



Reserved memory

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1 Article purpose

The **Reserved-memory** mechanism^[1] allows reserving memory regions in the kernel. This mechanism is used by drivers to allocate buffers in specific memory regions (such as MCU SRAM) or to get a dedicated memory pool that will not be managed by Linux[®] conventional memory allocator (in DDR).



2 Use cases

In STM32 MPU Linux OS, the **reserved-memory** is used by:

- the `dmaengine` driver to reserve the region where DMA buffers are allocated, typically MCU SRAM.
- the `remoteproc` driver to reserve the regions in RETRAM and MCU SRAM where the coprocessor firmware will be loaded.
- the `RPMmsg` driver to reserve the region where RPMmsg buffers used for interprocess communication with the coprocessor, are allocated, typically MCU SRAM.
- the Vivante Gcnano driver to reserve the region where the GPU working memory is allocated, typically the DDR.



3 References

- <https://www.kernel.org/doc/Documentation/devicetree/bindings/reserved-memory/reserved-memory.txt>

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