

Useful Hints and Recommendations

Setting for tasks

In CMake you have the possibility to set the size and the location of the memory for the command queues and also the COPSes reserved for that task.

Additionally, you can set the memory location for the frame buffers (in case they exist in the solution) for the layers.

Disable unused tasks by setting the size to 0. (This has to be in correlation with the solution which you want to execute on the target)

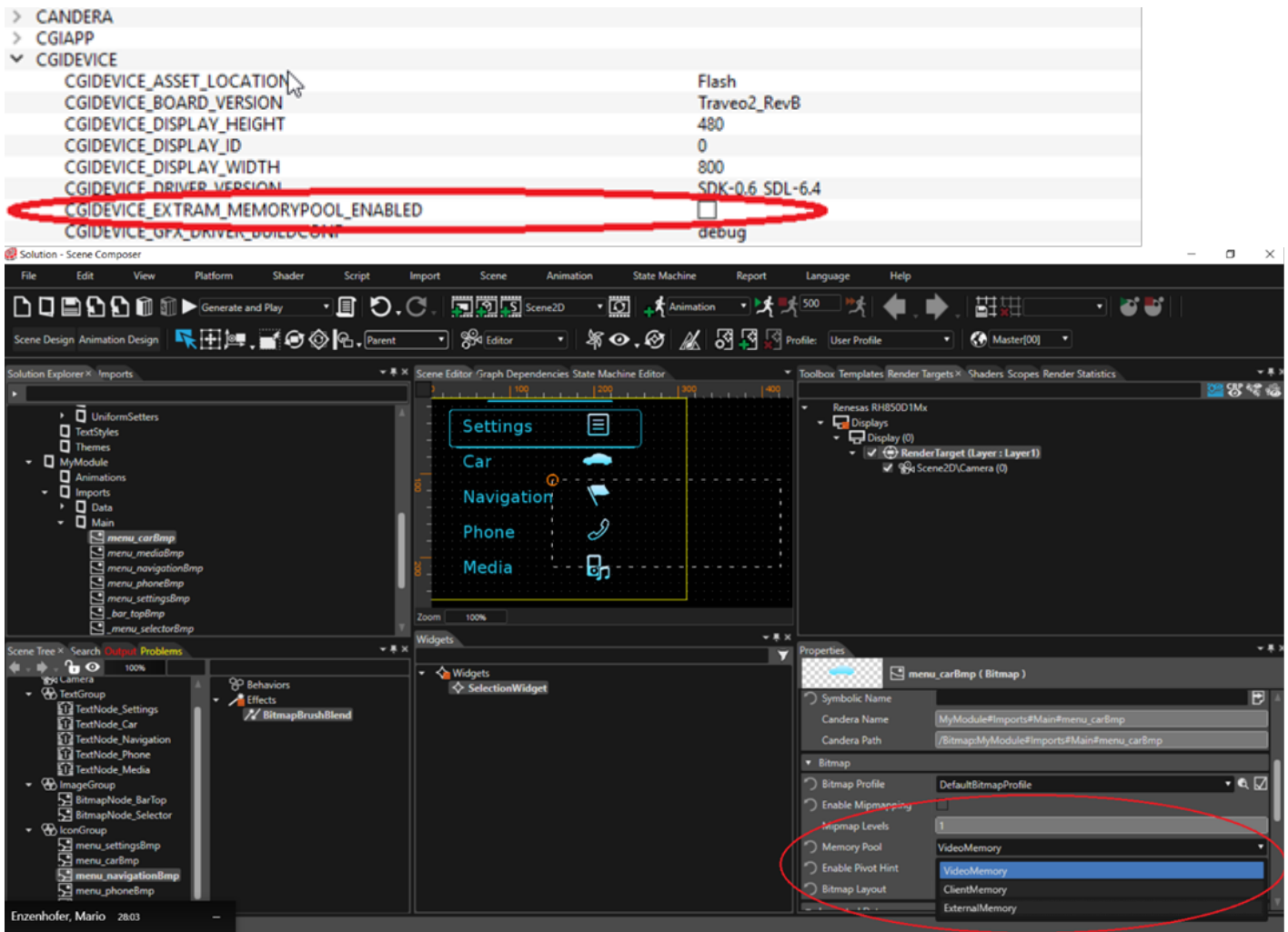
CGIDEVICE_INSTR_Q1_MEMLOC_TASK_WIN_PRIO_1	VramPool
CGIDEVICE_INSTR_Q1_SIZE_TASK_WIN_PRIO_1	65536
CGIDEVICE_INSTR_Q1_TASK_COPSES_WIN_PRIO_1	64
CGIDEVICE_INSTR_Q2_MEMLOC_TASK_WIN_PRIO_2	VramPool
CGIDEVICE_INSTR_Q2_SIZE_TASK_WIN_PRIO_2	65536
CGIDEVICE_INSTR_Q2_TASK_COPSES_WIN_PRIO_2	0
CGIDEVICE_INSTR_Q3_MEMLOC_TASK_WIN_PRIO_3	VramPool
CGIDEVICE_INSTR_Q3_SIZE_TASK_WIN_PRIO_3	65536
CGIDEVICE_INSTR_Q3_TASK_COPSES_WIN_PRIO_3	0
CGIDEVICE_INSTR_Q4_MEMLOC_TASK_MEM_PRIO_0	VramPool
CGIDEVICE_INSTR_Q4_SIZE_TASK_MEM_PRIO_0	65536
CGIDEVICE_INSTR_Q4_TASK_COPSES_MEM_PRIO_0	0
CGIDEVICE_INSTR_Q5_MEMLOC_TASK_MEM_PRIO_1	VramPool
CGIDEVICE_INSTR_Q5_SIZE_TASK_MEM_PRIO_1	65536
CGIDEVICE_INSTR_Q5_TASK_COPSES_MEM_PRIO_1	64
CGIDEVICE_INSTR_Q6_MEMLOC_TASK_MEM_PRIO_2	VramPool
CGIDEVICE_INSTR_Q6_SIZE_TASK_MEM_PRIO_2	65536
CGIDEVICE_INSTR_Q6_TASK_COPSES_MEM_PRIO_2	0
CGIDEVICE_LAYER0_MEMLOC	VramPool
CGIDEVICE_LAYER1_MEMLOC	VramPool
CGIDEVICE_LAYER2_MEMLOC	VramPool
CGIDEVICE_LAYER3_MEMLOC	VramPool
CGIDEVICE_LAYER4_MEMLOC	VramPool

EXTRAM support

By default, all the frame buffers for the layers, the instruction buffers, and the bitmaps (if they are not stored in Client memory) are stored in the VRAM.

However, it is possible to configure the memory location to EXTRAM (HyperRAM) instead. The memory location of the frame buffers and instruction buffers is configured via CMake (see Figure 2).

The memory location of the bitmaps is selected via Scene Composer (refer to Figure 3).



For target build, please keep in mind to check (enable) `CGIDEVICE_EXTRAM_MEMORYPOOL_ENABLED` in CMake in case you want to store images in external RAM.

Without that check it is not possible to allocate memory in the HyperRAM and the VRAM will be used instead.

Limitations

Each OTF layer (window) must use different TaskPrio ID.

OTF window surface height is minimum two slices (16 lines) and maximum ($2 * \text{window height} - 1$).

Maximum width for LBO blit area: 1600 (Maximum width for OTF layer (window) is 1600)

Supported values for OTF lines: 16, 32, 64, 128, 256

Supported CGI Studio samples for this target are:
LightPlayer

Empty
2DBasic
2DEffects
AdvancedCluster
Layouter
Transition
CourierSampleAppLight
Default CSALight's solution
New Traveo2Sample (covers few Traveo2 specific features)

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