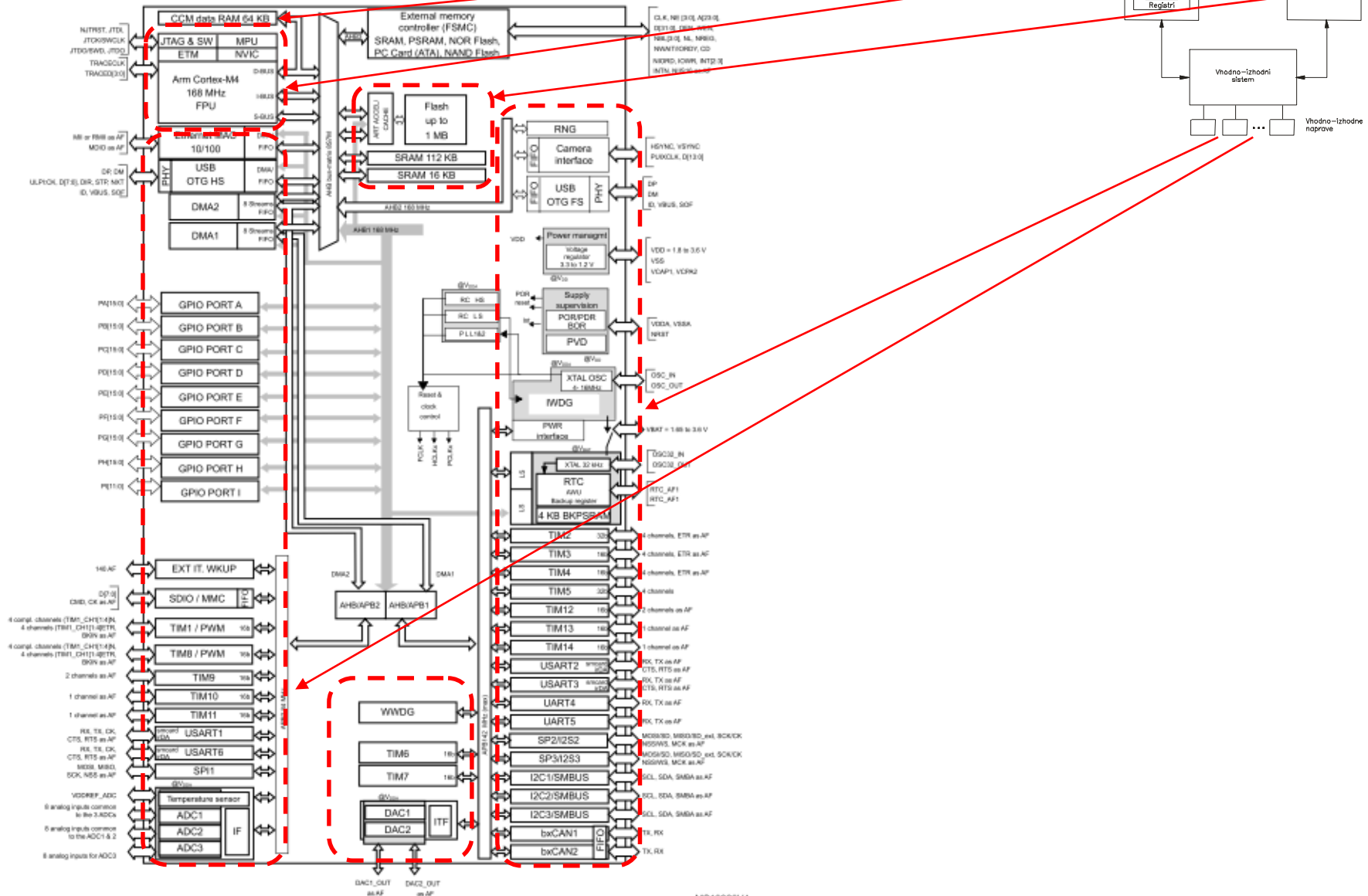


# *STM32F407 Discovery*

## *Predstavitev*

# STM32F407VG



MS19820V4

# Delo na STM32F4 razvojnem sistemu

## Priključitev :

- **Mini USB** prikllop na **krajši stranici**, svetila rdeči **LED** diodi

## Poseben začetni projekt za STM32F4 (e-učilnica) :

- **dodajanje vsebine (template.s) :**

'template.s - STM32CubeIDE

avigate Search Project Run Window Help

```
template.s
54
55 _start:
56 // Enable GPIO Peripheral Clock (bit 3 in AHB1ENR register)
57 ldr r6, = RCC_AHB1ENR // Load peripheral clock reg address to r6
58 ldr r5, [r6] // Read its content to r5
59 orr r5, #0x00000008 // Set bit 3 to enable GPIO clock
60 str r5, [r6] // Store result in peripheral clock register
61
62 // Make GPIO Pin12 as output pin (bits 25:24 in MODER register)
63 ldr r6, = GPIO_MODER // Load GPIO MODER register address to r6
64 ldr r5, [r6] // Read its content to r5
65 bic r5, #0x3000000 // Clear bits 24, 25 for P12
66 orr r5, #0x01000000 // Write 01 to bits 24, 25 for P12
67 str r5, [r6] // Store result in GPIO MODER register
68
69 // Set GPIO Pin12 to 1 (bit 12 in ODR register)
70 ldr r6, = GPIO_ODR // Load GPIO output data register
71 ldr r5, [r6] // Read its content to r5
72 orr r5, #0x1000 // write 1 to pin 12
73 str r5, [r6] // Store result in GPIO output data register
74
75 // Set GPIO Pin12 to 0 (bit 12 in ODR register)
76 ldr r6, = GPIO_ODR // Load GPIO output data register
77 ldr r5, [r6] // Read its content to r5
78 bic r5, #0x1000 // write 0 to pin 12
79 str r5, [r6] // Store result in GPIO output data register
80
81 loop:
82 nop // No operation. Do nothing.
83 b loop // Jump to loop
84
```



STM32 CubeIDE, STM32F4 (izbrana dokumentacij

----- Razvojni sistem -----

STM32 CubeIDE

ORLab-STM32 - GitHub repozitorij

User Manual Discovery kit stm32f407vg Uploaded 8/11/21, 12:58

DataSheet\_stm32f407vg Uploaded 8/11/21, 12:56

Reference Manual rm0090-stm32f407417 Uploaded 8/11/21, 12:57

Programming\_Manual\_pm0214-stm32-cortexm4-mcus-and-mpu

Arm Cortex-M4 Processor Datasheet Short Uploaded 29/10/21, 15:00

----- Cortex-M arhitektura, zbirnik -----

ARM Cortex-M for Beginners ARM 2017 Uploaded 29/10/21, 14:50

# ARM Cortex M – ISA

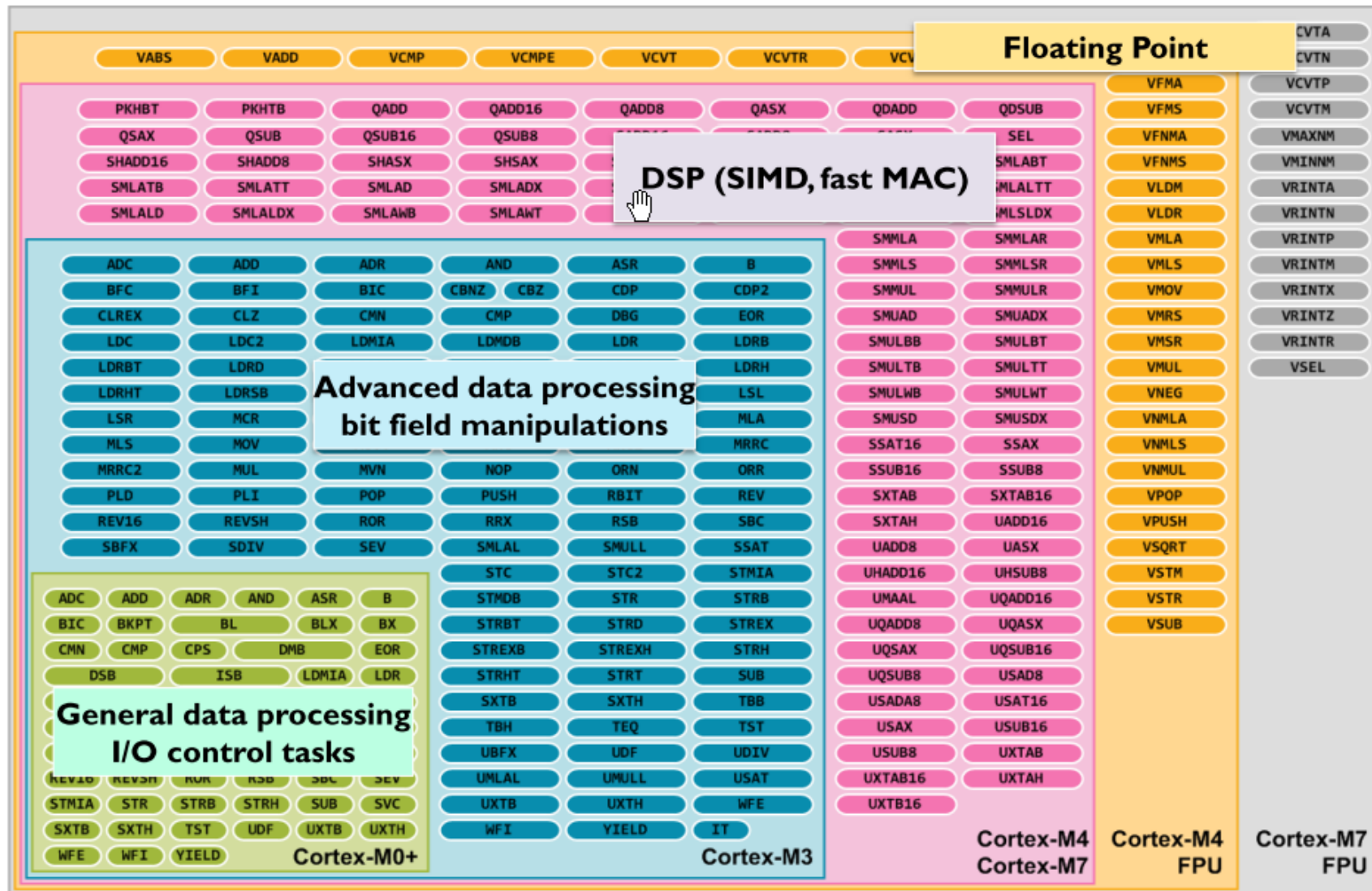
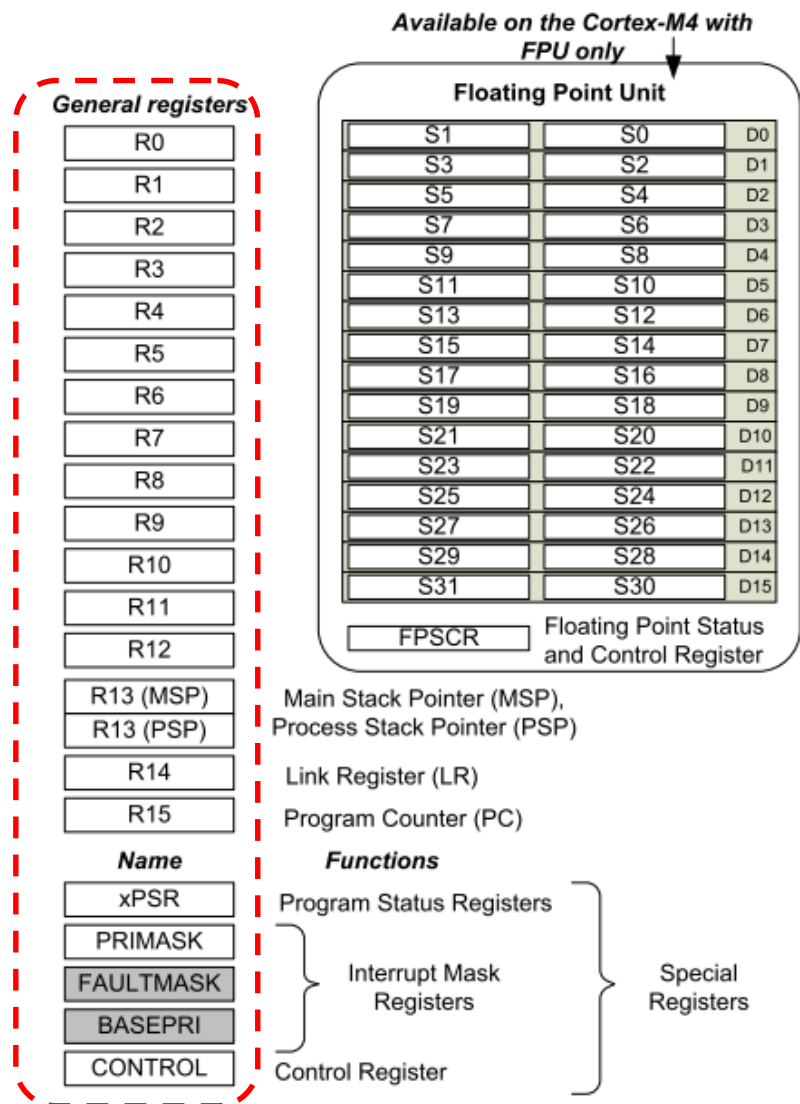


Figure 3: Instruction Set support in the Cortex-M processors

# ARM Cortex M – Programski model



# ARM Cortex M – Vektorska tabela

Vector Table	Vector address (initial)
Interrupt#239 vector <input type="checkbox"/>	0x000003FC
Interrupt#31 vector <input type="checkbox"/>	0x000000BC
Interrupt#1 vector <input type="checkbox"/>	0x00000044
Interrupt#0 vector <input type="checkbox"/>	0x00000040
SysTick vector <input type="checkbox"/>	0x0000003C
PendSV vector <input type="checkbox"/>	0x00000038
Not used	0x00000034
Debug Monitor vector <input type="checkbox"/>	0x00000030
SVC vector <input type="checkbox"/>	0x0000002C
Not used	0x00000028
Not used	0x00000024
Not used	0x00000020
SecureFault (ARMv8-M Mainline) <input type="checkbox"/>	0x0000001C
Usage Fault vector <input type="checkbox"/>	0x00000018
Bus Fault vector <input type="checkbox"/>	0x00000014
MemManage vector <input type="checkbox"/>	0x00000010
HardFault vector <input type="checkbox"/>	0x0000000C
NMI vector <input type="checkbox"/>	0x00000008
Reset vector <input type="checkbox"/>	0x00000004
MSP initial value	0x00000000

