

TECHNICAL SPECIFICATIONS

RED RANGER HELIUM



SENSOR TYPE	HELIUM 35.4 Megapixel CMOS
EFFECTIVE PIXELS	8192 × 4320
SENSOR SIZE	29.90 mm × 15.77 mm (Diagonal: 33.80 mm)
DYNAMIC RANGE	16.5+ stops
MAX DATA RATES	Up to 300 MB/s using RED MINI-MAG (480GB & 960GB) Up to 225 MB/s using RED MINI-MAG (120GB & 240GB)
MAX FRAME RATES	60 fps at 8K Full Format (8192 × 4320), 75 fps at 8K 2.4:1 (8192 × 3456) 60 fps at 7K Full Format (7168 × 3780), 75 fps at 7K 2.4:1 (7168 × 3024) 75 fps at 6K Full Format (6144 × 3240), 100 fps at 6K 2.4:1 (6144 × 2592) 96 fps at 5K Full Format (5120 × 2700), 120 fps at 5K 2.4:1 (5120 × 2160) 120 fps at 4K Full Format (4096 × 2160), 150 fps at 4K 2.4:1 (4096 × 1728) 150 fps at 3K Full Format (3072 × 1620), 200 fps at 3K 2.4:1 (3072 × 1296) 240 fps at 2K Full Format (2048 × 1080), 300 fps at 2K 2.4:1 (2048 × 864)
PLAYBACK FRAME RATES (PROJECT TIMEBASE)	23.98, 24, 25, 29.97, 47.95, 48, 50, 59.94, 60 fps, all resolutions
REDCODE SETTINGS RANGE FROM 2:1 UP TO 22:1	5:1 REDCODE for 8K Full Format (8192 × 4320) at 24 fps 12:1 REDCODE for 8K Full Format (8192 × 4320) at 60 fps 2:1 REDCODE for 4K Full Format (4096 × 2160) at 24 fps 3:1 REDCODE for 4K Full Format (4096 × 2160) at 60 fps

REDCODE RAW ACQUISITION FORMATS

8K Full Format (8192 × 4320), 2:1, 2.4:1, 16:9, 14:9, 8:9, 3:2, 6:5, 4:1, 8:1, and Ana 2x, 1.3x, 1.25x

7K Full Format (7168 × 3780), 2:1, 2.4:1, 16:9, 8:9, 6:5, 4:1, 8:1, and Ana 2x, 1.3x

6K Full Format (6144 × 3240), 2:1, 2.4:1, 16:9, 8:9, 3:2, 4:3, 6:5, 4:1, 8:1, and Ana 2x, 1.3x, 1.25x

5K Full Format (5120 × 2700), 2:1, 2.4:1, 16:9, 8:9, 6:5, 4:1, 8:1, and Ana 2x, 1.3x

4K Full Format (4096 × 2160), 2:1, 2.4:1, 16:9, 8:9, 3:2, 4:3, 5:4, 6:5, 4:1, 8:1, 1:1, and Ana 2x, 1.3x

3K Full Format (3072 × 1620), 2:1, 2.4:1, 16:9, 3:2, 4:3, 5:4, 6:5, 4:1, 8:1, and Ana 2x, 1.3x

2K Full Format (2048 × 1080), 2:1, 2.4:1, 16:9, 3:2, 4:3, 5:4, 6:5, 4:1, 8:1, and Ana 2x, 1.3x

APPLE PRORES

ProRes 422 HQ, ProRes 422 and ProRes 422 LT at 4K (4096 × 2160) up to 30 fps

ProRes 4444 XQ and ProRes 4444 at 2K (2048 × 1080) up to 120 fps

ProRes 422 HQ, ProRes 422 and ProRes 422 LT at 2K (2048 × 1080) up to 120 fps

AVID CODECS

DNxHR HQX at 4K (4096 × 2160) 12-bit up to 30 fps

DNxHR HQ, SQ and LB at 4K (4096 × 2160) 8-bit up to 30 fps

DNxHR 444 at 2K (2048 × 1080) 12-bit up to 120 fps

DNxHD 444 and HQX (1920 × 1080) 10-bit up to 120 fps

DNxHD HQ, SQ and LB (1920 × 1080) 8-bit up to 120 fps

CONSTRUCTION

Aluminum Alloy

WEIGHT

7.30 lbs (with Integrated Media Bay, PL Mount, and Gold Mount)

7.50 lbs (with Integrated Media Bay, PL Mount, and V-Lock)

DC IN POWER INPUT

11.5 V DC to 32 V DC

OPERATING TEMPERATURE

0°C to 40°C (32°F to 104°F)

STORAGE TEMPERATURE

−20°C to 50°C (−4°F to 122°F)

RELATIVE HUMIDITY

0% to 85% non-condensing

COLOR MANAGEMENT

Supports 33×33×33, 32×32×32, 26×26×26, and 17×17×17 3D LUTs

Variable number of 3D LUT outputs

User programmable shaper 1D LUTs

Tetrahedral interpolation, 16-bit processing

AUDIO

Integrated dual channel digital stereo microphones, uncompressed, 24-bit 48 kHz

Integrated dual channel 5-pin XLR

with preamplifiers, uncompressed, 24-bit 48 kHz

REMOTE CONTROL

External R.C.P. WiFi antenna with SMA connector

Ethernet, RS232, and GPI Trigger



MONITOR OUTPUTS

3G-SDI (HD-SDI) and MON-1
1080p RGB or 4:2:2, 720p RGB or 4:2:2
SMPTE Timecode, HANC Metadata, 24-bit 48 kHz Audio

MONITOR OPTIONS

DSMC2® RED Touch 4.7" LCD, DSMC2® RED Touch 7.0" LCD and
DSMC2® RED EVF (OLED) with cable-free connection.
RED Touch 9.0" LCD, RED Touch 7.0" LCD, RED Touch 5.0" LCD, RED PRO
7" LCD, DSMC2® Touch 7.0" Ultra-Brite LCD, BOMB EVF® (OLED) and
BOMB EVF® (LCOS) compatible with DSMC2® LCD/EVF Adaptor A or
DSMC2® LCD/EVF Adaptor D, and LCD/EVF cable.

REDCINE-X PRO DELIVERY FORMATS

4K: DPX, TIFF, OpenEXR (.RED via RREncode plugin)
2K: DPX, TIFF, OpenEXR (.RED via RREncode plugin)
1080p RGB 4:2:2, 720p 4:2:2 : QuickTime, JPEG, AVID AAF, MXF
1080p 4:2:0, 720p 4:2:0 : H.264, .MP4

VIDEO EDITING SOFTWARE COMPATIBILITY

Adobe Premiere Pro, AVID Media Composer,
DaVinci Resolve, Edius Pro, Final Cut Pro, Vegas Pro

* Tech specs reflect both current and projected information. Everything is subject to change.