



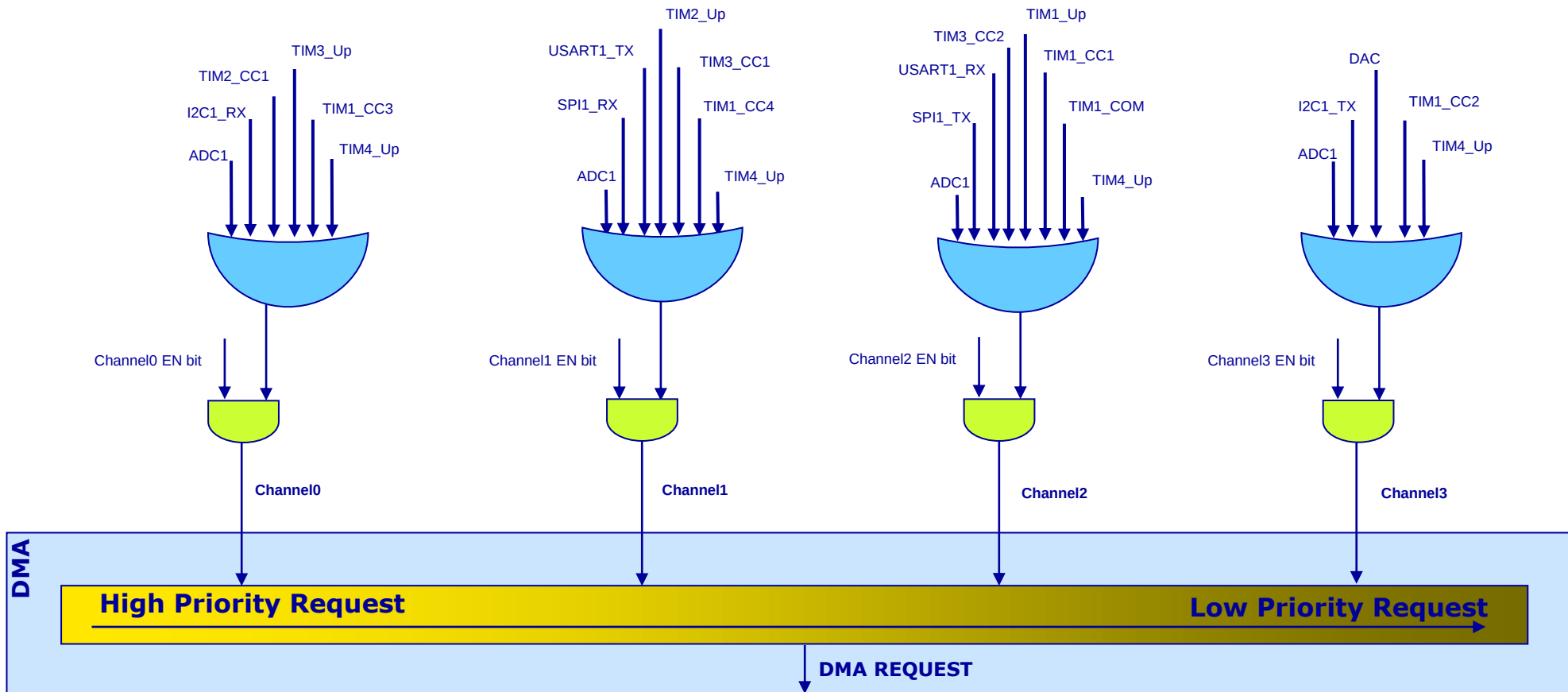
**MMS – MCD
Application Team**

STM8L15x Training Slides

Direct Memory Access (DMA)

- **4 independently configurable channels** (channel 0..3)
- **4 Software programmable priority levels:** Very high, High, Medium or Low. Hardware priority in case of equality (channel0 has higher priority vs. channel1).
- **Circular mode (auto-reload mode)** is available to handle circular buffers and continuous data flows (e.g. ADC1 scan mode).
- **Programmable transfer data size:** Byte or Half word (16bit) with **Programmable number of data to be transferred** up to 255.
- **Can operate in low power Waite mode**
- **2 event flags for each channel with Interrupt capability**
 - DMA Half Transfer,
 - DMA Transfer complete
- **Programmable and Independent source and destination:**
 - **Memory-to-memory** (only on channel 3),
 - **peripheral-to-memory** and
 - **memory-to-peripheral** transfers

- The DMA controller provides access to 4 channels

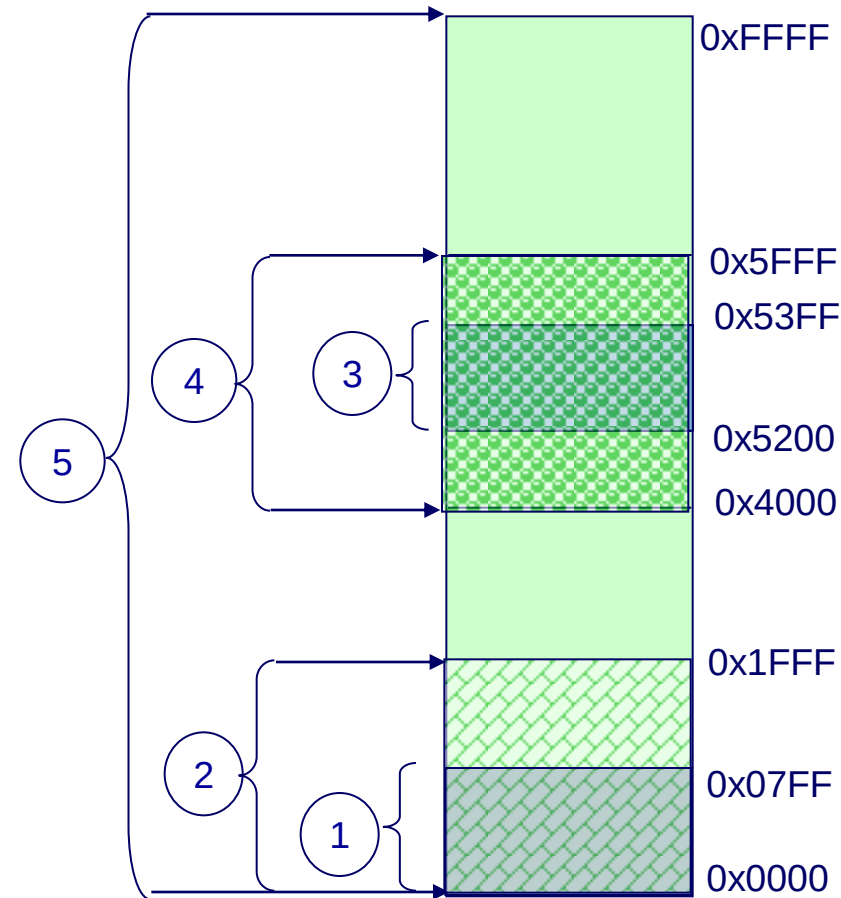


DMA Source and destination addresses



- **4 independently configurable channels** are available:
 - 3 regular channels (channel 0, channel 1 and channel 2)
 - 1 memory channel (channel 3).

Channels	Transfer direction	Source address range	Destination address range
Regular channels	Peripheral to memory	Zone 3	Zone 1
	Memory to peripheral	Zone 1	Zone 3
Memory channel	Peripheral to memory	Zone 4	Zone 5
	Memory to peripheral	Zone 5	Zone 4
	Memory to Memory	Zone 5	Zone 2



- How many DMA Channels are available in the STM8L15x ?

- List the peripherals which have a DMA interface?

- How many interrupts can be generated for each channel?

- Which Channel is able to perform Memory to Memory transfer?

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