

PTZOptics Rise 4K

Technical Specifications

Technical Specs

Model Information

Feature	Value
Official SKU	`PT20X-RISE-4K-BK`
Model Name	`Rise 4K`



Connections

1. System Select (Resolution Dial)
2. Kensington lock
3. Line out
4. Line in
5. RS422 out (RJ45)
6. RS422 in (RJ45)
7. RS232 in (RJ45)
8. Dual XLR inputs (with 48V Phantom Power)
9. 12G-SDI output
10. Time code
11. Genlock

12. SFP+ fiber port (12G-SDI extension)
13. Restore button
14. MicroSD card slot
15. USB 3.0 Type-C
16. HDMI 2.0 output
17. 3G-SDI output
18. LAN (RJ45, 10/100/1000M) with PoE++
19. DC 12V power

Video Formats

Feature	Specification
Resolutions & Frame Rates HDMI / 12G-SDI	`4KP60`, `4KP59.94`, `4KP50`, `4KP30`, `4KP29.97`, `4KP25`, `4KP24`, `4KP23.98`, `1080P60`, `1080P59.94`, `1080P50`, `1080P30`, `1080P29.97`, `1080P25`, `1080P24`, `1080P23.98`, `1080I60`, `1080I50`, `1080I59.94`, `720P60`, `720P59.94`
Resolutions & Frame Rates 3G-SDI	`1080P60`, `1080P59.94`, `1080P50`, `1080P30`, `1080P29.97`, `1080P25`, `1080P24`, `1080P23.98`, `1080I60`, `1080I50`, `1080I59.94`, `720P60`, `720P59.94`

Imaging System

Feature	Specification
Sensor	`1 inch`, `CMOS`, `Progressive Scan`, `Effective Pixels: 50 million`
Lens	`20x`, `f9.79mm to 186.5mm`, `F2.8 to F4.5`
Digital Zoom	`16x`
Horizontal FoV	`70°` to `4.1°`
Vertical FoV	`41.9°` to `2.3°`

Feature	Specification
Minimum Illumination	`0.5Lux @ (F2.8, AGC ON)`
Shutter	`1/30s` to `1/10000s`
ND (Neutral Density) Filter	`Built-in` (`OFF`, `1/4`, `1/16`, `1/64`)
Image stabilization	`OIS` (`Optical Image Stabilization`)
OIS (Optical Image Stabilization) Operating Range	`3Hz` to `8Hz`
White Balance	`Auto`, `Manual`, `Indoor`, `Outdoor`, `One Push`, `VAR`
Digital Noise Reduction	`3D Digital Noise Reduction`
SNR	`≥55dB`
Supported Features	- `Backlight Compensation` - `Horizontal Flip & Vertical Flip` - `Image Freeze`

Video Output Reference

Feature	HDMI	3G-SDI	12G-SDI (Rise 4K)
Maximum Resolution	**4K @ 60fps** (3840 × 2160)	**1080p @ 60fps** (1920 × 1080)	**4K @ 60fps** (3840 × 2160)
Connector	HDMI 2.0	BNC (locking)	BNC (locking)
Signal Type	Uncompressed Digital	3G-SDI (Level-A or Level-B)	12G-SDI (Level-A)
Embedded Audio	Yes	Yes	Yes
Typical Cable Length	~49 ft (15 m) without extenders	~200–330 ft (60–100 m)	~100–165 ft (30–50 m)

Pan, Tilt, and Presets

Feature	Specification
Pan range	`±172°`
Tilt range	`-30°` to `+120°`
Pan Speed	`0.004°/S` to `180°/S`
Tilt Speed	`0.004°/S` to `180°/S`
Preset Positions Number	`255`
Preset Position Accuracy	`0.1°`

USB Specifications

Feature	Specification
Support Operating System	`Windows 7`, `Windows 8`, `Windows 10`, `Mac OS X`, `Linux`, `Android`
Color Space/Compression	`YUY2` / `H.264` / `MJPEG` / `H.265`
Video Format	`YUY2`: `Max 1080P@30fps`, `H.264 AVC`: `Max 2160P@60fps`, `H.265 HEVC`: `Max 2160P@60fps`, `MJPEG`: `Max 2160P@60fps`
UVC (USB Video Communication Protocol)	`UVC 1.1`, `Supports USB Embedded Audio`

Network Video and Audio

Feature	Specification
Video Compression	`H.265`/`H.264`/`MJPEG`
Video Stream	`First stream`, `Second stream`

Feature	Specification
First Stream Resolution	`3840x2160`, `1920x1080`, `1280x720`, `1024x576` etc.
Second Stream Resolution	`720x576`, `720x480`, `320x240` etc.
Bit Rate	`32kbps` to `102400kbps`
Bit Rate Control	`Variable bit rate`, `Fixed bit rate`
Frequency	`P50`: `1fps` to `50fps`, `P60`: `1fps` to `60fps`
Audio Compression	`AAC`
Audio Bit Rate	`96Kbps`, `128Kbps`

Protocols

Feature	Specification
Control Protocols	`HTTP(S)`, `ONVIF`, `VISCA/Pelco-D/Pelco-P`
Video Protocols	`NDI HX3`, `SRT`, `RTSP`, `RTMP(S)`
Other	`FreeD`

Video and Synchronization I/O

Feature	Specification
Video Outputs	1x `HDMI: 2.0`
	1x `12G-SDI: BNC type, 800mVp-p, 75Ω, Comply with SMPTE2082 standard`
	1x `3G-SDI: BNC type, 800mVp-p, 75Ω, Comply with SMPTE 424M standard`

Feature	Specification
Genlock	1x `BNC type□1.0Vp-p□75Ω□input only`
Timecode	1x `BNC type□75Ω□input only`

Network, USB, and Storage I/O

Feature	Specification
Network	1x `RJ45: 10M/100M/1000M adaptive Ethernet`
USB	1x `USB3.0, Type-C`
SD Card	1 channel `MicroSD`

Audio I/O

Feature	Specification
Audio	1x `Line In, 3.5mm Audio Interface□`
	1x `Line Out, 3.5mm Audio Interface□`
	2x `XLR Inputs (Optional 48V Phantom Power)`

Serial Control I/O

Feature	Specification
Control Options	1x `RS232 In: RJ45, VISCA/Pelco-D/Pelco-P protocol`
	1x `RS485/422: RJ45, VISCA/Pelco-D/Pelco-Protocol`
	1x `RS422 out: RJ45, VISCA/Pelco-D/Pelco-Protocol`

Power

Feature	Specification
Power	`JEITA type□DC IN 12V□`
Power Over Ethernet	`PoE++□IEEE 802.3bt□`
Input Current	`5A□maximum□`

Front Status LED Indicators

The camera front panel features a blue **Power LED** and a green **Standby Status LED**:

Camera State	Power LED (Blue)	Standby LED (Green)
Power-on (initial boot)	On	On
Normal operation (idle, no control)	Steady On	Off
Receiving IR remote signal	Steady On	Flashes once
Standby mode	On	On
Privacy Mode	On	Flashes continuously

General Specifications

Feature	Specification
Installation	`Normal` and `Inverted`
Tally Light	3x `(Bi-color, Red and Green)`

Environmental and Physical Specifications

Feature	Specification
Working Temperature	`0°C to 40°C`
Storage Temperature	`-40°C to 60°C`
Dimension	`205mm x 237mm x 272mm (8.07" × 9.33" × 10.71")`
Net weight	`4.8KG (10.58 lbs)`

Certifications

- CE-EMC
- CE-LVD
- FCC
- REACH
- RoHS
- UKCA
- NDI HX3 (Pending Certification)

Compliance

- The Rise 4K is **NDAA Compliant**.
- Covered by one or more claims of the HEVC patents listed at patentlist.accessadvance.com