



# 4K(UHD) DOWN CONVERTER IF4K-DNC-A

The IF4K-DNC-A is a 12G-SDI compatible, cost-effective processor, equipped with a 4K (UHD) to HD down converter that provides simultaneous 12G and HD output. The unit also handles frame synchronization, color correction, HLG to SDR conversion, and supports wide color gamut as well as 12G and HD output. The IF4K-DNC-A supports AES and analog audio output and is ideal for audio monitoring.



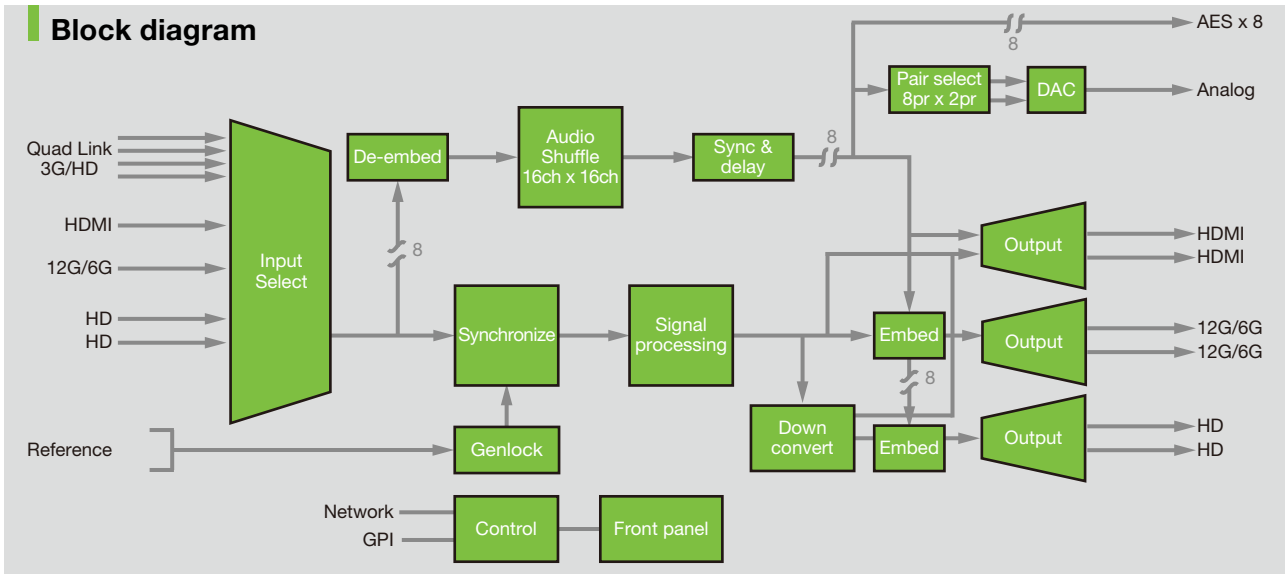
- 12G/6G-SDI, Quad Link 3G/HD-SDI, Dual Link 3G/HD-SDI, Single Link 3G/HD-SDI and HDMI inputs. Auto-detected input signals.
- Supports 59.94Hz, 60Hz, 50Hz, 30Hz, 29.97Hz, 25Hz for 4K (3840 x 2160) input and 59.94Hz, 60Hz, 50Hz for HD (1920 x 1080) input.
- 12G/6G-SDI x 2, HD-SDI x 2, HDMI x 2 video outputs.
- AES x 8 and analog audio x 2 (pair) audio outputs.
- Frame synchronization and color correction.
- HDR (HLG)/SDR conversion and wide color gamut (ITU-R BT.2020/709) conversion support. Enables simultaneous output of 12G-SDI HLG/ITU-R BT.2020 and HD-SDI SDR/ITU-R BT.709.
- HD video support from all outputs.
- HDMI input/output UHD/HD. HDR metadata inserted.
- Can be used as a frame synchronizer for HDMI to SDI conversion and 4K UHD/HD to HDMI converter for 4K UHD/HD monitoring.
- Adjustable audio delay. Timecode passed.
- Web server enables settings from PC or tablet.
- Video confidence monitor on front panel display.
- Payload ID (SMPTE-352) supported.

## Remote panel IF4K-REMOTE

- Offers connection to IF4K-DNC-A for remote control of:
  - HDR (HLG)/SDR conversion.
  - Select input signals.
  - Audio delay settings.



### Block diagram

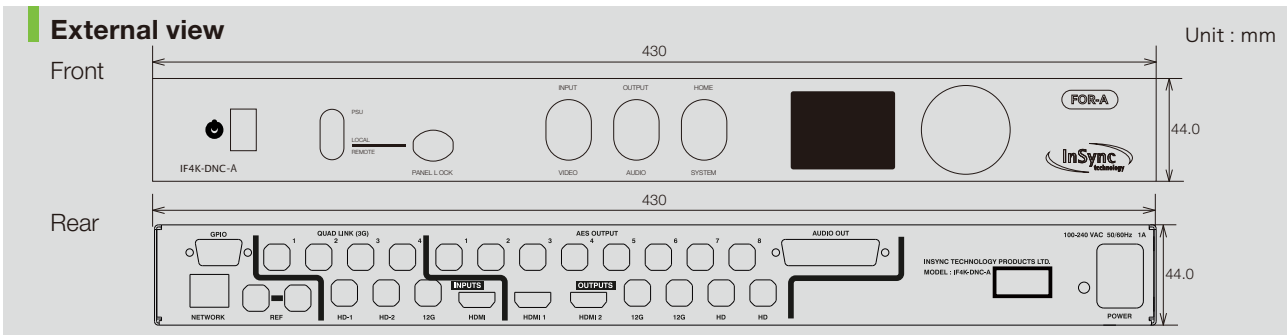


### Specifications

Video formats	12G-SDI: 2160/60p, 2160/59.94p, 2160/50p (Level-A, 2SI) 6G-SDI: 2160/30p, 2160/29.97p, 2160/25p (Single Link 2SI) Quad Link 3G-SDI: 2160/60p, 2160/59.94p, 2160/50p (Level-A/B, 2SI/SQD) HD-SDI: 1080/60i, 1080/59.94i, 1080/50i
Video inputs	
SDI	12G/6G-SDI: 12/6 Gbps BNC x 1 Quad Link 3G-SDI: 3 Gbps BNC x 4 HD-SDI: 1.5 Gbps BNC x 2
HDMI	HDMI: 2160/60p, 2160/59.94p, 2160/50p, 2160/30p, 2160/29.97p, 2160/25p, 1080/60i, 1080/59.94i, 1080/50i
Input cable equalization	12G/6G-SDI: 50m (using 5C-FB or equivalent cable: Belden 1694A) 3G/HD-SDI: 100m (using 5C-FB or equivalent cable: Belden 1694A)
System phase adjustment	-0.5H to +0.5H (Quad Link 3G-SDI)
Video outputs	
SDI	12G/6G-SDI: 12/6 Gbps BNC x 2 HD-SDI: 1.5 Gbps BNC x 2 HD-SDI output has 13-line delay in simultaneous output of 12G-SDI and HD-SDI.
HDMI	HDMI x 2: 2160/60p, 2160/59.94p, 2160/50p, 2160/30p, 2160/29.97p, 2160/25p, 1080/60i, 1080/59.94i, 1080/50i
Audio inputs	Embedded: 12G/6G/Quad Link 3G/HD-SDI: 16 channels (PCM audio pair x 8), 48 kHz, 24-bit
Audio outputs	
Analogue	D-sub 25 pin x 1, 4 channels
AES	PCM output, unbalanced, BNC x 8
Genlock input	BB: Tri-level sync: 0.3 Vp-p, 75Ω, BNC x 2, loop-through (to be terminated with 75Ω terminator, if unused)
Color processing	ITU-R BT.2020/ITU-R BT.709 conversion, selectable gamma (2.0/2.4)
Convert	Down conversion*, frame synchronization, HDR (HLG) to SDR conversion
Video function	Video level: Y gain, Black level, Chroma gain RGB color corrector: RGB Gain, Lift, Gamma (SDR)
Interfaces	Ethernet: 10/100BASE-TX, RJ-45 x 1
Temperature/humidity	0°C to 40°C/30% to 90% (no condensation)
Power/Consumption	100 V to 240 V AC ±10%/20 W
Dimensions/weight	430 (W) x 44 (H) x 170 (D) mm/2.3 kg

\* When input is UHD 30/29/25p, the downconverted output will be 1080 30/29/25psf.

### External view



ISO 9001 and 14001 certified (Sakura R&D)

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