



# Box mode #15

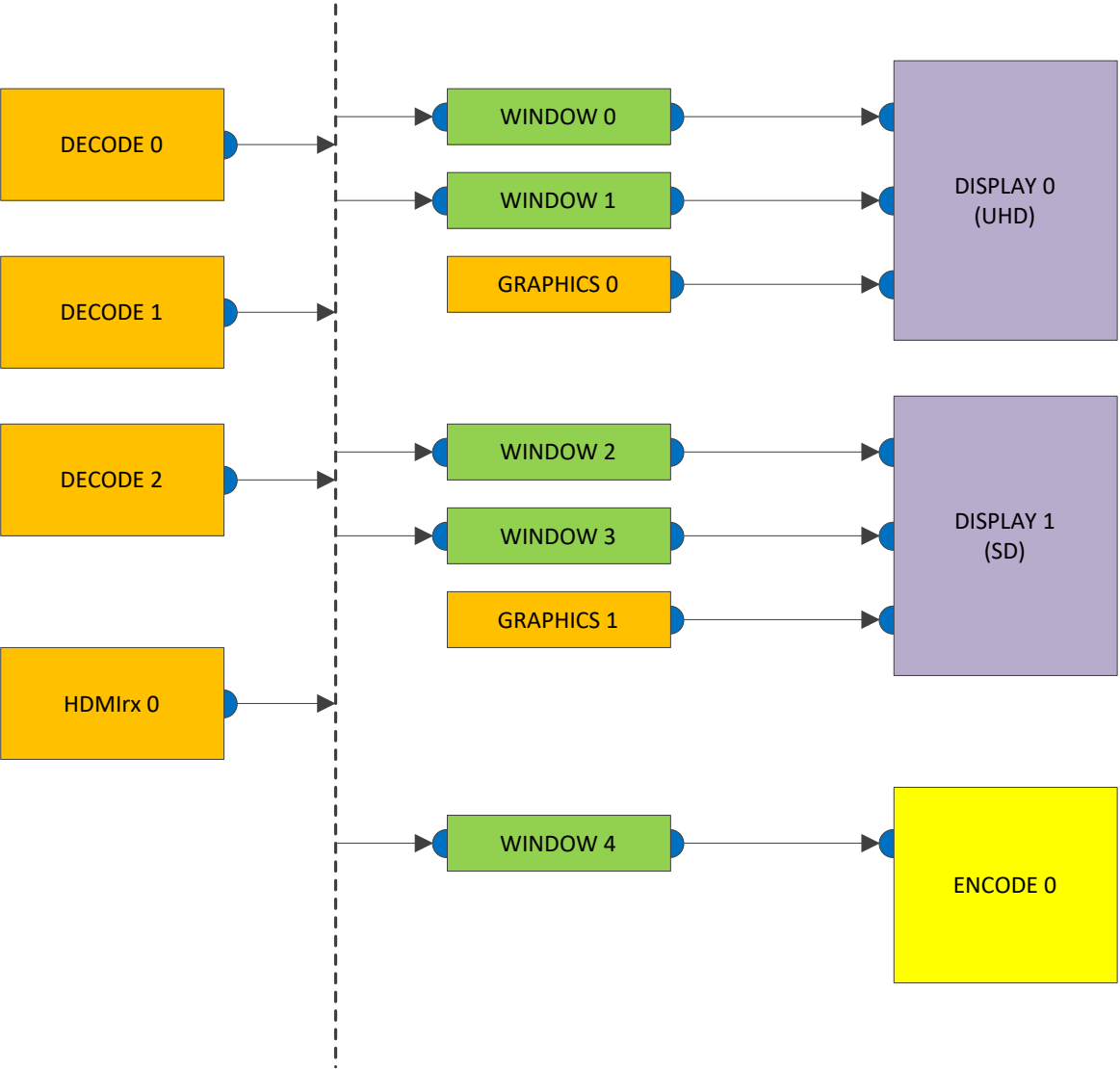
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## Box mode #15

- Required memory speed: 3x 32-bit DDR3-2133 / DDR4-2400
  - High-temperature refresh supported
- Features:
  - Three decoders:
    - One 3840x2160p60 10-bit decoder
    - Two 1920x1080p60 8-bit decoders
  - Multi-PIP supported (3+1)
  - UHD + SD display
  - Main + PIP
  - HDMI input supported
  - Encoding to 1080p60

# Possible video routings



# Source limitations

- Decode 0
  - 3840x2160p60 10-bit HEVC / VP9
  - 1920x1080p60 8-bit AVC / MPEG2
  - Multi-PIP (3x)
    - 1920x1080p30/60i 8-bit HEVC / VP9
    - 1920x1080p30/60i 8-bit AVC / MPEG2
- Decode 1 / Decode 2
  - 1920x1080p60 8-bit HEVC / VP9
  - 1920x1080p60 8-bit AVC / MPEG2
- HDMIrx
  - Up to 3840x2160p60
- Graphics 0 (UHD)
  - 1080p60 32-bit ARGB
- Graphics 1 (SD)
  - 480p60 or 576p50 32-bit ARGB

# Hardware resource mapping

Decoder	MFD	Hardware
Decode 0	MFD0	HVD0
Decode 1	MFD1	HVD1
Decode 2	MFD2	HVD2

# Window limitations

- Window 0 (MAIN / UHD)
  - Up to full-screen display (smooth scaling)
  - 1080i60 de-interlacing
  - Multi-PIP (3x)
    - Each display rectangle up to 25% x 25%
    - 480i60 de-interlacing
- Window 1 (PIP / UHD)
  - Up to full-screen display (smooth scaling)
  - 1080i60 de-interlacing
- Window 2 (MAIN / SD)
  - Up to full-screen display (smooth scaling)
  - No de-interlacing
  - Multi-PIP (3x)
    - Each display rectangle up to 25% x 25%
- Window 3 (PIP / SD)
  - Up to full-screen display (smooth scaling)
  - No de-interlacing
- Window 4 (Encode 0)
  - Full-screen display only
  - 1080i60 de-interlacing

# Display and Encode limitations

- Display 0 (UHD)
  - 3840x2160p60
- Display 1 (SD)
  - 480i60 or 576i50
- Encode 0
  - Up to 1080p60 8-bit