

# **BOX MODE #7**

7439 Bx

### **BOX MODE #7 – SUMMARY**



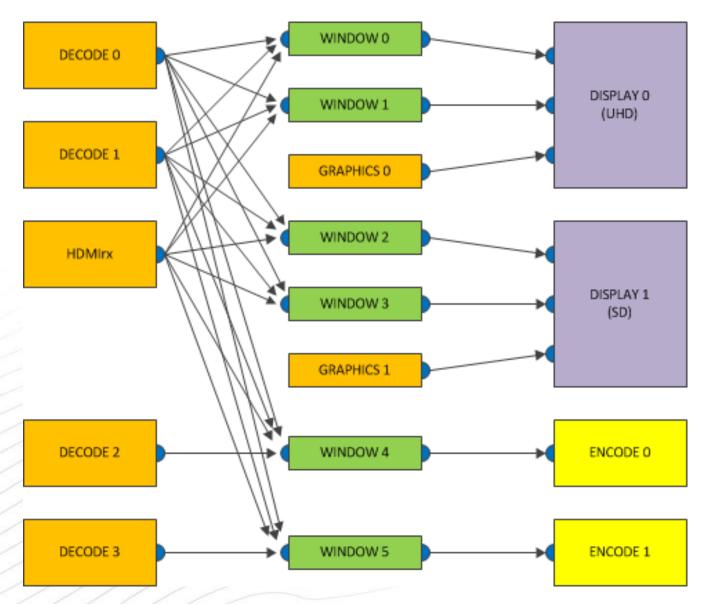
- Required memory speed: 2x 32-bit DDR3-2133
  - High-temperature refresh not supported

#### Features:

- 3840x2160p50 10-bit decode for MAIN
- 1920x1080p25/50i 8-bit decode for PIP
- Quad multi-PIP support
- HDMI input
- UHD + SD display
- Dual 1920x1080p25/50i to 720p25 transcoding

### **POSSIBLE VIDEO ROUTINGS**





#### **SOURCE LIMITATIONS**



- For each source, you may toggle between any of the provided options.
  - Only one option enabled at a given time.
- Decode 0
  - Single decode mode:
    - 3840x2160p50 10-bit HEVC
    - 3840x2160p50 8-bit VP9
    - 1920x1080p50 8-bit AVC / MPEG2
  - Multi-PIP mode (3x):
    - 1920x1080p25 / 50i 8-bit HEVC / VP9 / AVC / MPEG2
- Decode 1
  - 1920x1080p25 / 50i 8-bit HEVC / VP9 / AVC / MPEG2

- Decode 2
  - 1920x1080p25 / 50i 8-bit HEVC / VP9 / AVC / MPEG2
- Decode 3
  - 1920x1080p25 / 50i 8-bit HEVC / VP9 / AVC / MPEG2
- Graphics 0 (UHD)
  - 1080p50 32-bit ARGB
- Graphics 1 (SD)
  - 576p50 32-bit ARGB
- HDMIrx
  - **3840x2160p50**

## HARDWARE RESOURCE MAPPING



Decoder	MFD	Expected Usage	Hardware
Decode 0	MFD0	Primary decode	HVD0
Decode 1	MFD1	Secondary decode	HVD1
Decode 2	MFD2	Transcode 0	HVD1
Decode 3	MFD3	Transcode 1	HVD1

#### WINDOW LIMITATIONS



#### Window 0 (MAIN / UHD)

- Up to full-screen display (smooth scaling)
- 10-bit support / 1080i50 10-bit de-interlacing
- Multi-PIP mode (3x):
  - Up to 25% of the display canvas used for each window.
  - 576i50 8-bit de-interlacing

#### Window 1 (PIP / UHD)

- When Decode 0 is limited to 1080p25/50i 8-bit or less, this window may be up to full-screen display (smooth scaling)
- When Decode 0 is larger than 1080p25/50i 8-bit, this window is limited to ½ x ½ of the display canvas.
- 1080i50 8-bit de-interlacing

#### Window 2 (MAIN / SD)

- Up to full-screen display (smooth scaling)
- Multi-PIP mode (3x);
  - Up to 25% of the display canvas used for each window.

#### Window 3 (PIP / SD)

- When Decode 0 is limited to 1080p25/50i 8-bit or less, this window may be up to full-screen display (smooth scaling)
- When Decode 0 is larger than 1080p25/50i 8-bit, this window is limited to ½ x ½ of the display canvas.

#### Window 4 / 5 (Transcode)

- Full-screen display only
- 1080i50 8-bit de-interlacing support

### **DISPLAY AND ENCODE LIMITATIONS**



- Display 0 (UHD)
  - **3840x2160p50**
- Display 1 (SD)
  - **576i50**

- Encode 0
  - 720p25 8-bit AVC
- Encode 1
  - 720p25 8-bit AVC