

# **BOX MODE #4**

7445 D0

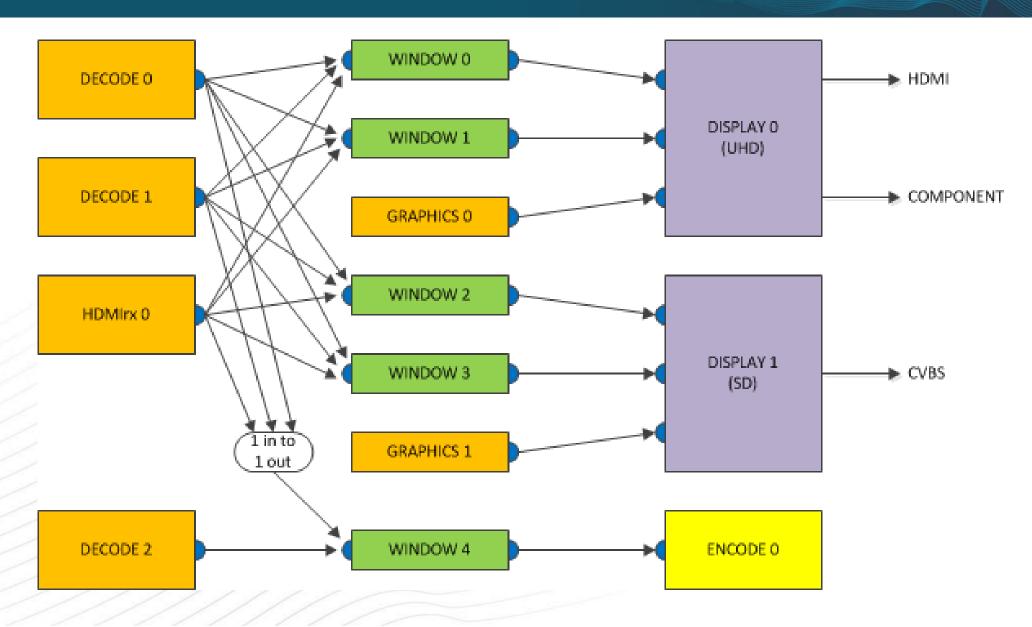
## **BOX MODE 4 - SUMMARY**



- Memory speed: 2x 32-bit DDR3-2133
- Supports:
  - 50Hz usages only
  - 4kp50 10-bit HEVC decode
  - MAIN + PIP
  - Multi-PIP (up to four displayed at a time)
  - UHD + SD simultaneous outputs
  - HDMI input
  - Single encode up to 720p25
- Suitable for 7252 D0

## **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 (MAIN)
  - 3840x2160p50 10-bit HEVC
  - 1080p50 8-bit AVC
  - Multi-PIP: (3x)
    - 1920x1080p25/50i 8-bit HEVC
    - 1920x1080p25/50i 8-bit AVC
- Decode 1 (PIP)
  - 1920x1080p25/50i 8-bit HEVC
  - 1920x1080p25/50i 8-bit AVC
- Decode 2 (Transcode 0)
  - 1920x1080p25/50i 8-bit HEVC
  - 1920x1080p25/50i 8-bit AVC

- Graphics 0
  - 1080p50 32-bit ARGB
- Graphics 1
  - 576p50 32-bit ARGB
- HDMIrx 0
  - 4096x2160p50 12-bit 4:2:0
  - 4096x2160p50 12-bit 4:2:2
  - 4096x2160p50 8-bit 4:4:4

## WINDOW LIMITATIONS



#### Window 0 (MAIN)

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

#### Window 1 (PIP)

- Up to ½ x ½ full-screen display (smooth scaling)
- 8-bit support
- 576i50 8-bit de-interlacing

#### Window 2 (MAIN)

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

#### Window 3 (PIP)

- Up to ½ x ½ full-screen display (smooth scaling)
- 8-bit support

#### Window 4 (Transcode 0)

- Size of final encode
- 576i50 de-interlacing

## **DISPLAY LIMITATIONS**



### Display 0 (UHD)

- 3840x2160p50 12-bit 4:2:0 (HDMI)
- 3840x2160p50 12-bit 4:2:2 (HDMI)
- 3840x2160p50 8-bit 4:4:4 (HDMI)
- 1920x1080p50 (component)
- Only one display format at a time
  - If you want 1080p50 component, HDMI also needs to be 1080p50.

## Display 1 (SD)

• 576i50 (CVBS)

#### Encode 0

• 720p25 8-bit AVC

### **MULTI-PIP USAGE**



- 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 1080p25/50i 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 3840x2160p50.
- For improved quality, each multi-PIP also has a 576i50 capable de-interlacer.

