

# Box mode #7

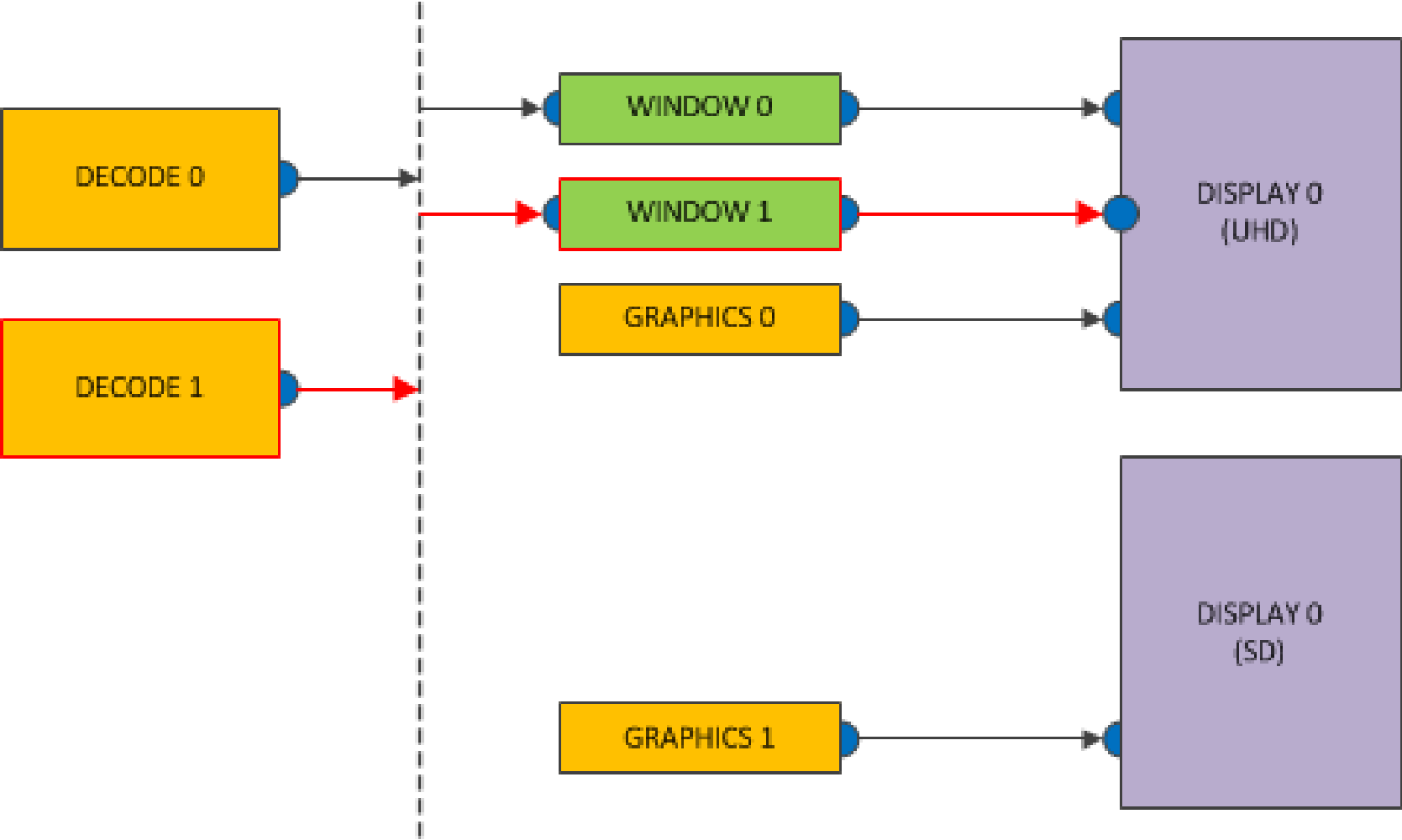
7260



## Box mode #7 – Summary

- Required memory speed: 1x 32-bit DDR4-2400
  - High-temperature refresh supported
- Features:
  - Single 3840x2160p60 decode or dual 1080p60 decode
  - UHD display
  - Main + limited PIP
    - Decode and MAIN window display limitations for 3840x2160p cases.
  - Multi-PIP (3x) supported
  - Independent SD display supported (graphics only – no video)
  - No HDMI input
  - No transcoding
  - No AC4 decode support

# Possible video routings



# Source limitations

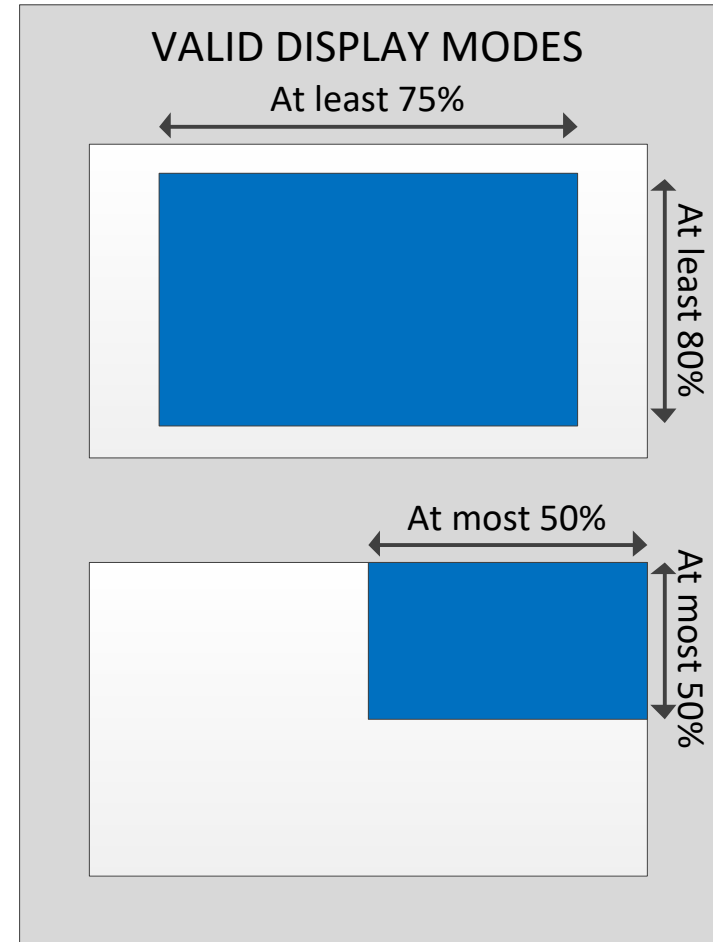
- Decode 0
  - 3840x2160p60 10-bit HEVC / VP9
  - 3840x2160p30 8-bit AVC
  - 1920x1080p30/60i 8-bit MPEG2
  - Multi-PIP mode (3x)
    - 1920x1080p30/60i 10-bit HEVC / VP9
    - 1920x1080p30/60i 8-bit AVC / MPEG2
  - No MTG support
  - Progressive sources larger than 1080p and all 1080i sources must have 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.
    - Can remain active while Decode 0 is in multi-PIP 3x mode.
  - 1920x1080p60 10-bit HEVC / VP9
  - 1920x1080p60 8-bit AVC
  - 1920x1080p30/60i 8-bit MPEG2
- Graphics 0 (UHD)
  - 1080p60 32-bit ARGB
  - Requires graphics compression
- Graphics 1 (SD)
  - 480p60 32-bit ARGB

# HARDWARE RESOURCE MAPPING

| Decoder  | MFD  | Hardware |
|----------|------|----------|
| Decode 0 | MFD0 | HVD0     |
| Decode 1 | MFD1 | HVD0     |

# 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.
  - Multi-PIP (3x) support
    - 480i60 de-interlacing
    - Up to 50%x50% display rectangle per multi-PIP.
- Window 1 (PIP / UHD)
  - Must be inactive when Decode 0 is handling any single source greater than 4kp30.
    - Can remain active while Decode 0 is in multi-PIP 3x mode.
  - Up to full-screen (smooth-scaling)
  - No de-interlacing



# 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