



# DPDK

DATA PLANE DEVELOPMENT KIT

## **Mempool Device Driver**

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The following are a list of mempool PMDs, which can be used from an application through the mempool API.

## OCTEONTX FPAVF MEMPOOL DRIVER

The OCTEONTX FPAVF PMD (`librte_mempool_octeontx`) is a mempool driver for offload mempool device found in **Cavium OCTEONTX** SoC family.

More information can be found at [Cavium, Inc Official Website](#).

### 1.1 Features

Features of the OCTEONTX FPAVF PMD are:

- 32 SR-IOV Virtual functions
- 32 Pools
- HW mempool manager

### 1.2 Supported OCTEONTX SoCs

- CN83xx

### 1.3 Prerequisites

See :doc: `../platform/octeontx.rst` for setup information.

### 1.4 Pre-Installation Configuration

#### 1.4.1 Config File Options

The following options can be modified in the `config` file. Please note that enabling debugging options may affect system performance.

- `CONFIG_RTE_MBUF_DEFAULT_MEMPOOL_OPS` ( set to `octeontx_fpavf`)  
Set default mempool ops to `octeontx_fpavf`.
- `CONFIG_RTE_LIBRTE_OCTEONTX_MEMPOOL` (default `y`)  
Toggle compilation of the `librte_mempool_octeontx` driver.

### 1.4.2 Driver Compilation

To compile the OCTEONTX FPAVF MEMPOOL PMD for Linux arm64 gcc target, run the following `make` command:

```
cd <DPDK-source-directory>
make config T=arm64-thunderx-linuxapp-gcc test-build
```

## 1.5 Initialization

The `octeontx fpavf mempool` initialization similar to other mempool drivers like `ring`. However user need to pass `--base-virtaddr` as command line input to application example `test_mempool.c` application.

Example:

```
./build/app/test -c 0xf --base-virtaddr=0x1000000000000 \
    --mbuf-pool-ops-name="octeontx_fpavf"
```