Product Specifications

Optical

FOV, Circular	35 ° (RANGER 35)
FOV, Monocular (diagonal)	47 ° (RANGER 47)
FOV, Vertical	28 ° (RANGER 47)
FOV, Horizontal	36 ° (RANGER 47)
Shape Of View (SOV) Type 1	Full Rectangular (Type 1) (RANGER 47)
Shape Of View (SOV) Type 2	Vertical Inscribed Circle (Type 2) (RANGER 35)
Shape Of View (SOV) Type 3	Horizontal Inscribed Circle (Type 3) (RANGER 35)
FOV Masking	Customer provides software masking as necessary.
FOV, Binocular (diagonal)	47 ° (RANGER 47)
Overlap	100
Pupil Size	5, Non-Real mm
Eye Relief	15 mm (RANGER 47 Tactile)
	15 mm (RANGER 47)
	13 mm (RANGER 35)
Geometric Distortion	< +10% (RANGER 47 Tactile)
	< +10% (RANGER 47)
	< +9% (RANGER 35)
Accommodation (Fixed Or User Adjustable Range)	-5 TO +5 diopter (RANGER 47 Tactile)
	-4 TO +4 diopter (RANGER 35)
	-5 TO +5 diopter (RANGER 47)
Convergence Angle	0 °
Brightness (MAX)	40 fL
Brightness Levels	40, 30, 20 fL
Chromaticity (X)	.313
Chromaticity (Y)	.329
Contrast (Min.)	10000:1
Image Defect Criteria	[See document 104921](#)
Spatial Resolution	1.6 arcmn/pxl (RANGER 47)
	2.1 arcmn/pxl (RANGER 35)

Microdisplay

Display Technology	Organic Light-Emitting Diode (OLED)
Resolution	SXGA 1280 x 1024
Pixel Format	12 x 12 micron square pixels comprised of three vertical 4 X 12 micron sub pixels with R G B filters.
Color Depth	24-BIT (8 bits per R,G,B)

Video

Video Input Format	SXGA 1280 x 1024 @ 60 Hz
Video Interface	DVI over HDMI
Latency	< 0.002 ms
Video Image Quality	No visible artifacts, noise or abnormalities

Controls

On/Off Control	Power (Push Button) located on Display.
Brightness Control	Brightness button cycles through pre-set levels
Display Configuration Control	NVIS Unified (UNI) over USB Port
User Input Button(s)	4 Programmable Joystick HID buttons over USB
	Button 1 Function (left/distal)
	Button 2 Function (left/proximal)
	Button 3 Function (right/distal)
	Button 4 Function (right/proximal)
User Input Scroll Wheel	USB controlled zoom wheel with hard stops to match software limits.
Interpupillary Distance (IPD) Range	55 - 74 mm

Indicators

Power On/Off Indicator	Green LED located on Display.
	Always on when image is displayed.
	Off when power is turned off or in sleep mode. Blinking when in configuration mode.
Sync (video Signal) Indicator	Green LED(s) on Display
	Separate Left & Right channels.
	Always on when correct sync is being received.
	Blinking when in config mode.
	Off otherwise.

Power

Power Consumption	5 W
Power Supply	INPUT: 100-240 VAC, 0.3A 50-60 Hz. OUTPUT: +5 V DC, 2 A
Power Source	100-240 VAC, 50-60 Hz, 0.4 A (IEC Type C13 Cord)
Power Input	+5V DC, 2 A

Physical

Size (envelope)	8.1 L X 6.4 W X 3.0 H in
Mass	855 g
Color	Light green / Dark Brown
Cable Exit	Rear, horizontal cable exit
Cable Length	5 m
Cable Minimum Bend Radius	1 in
Cable Makeup	2x HDMI
	1x USB

	1x Power cord
Tripod Mounting	External; Platform with Standard 1/4"-20 TPI thread
Neck Strap	Neoprene strap with 3/8" webbing connectors; adjustable length of 25" to 51" with quick disconnects
Trackers Supported	IC3, IC2+, IS900 (MicroTrax), Ascension, and Polhemus
Tracker Mounting	External; Rear platform with tracker mounting holes

Environment

Operating Temperature Range	0 to 30 °C
Operating Humidity Range	85% Relative Humidity, Non-condensing
Storage Temperature Range	-20 to 60 °C
Storage Humidity Range	85% Relative Humidity, Non-condensing

Compliancy

| CE Compliance | CE Compliant |
| RoHS Compliance | RoHS Compliant |

Drawings