# BOX MODE #26

7439 Bx

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# BOX MODE #26 – SUMMARY

- **Required memory speed:  1x 32-bit DDR4-2400 (1% SSC)**
  - No high-temperature refresh
- **Features:**
  - 3840x2160p60 decode
  - 352x288p50 decode
  - UHD display only (no independent SD)
  - MAIN + PIP
  - No HDMI input
  - No encoding

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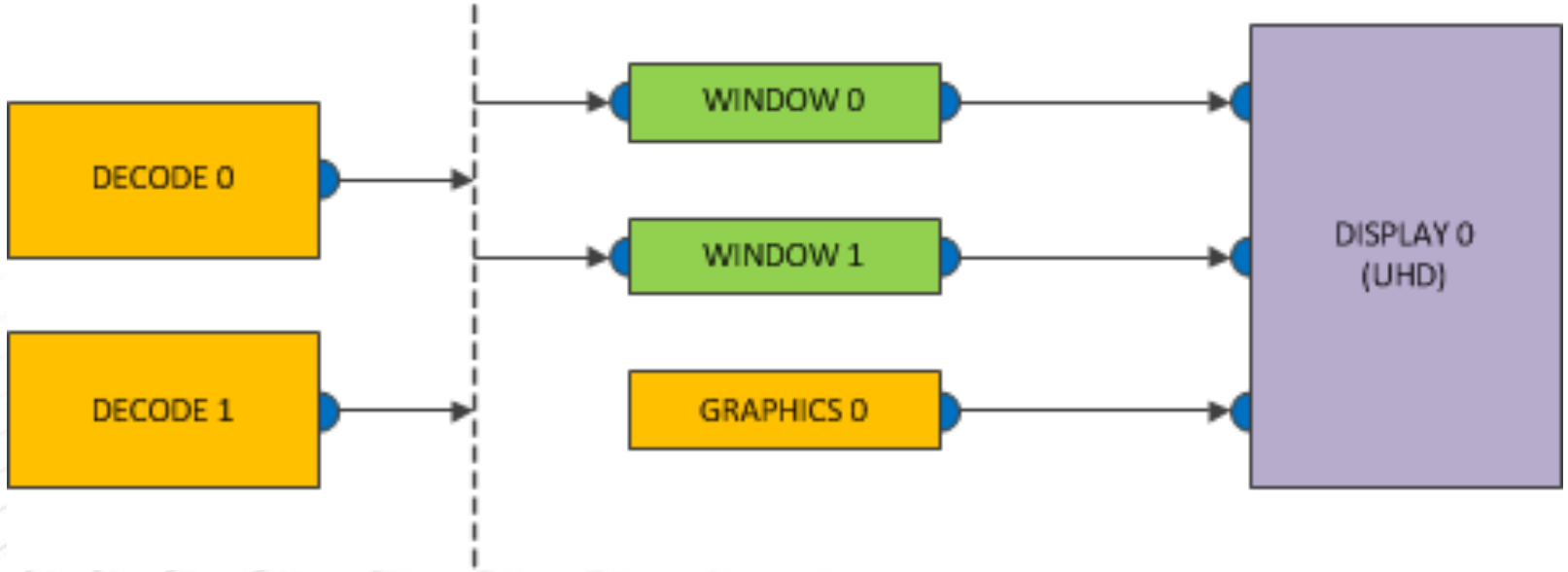
# POSSIBLE VIDEO ROUTINGS

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# SOURCE LIMITATIONS

- **For each source, you may toggle between any of the provided options.**
  - Only one option enabled at a given time.
- **Decode 0**
  - 3840x2160p60 10-bit HEVC
  - 3840x2160p60 8-bit VP9
  - 1920x1080p60 8-bit AVC / MPEG2
  - Sources larger than 1080p must have an aspect ratio less than or equal to 2.21:1
- **Decode 1**
  - 352x288p50 10-bit HEVC
  - 352x288p50 8-bit VP9 / AVC / MPEG2
- **Graphics 0 (UHD)**
  - 1080p50 32-bit ARGB

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# HARDWARE RESOURCE MAPPING

| Decoder | MFD | Hardware |
|---|---|---|
| Decode 0 | MFD0 | HVD0 |
| Decode 1 | MFD1 | HVD1 |

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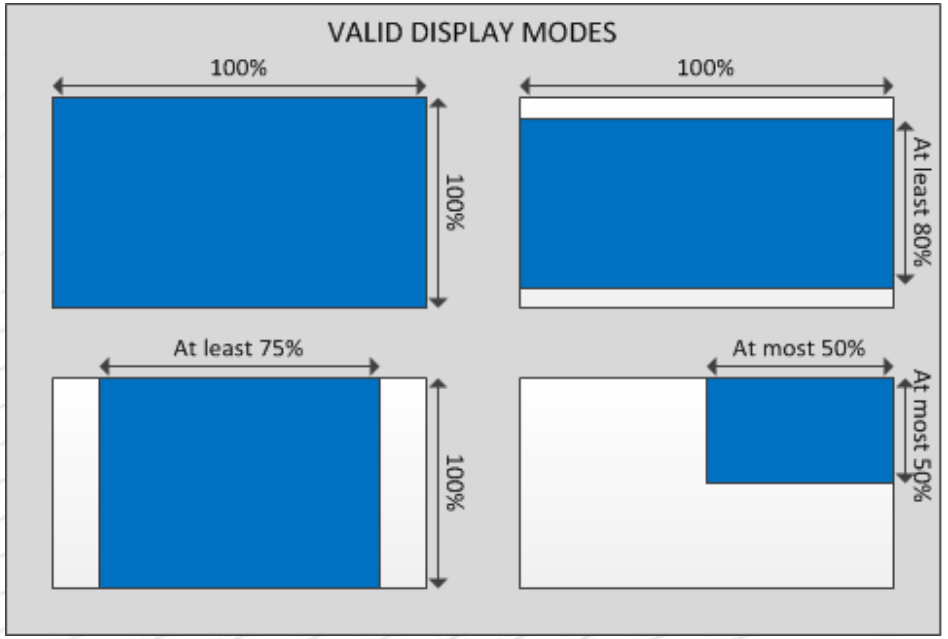
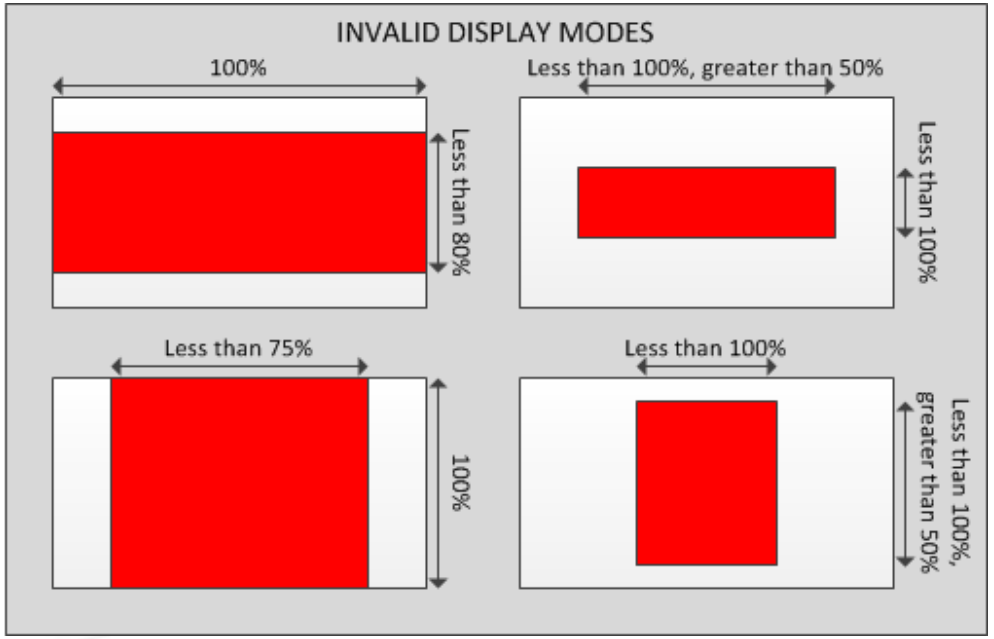
# WINDOW LIMITATIONS

- **Window 0 (MAIN / UHD)**
  - 1080i50 de-interlacing
  - When the display format size is less than or equal to 1080p then supports up to full-screen (smooth-scaling)
  - When the display format is greater than 1080p, the following diagram specifies the limits:

- **Window 1 (PIP / UHD)**
  - Up to ½ x ½ display (smooth scaling)
  - 576i50 8-bit de-interlacing

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# DISPLAY AND ENCODE LIMITATIONS

- **Display 0 (UHD)**
  - Up to 3840x2160p size and up to 50Hz rate
    - For example, 1080p60 is an appropriate size but exceeds the rate restriction.
  - Can be routed to HDMI or CVBS but only one size/format is supported at any time.
    - If HDMI cable connection is detected, can drive HDMI (up to UHD) and CVBS will be off.
    - If HDMI cable not detected, can drive CVBS (576i50) and HDMI will be off.
  - Displays larger than 1080p must have an aspect ratio greater than or equal to 16:9

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