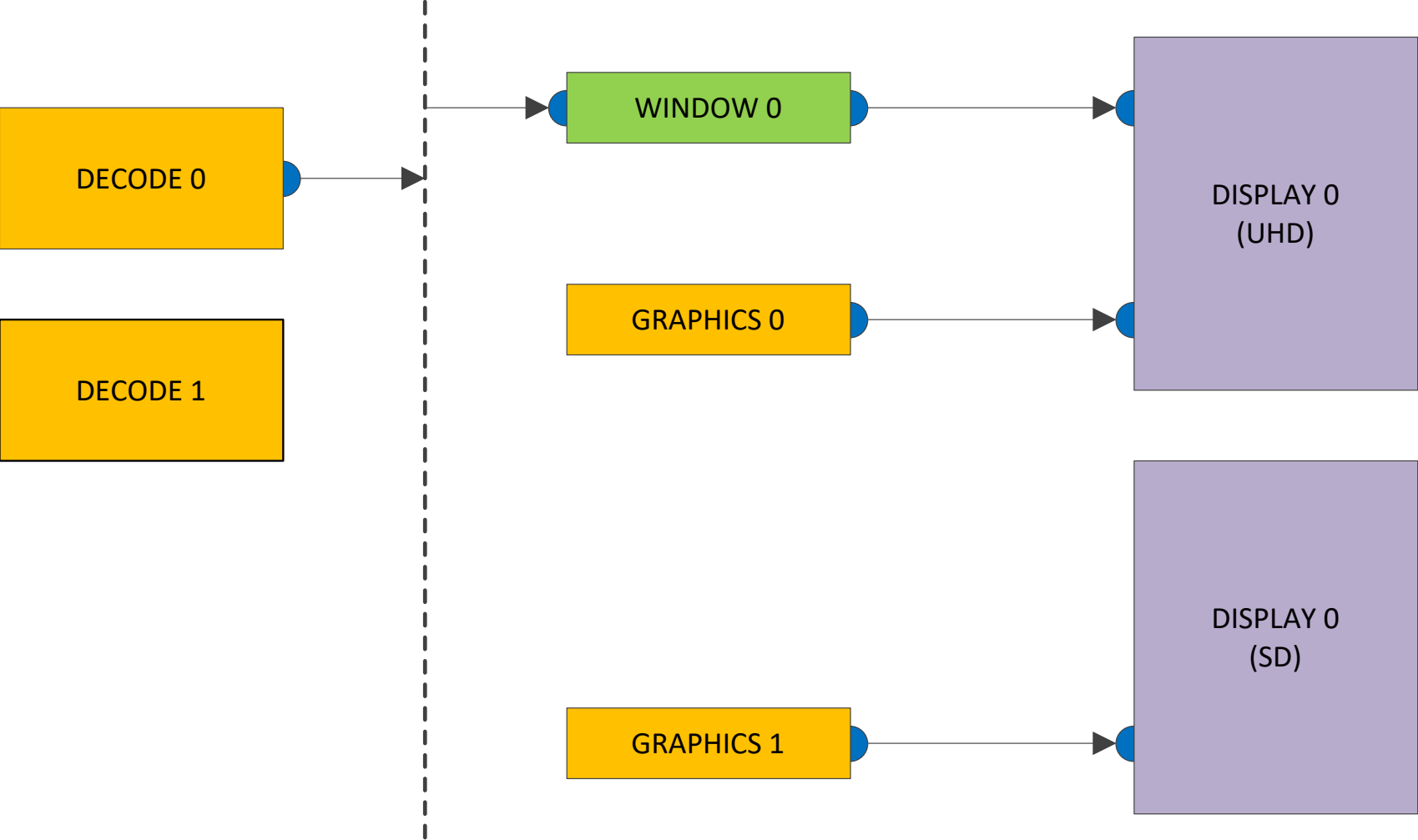# Box mode #4

7255

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Box mode #4 – Summary

- Required memory speed: 1x 32-bit DDR4-2400
  - No high-temperature refresh

- Features:
  - Single 3840x2160p60 decode or dual 3840x2160p30 + 1080p60 decode
  - UHD display
    - Additional independent SD display supported (graphics only – no video)
  - Main + graphics PIP
    - Decode and MAIN window display limitations for 3840x2160p cases.
  - No Multi-PIP support
  - No HDMI input
  - No transcoding

Possible video routings

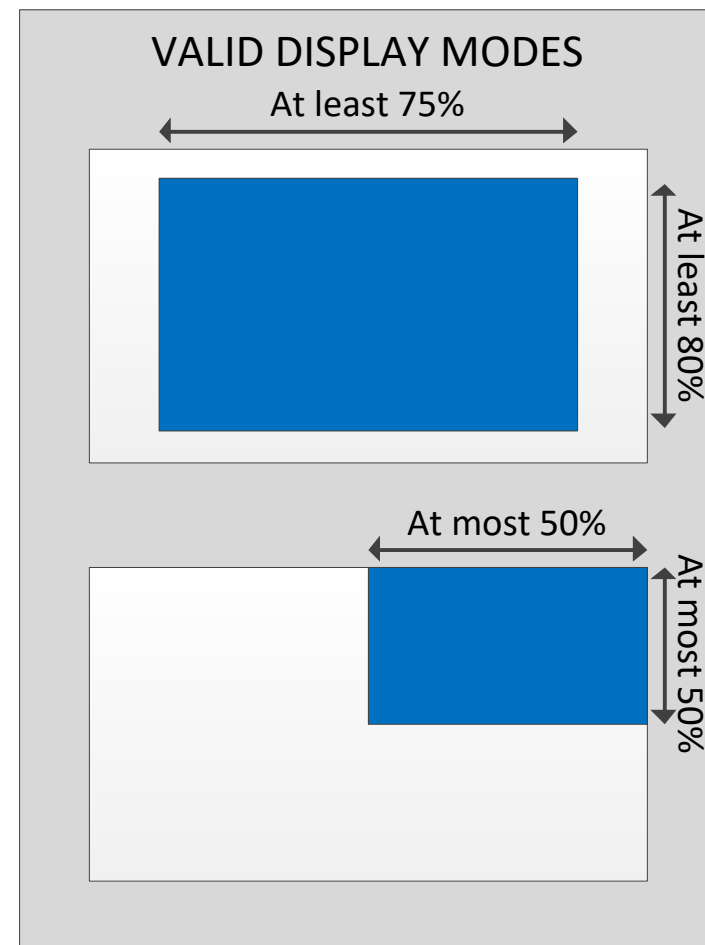**BROADCOM**®

Source limitations

- Decode 0
  - 3840x2160p60 10-bit HEVC / VP9 / AVS2.0
  - 3840x2160p30 8-bit AVC
  - 1920x1080p60 8-bit AVS / AVS+
  - 1920x1080p30/60i 8-bit MPEG2
  - No MTG support
  - Progressive sources larger than 1080p and all 1080i sources must have an aspect ratio less than or equal to 2.21:1

- Decode 1
  - Must be inactive when Decode 0 is handling any single source greater than 4kp30.
  - 1920x1080p60 10-bit HEVC / VP9 / AVS2.0
  - 1920x1080p60 8-bit AVC / AVS / AVS+
  - 1920x1080p30/60i 8-bit MPEG2
  - This decoder can only be used to feed the graphics path. It cannot feed the video network.

- Graphics 0 (UHD)
  - 1080p60 32-bit ARGB

- Graphics 1 (SD)
  - 480p60 32-bit ARGB

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HARDWARE RESOURCE MAPPING

Decoder	MFD	Hardware
Decode 0	MFD0	HVD0
Decode 1	(graphics only)	HVD0

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Window Limitations

- Window 0 (MAIN / UHD)
  - 1080i60 de-interlacing
  - When the display format is less than or equal to 1080p:
    - Up to full-screen (smooth-scaling)
  - When the display format is greater than 1080p, the diagram to the right specifies the limits.

VALID DISPLAY MODES

At least 75%

At least 80%

At most 50%

At most 50%

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Display and encode limitations

- Display 0 (UHD)
  - 3840x2160p60
  - Displays larger than 1080p must have an aspect ratio greater than or equal to 16:9

- Display 1 (SD)
  - 480i60

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