

TERADEK Ranger 4K

Ranger 4K: Wireless 4K HDR Video System

Ranger is an uncompressed, 4K/ HDR wireless video transmission system for broadcast, live production, and professional A/V. The system utilizes our patented JSSC technology to send 10-bit, 4:2:2 video up to 5,000 ft. line of sight at less than 1 ms (millisecond) delay. Ranger operates over the unlicensed 5GHz band and is also capable of transmitting over the 4.9 GHz band, which may require special licensing in certain countries.



RANGER 4K TX

RANGER 4K RX

VIDEO

Video Inputs	12G-SDI SMPTE 2082-1 standard / 75 Ω (BNC x 1) 1 x HDMI 2.0 Type-A receptacle	N/A
Video Outputs	12G-SDI SMPTE 2082-1 standard / 75 Ω (BNC x 1)	12G-SDI SMPTE 2082-1 standard / 75 Ω (BNC x 2) 1 x HDMI 2.0 Type-A receptacle
SDI Ancillary Data Support	Supports transmitting metadata, timecode, and start/stop flags from certain camera manufacturers. Please refer to: https://support.teradek.com/hc/en-us/articles/217446087	
Color Sampling	SDI: YCbCr 4:2:2, 10-bit HDMI: RGB 4:4:4, 8-bit YCbCr 4:2:2, 10-bit	SDI: YCbCr 4:2:2, 10-bit HDMI: RGB 4:4:4, 8-bit YCbCr 4:2:2, 10-bit
Delay (TX to RX)	<0.001sec (without format conversions)	<0.001sec (without format conversions)

Supported Resolutions	4Kp23.98/24/25/29.97/30/50/59.94/60 1080p 23.98/24/25/29.97/30/50/59.94/60 1080psf23.98/24/25/29.97/30 1080i50/59.94/60 720p50/59.94/60 480p59.94/576p50 (via HDMI ports only) 480i (NTSC)/576i (PAL)	
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Input Cross Conversion	Yes, HDMI to SDI	N/A
Output Video Scaling	N/A	Yes, Framerate and Resolution Scaling

VIDEO PROCESSING

Video Compression	Uncompressed	Uncompressed
Test Pattern Generator	N/A	Yes
Video Format Conversion Support	Yes	Yes
Spectrum Analyzer	Yes (via Launchpad App)	Yes

RANGER 4K TX**RANGER 4K RX****AUDIO**

Audio Compression	48kHz 24-bit PCM	48kHz 24-bit PCM
Audio Input	Embedded SDI/HDMI Audio Input (2 channel)	N/A
Audio Output	N/A	Embedded SDI/HDMI Audio Input (2 channel)

PHYSICAL ATTRIBUTES

Dimensions	5.9" x 3.6" x 1.2" (149 x 91 x 30mm)	5.5" x 5.3" x 1.2" (140 x 133 x 30mm)
Weight	19.1oz (544g)	23.2oz (658g)
Construction	Milled aluminum (chassis), regulation-compliant PCB	Milled aluminum (chassis), regulation-compliant PCB

INTERFACES

Configuration Interface	OSD Screen with Menu Joystick Navigation	OSD Screen with Menu Joystick Navigation
Switches	On/Off Switch	On/Off Switch
Desktop App	Launchpad application for OSX & Windows	Launchpad application for OSX & Windows
Mobile App	Launchpad app (iOS and Android) configuration via Bluetooth	Launchpad app (iOS and Android) configuration via Bluetooth
USB Interface	Upgrade via Micro-USB	Upgrade via Micro-USB
Bluetooth	Bluetooth 5 LE	Bluetooth 5 LE

WIRELESS

Wireless	Non-DFS Frequencies: 5.190 ~ 5.230 GHz and 5.755 ~ 5.795 GHz DFS Frequencies: 5.270 ~ 5.670 GHz Licensed Frequencies: 4.9 ~ 5.1GHz and 5.85 ~ 6.0 GHz	
RF Channel Selection	Auto, Manual (Manual available for non-DFS, DFS and Licensed Frequencies)	Auto, Manual (Manual available for non-DFS, DFS and Licensed Frequencies)
Encryption	AES-256, RSA-1024 key exchange	AES-256, RSA-1024 key exchange
RF power	21 dBm	18 dBm
Antennas	1x Horizontal N-Type 2dbi antenna 1x Vertical N-Type 2dbi antenna	3x Vertical 2dbi antennas 2x Horizontal 2dbi antennas
Range	Up to 5000 ft line of sight (using Panel Antenna)	
Multicast	Can connect one transmitter to up to 6 receivers	
Noise Rejection	Can coexist with WiFi and 5GHz cordless phones Can operate up to 6 sets in same location	Can coexist with WiFi and 5GHz cordless phones Can operate up to 6 sets in same location

POWER

Power Input	2-Pin Circular locking connector 7-28 VDC	2-Pin Circular locking connector 6-28 VDC
Battery	Gold or V mount battery plate	Gold or V mount battery plate
Nominal Power Consumption	19 Watts	15 Watts
Operating Temperature	0~40 deg-C	0~40 deg-C

GENERAL

Mountability	Multiple mounting options with M3, 3/8" and 1/4-20" holes	Multiple mounting options with M3, 3/8" and 1/4-20" holes
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