



(a) The sequence diagram of different tasks without/with interruptible CNN accelerator. Since CNN is part of both VO and DPR, hardware resource conflicts occur when they access the CNN accelerator at the same time. The proposed interruptible accelerator can solve this problem.

(b) The sequence diagram of different computing resources with interruptible CNN accelerator. Since the DPU only supports single threading, the CNN part of the DPR is interrupted when the FE with higher priority also accesses the DPU, while the tasks on the PS can be run in parallel on the multithreading CPU.