

TERADEK Ranger MkII

Ranger MkII: Wireless 4K/HDR Video System

Ranger is the world's most capable professional wireless video system, featuring our Emmy and Academy Award-winning zero-delay, 4K HDR technology. Ranger's best-in-class performance allows broadcasters, live production companies, churches, and government entities to implement real-time wireless workflows over licensed and unlicensed bands, from 4.9 GHz up to 6.4 GHz. And new for 2023, Ranger now includes 12 additional RF channels over 6 GHz (U-NII 5), providing access to wireless spectrum rarely used by other electronics.



	RANGER MKII TX	RANGER MKII RX
VIDEO		
Video Inputs	12G-SDI SMPTE 2082-1 standard / 75 Ω (BNC x 1) 1x 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 1) 1 x HDMI 2.0 Type-A receptacle
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 1080p23.98/24/25/29.97/30/50/59.94/60 1080psf23.98/24/25/29.97/30 1080i50/59.94/60 720p50/59.94/60 480p50 576p59.94/60	
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
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 Output (2 channel)

RANGER MKII TX

RANGER MKII RX

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 USB-C	Upgrade via USB-C
Bluetooth	Bluetooth 5 LE	Bluetooth 5 LE

NETWORK

Wireless	Licensed Frequencies*: 4.850 ~ 5.150 GHz 5.350 ~ 5.470 GHz 5.850 ~ 5.925 GHz Unlicensed Frequencies: 5.150 ~ 5.250 GHz (Non-DFS) 5.250 ~ 5.350 GHz (DFS) 5.470 ~ 5.725 GHz (DFS) 5.725 ~ 5.850 GHz (Non-DFS) 5.725 ~ 5.850 GHz (Non-DFS) 5.925 ~ 6.425 GHz	
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*By using this product in the licensed frequencies, you acknowledge and agree to comply with all applicable regulations and rules, and to only operate this system in compliance with the applicable license requirements.

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	23 dbm EIRP	21 dbm EIRP
Antennas	1x Horizontal N-Type 2dbi antenna 1x Vertical N-Type 2dbi antenna	5x External 2 dBi antennas (included)
Range	Up to 5000 ft line of sight (using Panel Antenna)	Up to 5000 ft line of sight (using Panel Antenna)
Multicast	Can connect one transmitter to up to 6 receivers	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 6-28 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	12 Watts	18 Watts
Operating Temperature	0~40 deg-C	0~40 deg-C

GENERAL

Mountability	Multiple mounting options with 1/4"x20 and M3 holes	Multiple mounting options with 1/4"x20 and 3/8"x16 holes
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TERADEK Ranger Micro

Ranger Micro: Wireless HDR Video System

Ranger is the world's most capable professional wireless video system, featuring our Emmy and Academy Award-winning zero-delay, HDR technology. Ranger's best-in-class performance allows broadcasters, live production companies, churches, and government entities to implement real-time wireless workflows over licensed and unlicensed bands, from 4.9 GHz up to 6.4 GHz. And new for 2023, Ranger now includes 12 additional RF channels over 6 GHz (U-NII 5), providing access to wireless spectrum rarely used by other electronics.



	RANGER MICRO TX	RANGER MICRO RX
VIDEO		
Video Inputs	3G-SDI SMPTE 424M standard / 75 Ω (BNC x 1) 1x HDMI 2.0 Type-A receptacle	N/A
Video Outputs	3G-SDI SMPTE 424M standard / 75 Ω (BNC x 1)	3G-SDI SMPTE 424M standard / 75 Ω (BNC x 1) 1 x HDMI 2.0 Type-A receptacle
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	1080p23.98/24/25/29.97/30/50/59.94/60 1080psf23.98/24/25/29.97/30 1080i50/59.94/60 720p50/59.94/60 480p50 576p59.94/60	
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
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 Output (2 channel)

RANGER MICRO TX

RANGER MICRO RX

PHYSICAL ATTRIBUTES

Dimensions	2.4" x 4.1" x 1.3" (60 x 103 x 33mm)	4.8" x 3.7" x 1" (122 x 94 x 27mm)
Weight	7.3oz (206g)	10.3oz (292g)
Construction	Milled aluminum (chassis) and regulation-compliant PCB	Milled aluminum (chassis) and 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 USB-C	Upgrade via USB-C
Bluetooth	Bluetooth 5 LE	Bluetooth 5 LE

NETWORK

Wireless

Licensed Frequencies*:

4.850 ~ 5.150 GHz

5.350 ~ 5.470 GHz

5.850 ~ 5.925 GHz

Unlicensed Frequencies:

5.150 ~ 5.250 GHz (**Non-DFS**)

5.250 ~ 5.350 GHz (**DFS**)

5.470 ~ 5.725 GHz (**DFS**)

5.725 ~ 5.850 GHz (**Non-DFS**)

5.725 ~ 5.850 GHz (**Non-DFS**)

5.925 ~ 6.425 GHz

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Encryption	AES-256, RSA-1024 key exchange	AES-256, RSA-1024 key exchange
RF power	23 dbm EIRP	21 dbm EIRP
Antennas	1x Horizontal N-Type 2dbi antenna 1x Vertical N-Type 2dbi antenna	5x External 2 dBi antennas (included)
Range	Up to 5000 ft line of sight (using Panel Antenna)	Up to 5000 ft line of sight (using Panel Antenna)
Multicast	Can connect one transmitter to up to 6 receivers	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 7-28 VDC
Battery	N/A	Gold or V mount battery plate
Nominal Power Consumption	9 Watts	11 Watts
Operating Temperature	0~40 deg-C	0~40 deg-C

GENERAL

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