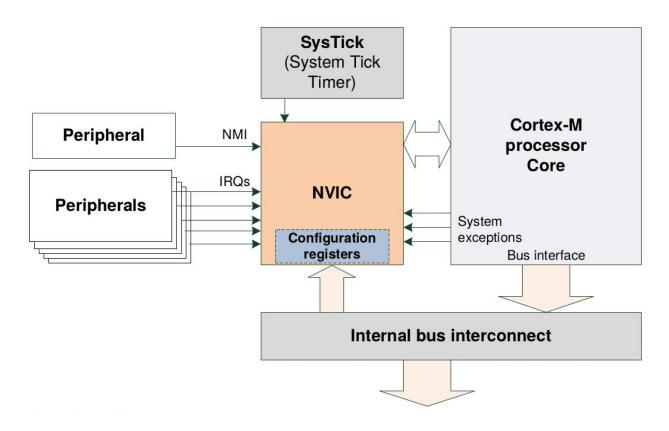
# Программирование микроконтроллеров STM32

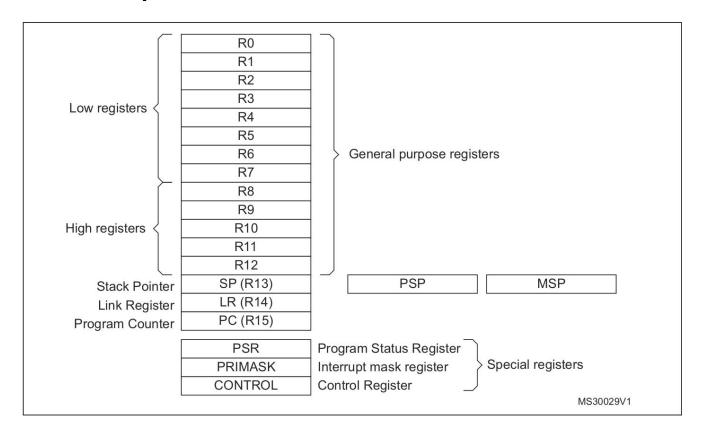
Соrtex-M0 ядро. Обзор структуры памяти

МФТИ, 2019

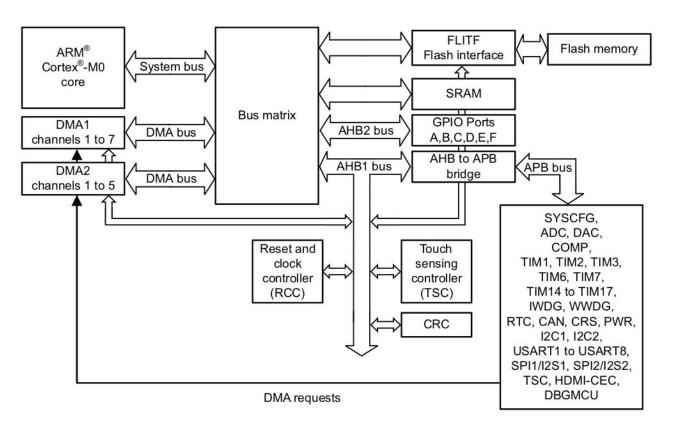
### Устройство ядра



### Ядро. Регистры



### Устройство микроконтроллера



### Структура данных. Стек



# Структура памяти

Dovice	0xFFFFFFF
Device	0xE0100000
Drivato porinh bus	0xE00FFFFF
Private periph. bus	0xE0000000
External device	0xDFFFFFFF
External device	0xA0000000
External RAM	0x9FFFFFF
External KAIVI	0x60000000
Porinhoral	0x5FFFFFFF
Peripheral	0x40000000
SRAM	0x3FFFFFFF
JRAIVI	0x20000000
Code	0x1FFFFFFF
Code	0x00000000

			0x1FFFFFF	Reserved
0xFFFFFFF			0x1FFFFC00	Reserveu
0xE0100000	Device 0x1FFFBFF	0x1FFFFBFF	Option bytes	
0xE00FFFF			0x1FFFF800	Option bytes
	Private periph. bus		0x1FFFF7FF	System memory
0xE0000000			0x1FFFEC00	System memory
0xDFFFFFF	External device		0x1FFFEBFF	Decembed
0xA0000000			0x08010000	Reserved
0x9FFFFFF	External RAM		0x0800FFFF	R/O Data Section
0x60000000	EXTERNAL KAIN		variable	R/O Data Section
0x5FFFFFF			variable	Text section
0x40000000	Peripheral		variable	Text Section
0x3FFFFFF			variable	Interrupt vector
0x20000000	SRAM		0x08000004	table
			0x08000003	Stack initial
0x1FFFFFF	Code		0x08000000	address
0x00000000			0x07FFFFFF	Reserved
			0x00000000	(for mapping)

0xFFFFFFF	Device
0xE0100000	Device
0xE00FFFFF	Drivata pariph bus
0xE0000000	Private periph. bus
0xDFFFFFF	External device
0×A0000000	External device
0x9FFFFFF	External RAM
0x60000000	External RAW
0x5FFFFFFF	Davinhaval
0x40000000	Peripheral
0x3FFFFFF	SRAM
0x20000000	
0x1FFFFFFF	Code
0x00000000	

0x3FFFFFF	Reserved
0x20002000	Reserved
0x20001FFF	Stack
variable	Stack
variable	
variable	
variable	Hoon
variable	- Heap
variable	Zero-initialized
variable	data
variable	Initialized data
0x20000000	iiillializeu uala

0xFFFFFFF	Dovice
0xE0100000	Device
0xE00FFFFF	Drivata parinh hua
0×E0000000	Private periph. bus
0xDFFFFFF	External device
0×A0000000	External device
0x9FFFFFF	External RAM
0x60000000	External KAW
0x5FFFFFF	Porinhoral
0x40000000	Peripheral
0x3FFFFFF	SRAM
0x20000000	
0x1FFFFFFF	Code
0x00000000	Code

_	
Dagamad	0x5FFFFFF
Reserved	0x48001800
AHB2 Bus	0x480017FF
(all GPIOs)	0x40024400
AHB1 Bus	0x400243FF
(DMA, RCC etc)	0x40018000
APB Bus	0x40017FFF
(USART, TIM etc)	0x40000000

0xFFFFFFF	Device 511M
0xE0100000	Device, 511M
0xE00FFFFF	Privata parinh bus 1M
0xE0000000	Private periph. bus, 1M
0xDFFFFFF	External device, 1G
0×A0000000	External device, 19
0x9FFFFFF	External DAM 4C
0x60000000	External RAM, 1G
0×5FFFFFF	Peripheral, 0.5G
0×40000000	Peripheral, 0.5G
0x3FFFFFFF	SRAM, 0.5G
0x20000000	
0x1FFFFFFF	Codo 0.5G
0x00000000	Code, 0.5G

Reserved	0xE00FFFFF
	0xE000EF04
Nested vectored	0xE000EF03
interrupt controller	0xE000EF00
System control block	0xE000ED3F
(SCB)	0xE000ED00
Nested vectored	0xE000E4EF
interrupt controller	0xE000E100
System timer	0xE000E01F
(SysTick)	0xE000E010
System control block	0xE000E00F
(SCB)	0xE000E008
Reserved	0xE000E007
	0xE0000000

## Репозиторий

https://github.com/edosedgar/stm32f0\_ARM