# NANO 4K
## VIDEO PROCESSOR

ACTUAL SIZE

## SACO NANO 4K PROCESSOR | CONTROLS

The NANO is SACO's video processing powerhouse using state-of-the-art electronics. It's designed to process and transmit uncompressed video signals.

Based on SACO's proprietary V-Stream communication protocol, the NANO is fully integrated to SACO's line of video displays and video-enabled Shockwave light fixtures.

**4K QUALITY**   SACO's proprietary high-speed, high-resolution video pixel control.

**DEEP COLOR**   16-bit data sampling per channel for smooth gradients, with 65,536 shades per color. Extensive dynamic gamut of over a billion colors per pixel.

**MODULAR**   Supports up to three live inputs (switchable). Framelock enables processor stacking, if feed stitching is needed.
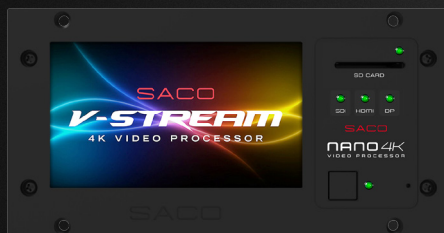
**PICTURE PERFECT**   Built-in frame buffer for advanced live image enhancing functions. Resizing engine for image mapping perfection.

SACO

# NANO 4K
## VIDEO PROCESSOR

# FEATURES GUIDE



## PHYSICAL

| | |
|---|---|
| CONSTRUCTION | Die-formed laser cut high grade 5052-H32 aluminum housing (0.063 "/ 1.6 mm) Machined high grade 6061-T6 aluminum face plate Black oxide steel hardware |
| MOUNTING | Mounts to a standard 19" rack cabinet mounting frame Compact footprint uses 2U (1/3 rack width) |
| FINISH | Durable polyester powder coating (housing) Black anodization (face plate) |
| WEIGHT | 2.3lbs (1.0kg) |

## THERMAL

| | |
|---|---|
| OPERATING TEMP | 32°F to 113°F (0°C to 45°C) |
| HEAT CONTROL | Forced air cooling by internal fan |

## ELECTRICAL

| | |
|---|---|
| INPUT VOLTAGE | 85-264 VAC (50-60 Hz) |
| INPUT CURRENT | 1.2A Maximum |
| POWER | 55W Maximum |

## CONNECTORS

| | |
|---|---|
| POWER INPUT | Standard IEC C7 receptacle |
| DATA INPUT | 1 x HDMI 2.0b input. Up to 4096 x 2160, up to 16-bit Deep Color, RGB and YCbCr supported. 1 x SDI 12G input. Up to 3840 x 2160 UHD SII format, 3G and HD supported. Re-clocked output. 1 x DisplayPort 1.3 input. Up to 4096 x 2160, up to 12-bit, RGB supported. |
| DATA OUTPUT | V-Stream data protocol with speeds up to 2.5 Gb/s 1 x dedicated V-Stream RJ45 receptacle 1 x SDI Output 12G, 3G and HD loop through 12 x Small Form Pluggable sockets (SFP) Supports up to 12 x Cat6 copper SFP adapters or 12 x LC duplex fiber optic SFP transceiver adapters |

## USER INTERFACE

| | |
|---|---|
| HARDWARE | 4.3in touch-screen for feed and parameters monitoring LED status indicators |
| API | Dynamic API control |

## VIDEO PROCESSING ENGINE

| | |
|---|---|
| IMAGE RESIZING | Crop, position and scale video inputs to match screen aspect ratio |
| IMAGE ENHANCING | Auto-sensing color space converter for accurate color reproduction (SDI only) Black level, contrast, brightness adjustments |
| FILM & XR MODES | Framelock function to synchronize video displays with the cameras Optional Genlock. Framelock standard Custom gamma curve HDR compatibility 24/48 \| 30/60 fps display sync |

## ACCESSORIES

| | |
|---|---|
| SACO DATA EXTENDER | Compact and flexible solution for long-run and multi-branch systems See specification guide for details |
| SFP ADAPTERS | Compatible with LC duplex optic fibre SFP transceivers Compatible with CAT6 copper SFP adapters |

## ADDITIONAL INFORMATION

| | |
|---|---|
| WARRANTY | 5 years |
| ORIGIN | Designed and made in North America |

V2.2-2021-03

# NANO *4K*

## VIDEO PROCESSOR

# SPECIFICATIONS GUIDE

**MODEL #**

**# DATA OUTPUT ADAPTERS**

_ _ Please specify number of outputs to be fitted with SFP adapters (Max 12)

**DATA OUTPUT ADAPTER TYPE**

**C** Cat6 copper SFP adapter [2]
**FS** Single mode LC duplex fiber optic SFP transceiver [3]
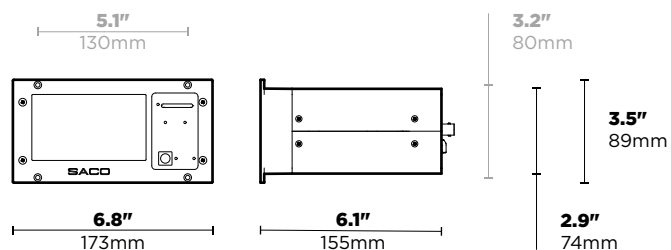**FM** Multi mode LC duplex fiber optic SFP transceiver [4]

[2] Maximum range up to 410ft (125m) for SACO video signal speeds.
[3] Maximum range over 1970ft (600m) depends of fiber type.
[4] Maximum range under 1970ft (600m) depends of fiber type.

**FILM MODE**

**FL** Framelock
**GL** Genlock

**5.1″**
130mm

**3.2″**
80mm

**3.5″**
89mm

**6.8″**
173mm

**6.1″**
155mm

**2.9″**
74mm

**(MOUNTING DIMENSIONS IN GREY)**

# SACO

DRY

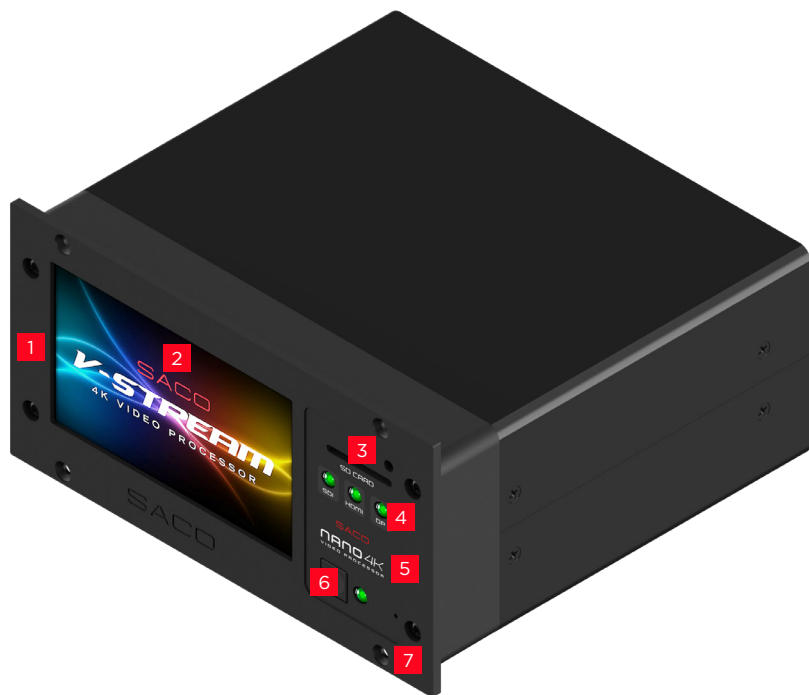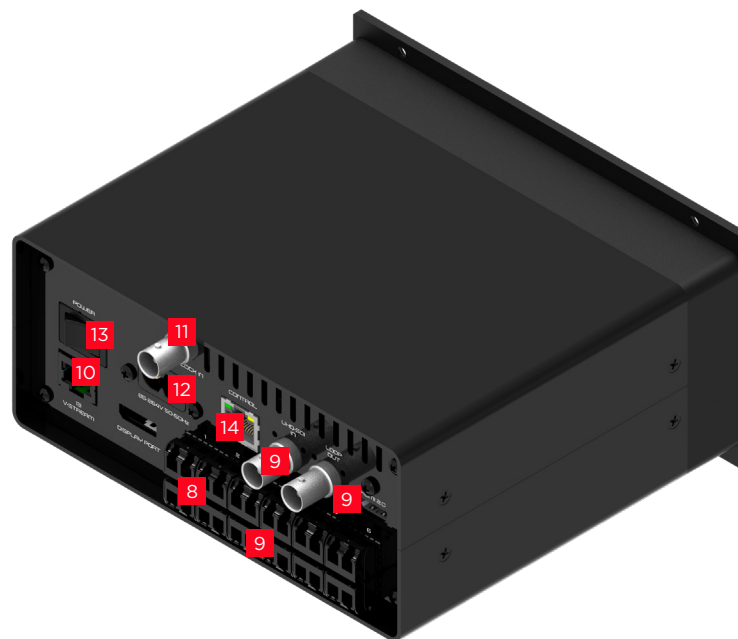# NANO 4K
## VIDEO PROCESSOR

# WIRING GUIDE





**1**   2U height 1/3 rack length

**2**   Touch panel for feed monitoring and easy command and control

**3**   SACO SD card slot for SACO support

**4**   Monitoring and status indicators

**5**   Multiprocessor stacking for unlimited feed stitching

**6**   Front mounted power switch

**7**   16-bit data sampling per channel (65,536 shades per color)

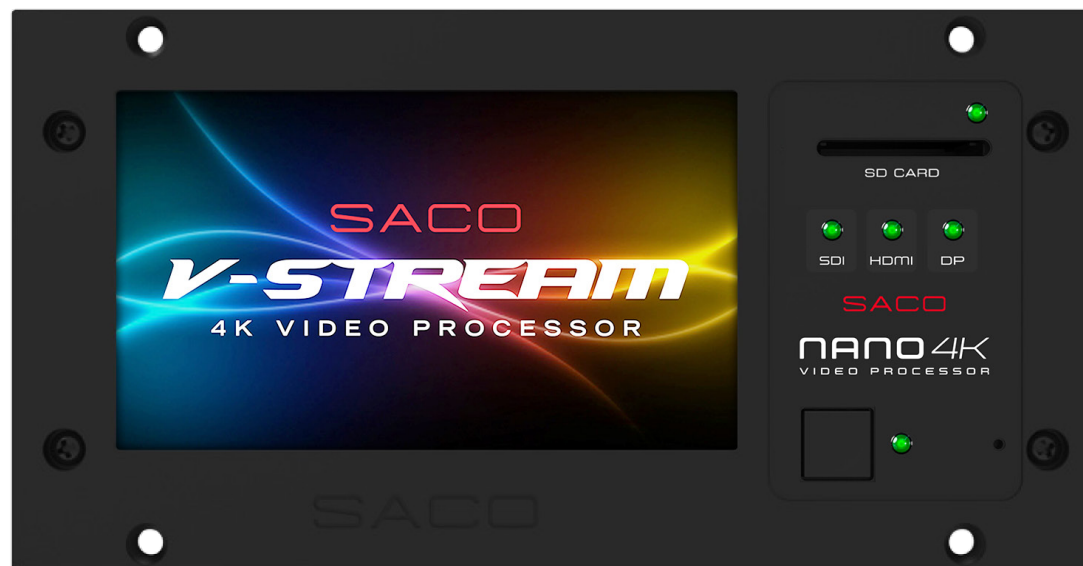**8**   Small Form Pluggable sockets (SFP) 6x V-Stream copper RJ45 direct outputs or 12x V-Stream fiber optic outputs

**9**   3 independent input channels (HDMI 2.0b / 12G SDI, 3G and HD supported / DisplayPort 1.3)

**10**   Dedicated V-Stream copper RJ45 output.

**11**   Genlock input (optional)

**12**   85-264 VAC power input

**13**   Back mounted power switch

**14**   RJ45 network connection for remote control and monitoring

# NANO 4K
## VIDEO PROCESSOR

SACO
**V-STREAM**
4K VIDEO PROCESSOR

SD CARD

SDI HDMI DP

SACO

NANO 4K
VIDEO PROCESSOR

---

POWER

GENLOCK IN

CONTROL

UHD-SDI IN

LOOP OUT

HDMI 2.0

85-264V 50-60Hz

1  2  3  4  5  6

13 V-STREAM

DISPLAY PORT

7  8  9  10  11  12

---

**V2.2-2021-03**

DRY

# SACO