

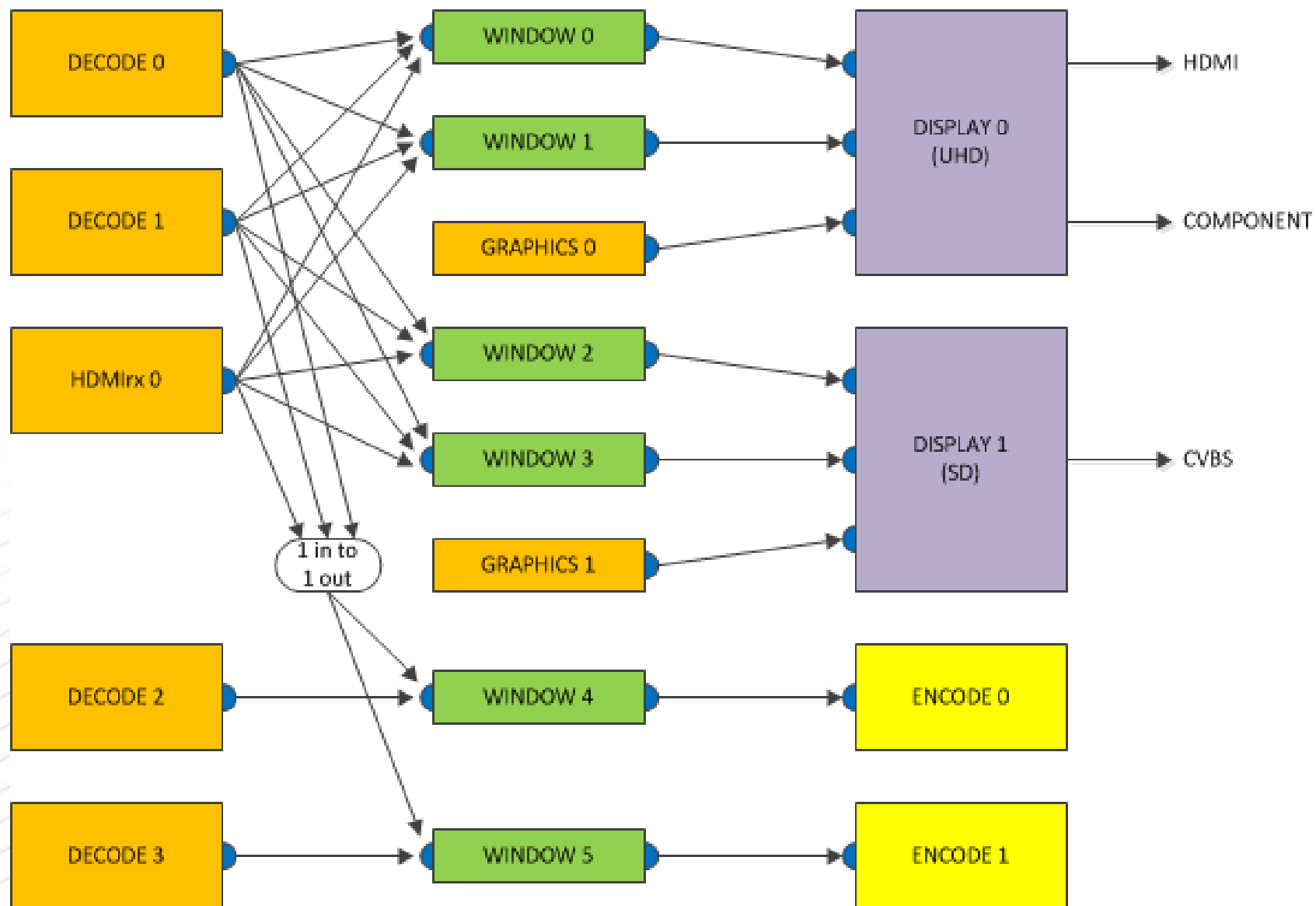
BOX MODE #1 V1.1

7445 D0



- **Memory speed: 3x 32-bit DDR3-2133**
- **Supports:**
 - 4kp60 10-bit HEVC decode
 - MAIN + PIP
 - Multi-PIP (up to four displayed at a time)
 - UHD + SD simultaneous outputs
 - HDMI input
 - Two encodes up to 720p30

POSSIBLE VIDEO ROUTINGS



- **For each source, you may toggle between any of the provided options.**
 - Only one option enabled at a given time.
- **Decode 0 (MAIN)**
 - 3840x2160p60 10-bit HEVC
 - 1080p60 8-bit AVC
 - Multi-PIP: (3x)
 - 1920x1080p60 8-bit HEVC
 - 1920x1080p30/60i 8-bit AVC
- **Decode 1 (PIP)**
 - 1920x1080p60 8-bit HEVC
 - 1920x1080p30/60i 8-bit AVC
- **HDMIrx 0**
 - 4096x2160p60 12-bit 4:2:0
 - 4096x2160p60 12-bit 4:2:2
 - 4096x2160p60 8-bit 4:4:4
- **Decode 2 (Transcode 0)**
 - 1920x1080p60 8-bit HEVC
 - 1920x1080p30/60i 8-bit AVC
- **Decode 3 (Transcode 1)**
 - 1920x1080p60 8-bit HEVC
 - 1920x1080p30/60i 8-bit AVC
- **Graphics 0**
 - 1080p60 32-bit ARGB
- **Graphics 1**
 - 480p60 32-bit ARGB
 - 576p50 32-bit ARGB

■ Window 0 (MAIN)

- Up to full-screen display (smooth scaling)
- Multi-PIP:
 - Up to three windows where the total combined display area is up to full-screen.
 - 480i60 / 576i50 8-bit de-interlacing
- 10-bit support
- 1080i60 10-bit de-interlacing

■ Window 1 (PIP)

- Size limits are based on current decode 0 operations.
 - When decode 0 is limited to decode 1 restrictions, this window can be up to full-screen display (smooth scaling)
 - Otherwise, this window is limited to $\frac{1}{2} \times \frac{1}{2}$ full-screen display (smooth scaling).
- 8-bit support
- 1080i60 8-bit de-interlacing

■ Window 2 (MAIN)

- Up to full-screen display (smooth scaling)
- 8-bit support

■ Window 3 (PIP)

- Size limits are based on current decode 0 operations.
 - When decode 0 is limited to decode 1 restrictions, this window can be up to full-screen display (smooth scaling)
 - Otherwise, this window is limited to $\frac{1}{2} \times \frac{1}{2}$ full-screen display (smooth scaling).
- 8-bit support

■ Window 4 (Transcode 0)

- Size of final encode
- 1080i60 de-interlacing

■ Window 5 (Transcode 1)

- Size of final encode
- 1080i60 de-interlacing

- **Display 0 (UHD)**

- 3840x2160p60 12-bit 4:2:0 (HDMI)
- 3840x2160p60 12-bit 4:2:2 (HDMI)
- 3840x2160p60 8-bit 4:4:4 (HDMI)
- 1920x1080p60 (component)
- Only one display format at a time
 - If you want 1080p60 component, HDMI also needs to be 1080p60.

- **Display 1 (SD)**

- 480i60 (CVBS)
- 576i50 (CVBS)

- **Encode 0**

- 720p30 8-bit AVC

- **Encode 1**

- 720p30 8-bit AVC

- **Multi-PIP is when a single decoder is capable of handling multiple full-resolution and a single display path can send them to the display.**
 - Here a “multi-PIP decode” is a standard 1080p30/60i 8-bit AVC channel.
- **These channels can be decoded, displayed and composited into a single display.**
 - In this box mode, when combined with the PIP path, the final display can provide four independent multi-PIP decodes.
 - The display can be up to 3840x2160p60.
- **For improved quality, each multi-PIP also has a 480i60 capable de-interlacer.**

