KNIGHT VISION™

AN/PVS-22 A1

(UNIVERSAL NIGHT SIGHT)

The AN/PVS-22 A1 clip-on Weapon Sight adds the latest high performance night vision to the venerable AN/PVS-22. The catadioptric lens provides high performance light collection with an effective f/1.2 in a light weight design. For use with up to 10x magnification day optics, the PVS-22 has been in service on systems from the M4 to the M24, and now accepts both AA and CR123 single cell batteries in the improved A1 version.

SPECIFICATIONS

SIZE: 7.3" (185mm) long, 3.6" (92mm) high, 1.43" (36mm) to optical centerline
WEIGHT: 1.75 lbs. (.80kg)
FINISH: Black Matte or Desert Sand Brown, Corrosion Resistant
CONTROLS: Pull On/Off Gain Control Knob, Manual Focus Ring
POWER: (**US Patent 7,576,515 & 7,576,516**) One standard AA battery, or one CR 123 battery (Single Interchangeable Battery™)
BATTERY LIFE: Exceeds 24 hours
MOUNT: KAC single throw lever to MIL-STD-1913 rail
WATERPROOF: 3 ft. for 4 hours 66 ft optional

OPTICAL CHARACTERISTICS

LENS DESIGN: 68mm Catadioptric
MAGNIFICATION: 1X (unity)
FOCUS RANGE/TYPE: 20 Meters to Infinity/Manual Focus
IMAGE INTENSIFICATION: ANVIS 18mm Configuration Image Intensified Tubes FOM Restrictions For Export May Apply

PERFORMANCE CHARACTERISTICS

RANGE: Recognize a Standing Man under Starlight: >500 m
Recognize a Standing Man under ¼ Moon: >700 m
Recognize a Vehicle under Starlight: >850 m
Recognize a Vehicle under ¼ Moon: >1000 m
BORESIGHT: (US Patent 7,143,359) <.5 MOA, no change to daysight point of impact
BORESIGHT RETENTION: <0.5 MOA over 300 rounds of .300 Win Mag.
WEAPONS CERTIFICATION: Acceptable for use with calibers up to and including .50 BMG.
CHEEK WELD: Unchanged
EYE RELIEF: Unchanged

UNS-A3

(UNIVERSAL NIGHT SIGHT-A3)

The UNS A3 Clip-on Weapon Sight provides image intensification in a package optimized for medium range application in conjunction with magnified day optics up to 8x. Performance is on-par with the PVS-22 with reduced bulk. Focus ring can be rapidly felt and manipulated with a gloved hand from a shooting position without losing sight of the target area. The UNS-A3 bridges the gap between small close-range and large long range devices.

SPECIFICATIONS

SIZE: 7.3" (186mm) long, 3.3" (85mm) high, 1.5" (38mm) to optical centerline
WEIGHT: 1.5lbs. (.68 kg)
FINISH: Flat Black Matte, Corrosion Resistant, alternate finishes available
CONTROLS: Pull On/Off Gain Control Knob, Manual Focus Ring
POWER: (**US Patent 7,576,515 & 7,576,516**) One standard AA battery, or one CR 123 battery (Single Interchangeable Battery™)
BATTERY LIFE: Exceeds 24 hours, CR 123 battery exceeds 36 hours
MOUNT: KAC quick attach / detach to MIL-STD-1913 rail or equivalent
WATERPROOF: 3 ft. for 4 hours

OPTICAL CHARACTERISTICS

OPERATING MODES: Clip-On Weapon Sight
LENS DESIGN: 62mm Refractive Telephoto Lens Design
MAGNIFICATION: 1X (unity)
FOCUS RANGE/TYPE: 20 Meters to Infinity/Manual Focus
IMAGE INTENSIFICATION: ANVIS 18mm Configuration Image Intensified Tubes FOM Restrictions For Export May Apply

PERFORMANCE CHARACTERISTICS

RANGE: Recognize a Standing Man under Starlight: >500 m
Recognize a Standing Man under ¼ Moon: >700 m
Recognize a Vehicle under Starlight: >850 m
Recognize a Vehicle under ¼ Moon: >1000 m
BORESIGHT: (US Patent 7,143,359) <.5 MOA, no change to daysight point of impact
BORESIGHT RETENTION: <0.5 MOA over 300 rounds of .300 Win Mag.
WEAPONS CERTIFICATION: Acceptable for use with calibers up to and including .50 BMG.
CHEEK WELD: Unchanged
EYE RELIEF: Unchanged

AN/PVS-30

(UNIVERSAL NIGHT SIGHT LONG RANGE)

The UNS™ LR LP clip-on weapon sight, Type Classified as AN/PVS-30, is currently in production for the US Army as the Sniper Night Sight on the Knight's Armament Company M110 Semi-Automatic Sniper System (SASS), and employed on various other in-service precision rifles. The PVS-30 offers high detail, long-range performance, optimally with day optics at high magnification. Tested and accepted to US Military Specifications.

SPECIFICATIONS

SIZE: 9.6" long (244mm) 3.5" (89mm) high, 1.5"(38mm) to optical centerline
WEIGHT: 2.9 lbs.(1.32kg)
FINISH: Flat Black Matte or Desert Sand Brown, Corrosion Resistant
CONTROLS: Pull On/Off Gain Control Knob, Manual Focus Ring
POWER: (**US Patent 7,576,515 & 7,576,516**) One standard AA battery, or one CR 123 battery (Single Interchangeable Battery™)
BATTERY LIFE: AA Exceeds 24hrs, CR 123 Exceeds 36 hrs
MOUNT: KAC single throw lever to MIL-STD-1913 rail
WATERPROOF: 3 ft. for 4 hours

OPTICAL CHARACTERISTICS

LENS DESIGN: 120mm Refractive Telephoto Lens
MAGNIFICATION: 1X (unity)
FOCUS RANGE/TYPE: 20 Meters to Infinity/Manual Focus
IMAGE INTENSIFICATION: ANVIS 18mm Configuration Image Intensified Tubes FOM Restrictions For Export May Apply

PERFORMANCE CHARACTERISTICS

RANGE: Recognize a Standing Man under Starlight: >800 m
Recognize a Standing Man under ¼ Moon: >1000 m
Recognize a Vehicle under Starlight: > 1000 m
Recognize a Vehicle under ¼ Moon: > 1500 m
BORESIGHT: (US Patent 7,143,359) <.5 MOA, no change to daysight point of impact
BORESIGHT RETENTION: <0.5 MOA over 300 rounds of .300 Win Mag.
WEAPONS CERTIFICATION: Acceptable for use with calibers up to and including .50 BMG.
EYE RELIEF: Unchanged

UNS-LR A2

(UNIVERSAL NIGHT SIGHT LONG RANGE)

The UNS-LR A2 clip-on Weapon Sight is a product improved version of the AN/PVS-30. Offering the same long-range performance of the PVS-30 and high magnification suitability, the addition of an extended focus lever enables precision clarity during rapid multiple target engagement while in a stable firing position with a gloved hand. The power/intensity knob has been relocated to the bottom of the body for faster identification of the control.

SPECIFICATIONS

SIZE: 9.6" long (244mm) 3.5" (89mm) high, 1.5"(38mm) to optical centerline
WEIGHT: 2.9 lbs. (1.32kg)
FINISH: Flat Black Matte or Desert Sand Brown, Corrosion Resistant
CONTROLS: Pull On/Off Gain Control Knob, Manual Focus Ring
POWER: (**US Patent 7,576,515 & 7,576,516**) One standard AA battery, or one CR 123 battery (Single Interchangeable Battery™)
BATTERY LIFE: AA Exceeds 24hrs, CR 123 Exceeds 36 hrs
MOUNT: KAC single throw lever to MIL-STD-1913 rail
WATERPROOF: 3 ft. for 4 hours

OPTICAL CHARACTERISTICS

LENS DESIGN: 120mm Refractive Telephoto
MAGNIFICATION: 1X (unity)
FOCUS RANGE/TYPE: 20 Meters to Infinity/Manual Focus
IMAGE INTENSIFICATION: ANVIS 18mm Configuration Image Intensified Tubes FOM Restrictions For Export May Apply

PERFORMANCE CHARACTERISTICS

RANGE: Recognize a Standing Man under Starlight: >800 m
Recognize a Standing Man under ¼ Moon: >1000 m
Recognize a Vehicle under Starlight: >1000 m
Recognize a Vehicle under ¼ Moon: >1500 m
BORESIGHT: (US Patent 7,143,359) <.5 MOA, no change to daysight point of impact
BORESIGHT RETENTION: <0.5 MOA over 300 rounds of .300 Win Mag.
WEAPONS CERTIFICATION: Acceptable for use with calibers up to and including .50 BMG.
CHEEK WELD: Unchanged
EYE RELIEF: Unchanged

UNS-TS

(UNIVERSAL NIGHT SIGHT- THERMAL SNIPER)

The UNS-Ts Clip-on Weapon Sight is purpose-built for superior visual detail and range in conjunction with higher magnification optics. Suited for use with individual high-magnification weapon sights or crew-based observation optics. The UNS-Ts provides a precision target selection or observation team with long-range Rapid Target Acquisition (RTA) capability in even the most adverse of battlefield conditions.

SPECIFICATIONS

SIZE: 9.0" (230mm) long, 3.2" (81mm) high, 1.5" (38mm) to optical centerline
WEIGHT: 2. 4lbs. (1. 08 kg)
FINISH: Flat Black Matte, Corrosion Resistant, alternate finishes available
CONTROLS: On/Off & Display Brightness control knob Auto/Manual Sensor Gain and Offset via menu control 3-button Keypad with user menu 3-button Tethered Remote with identical functions
POWER: Three AA Lithium batteries and extensive power saving features/modes Two CR 123 Lithium batteries for Tethered Remote adding extended power
BATTERY LIFE: 5 hours (less with wireless duty cycle)
MOUNT: KAC single throw lever to MIL-STD-1913 rail
WATERPROOF: 3 ft. for 4 hours
VIDEO: Digital CameraLink or Analog RS-170 (NTSC)
COMMUNICATION: RS-232/422 Serial
OPTIONAL ACCESSORIES: 3 button Tethered Remote with identical functions adding extended power

OPTICAL CHARACTERISTICS

OPERATING MODES: In-line clip-on/Standalone with digital reticles/handheld
LENS DESIGN: Refractive, 92mm EFL
FIELD OF VIEW (FOV): 6.8 degrees horizontal
MAGNIFICATION: 1X (unity)
FOCUS RANGE/TYPE: 25 Meters to Infinity/Manual Focus
IR SENSOR: 640 x 480 LWIR VOx, 17 µm pixel pitch (320X240 25 micron 5° FOV is available for export when licensing requires it)

PERFORMANCE CHARACTERISTICS

RANGE: Recognize a Standing Man under Clear conditions:>2000 m
Recognize a Standing Man under Dirty Battlefield: > 1000 m
BORESIGHT: (US Patent 7,143,359) <.5 MOA, no change to daysight point of impact
BORESIGHT RETENTION: <0.5 MOA over 300 rounds of .300 Win Mag.
WEAPONS CERTIFICATION: Acceptable for use with calibers up to and including .50 BMG.
WIRELESS COMMUNICATION: The weapon sight utilizes KAC's Soldier Personal Area Network™ (SPAN™) ultra-wideband wireless communication technology to transmit and receive full motion digital video.
DIGITAL ZOOM: 2X
LASER RANGEFINDER: Able to receive Laser Rangefinder data via SPAN™ wireless link

UNS-TSM

(UNIVERSAL NIGHT SIGHT- THERMAL SNIPER MOTORIZED)

The UNS-Ts Motorized (UNS-TsM) Motorized Focus Clip-on Weapon Sight expands the performance capability of the UNS-Ts with motorized focus, allowing the user to remain in undisturbed position when adjusting focus with the Powered Tethered Remote. The focus motor is quiet, reliable and extremely low in power consumption. Should the remoted not be used, focus buttons on the device body are easily accessible even with a gloved hand, but are protected from inadvertent activation.

SPECIFICATIONS

SIZE: 9.4" (239mm) long, 3.16" (80mm) high, 1.5" (38mm) to optical centerline
WEIGHT: 2 .8lbs. (1. 27 kg)
FINISH: Flat Black Matte, Corrosion Resistant, alternate finishes available
CONTROLS: On/Off & Display Brightness control knob, Auto/Manual Sensor Gain and Offset via menu control, 5-button Keypad with user menu (3-button) and motorized focus (2-button), 5-button Tethered Remote with identical functions as weapon sight
POWER: Three AA Lithium batteries and extensive power saving features/modes, Two CR 123 Lithium batteries for Tethered Remote adding extended power
BATTERY LIFE: 5 hours (less with wireless duty cycle)
MOUNT: KAC single throw lever to MIL-STD-1913 rail
WATERPROOF: 3 ft. for 4 hours
VIDEO: Digital CameraLink or Analog RS-170 (NTSC)
COMMUNICATION: RS-232/422 Serial
OPTIONAL ACCESSORIES: 5 button Tethered Remote with identical functions adding extended power

OPTICAL CHARACTERISTICS

OPERATING MODES: In-line clip-on/Standalone with digital reticles/handheld
LENS DESIGN: Refractive, 92mm EFL
FIELD OF VIEW (FOV): 6.8 degrees horizontal
MAGNIFICATION: 1X (unity)
FOCUS RANGE/TYPE: 25 Meters to Infinity/Motorized Focus
IR SENSOR: 640 x 480 LWIR VOx, 17 µm pixels (320x240 25 micron 5° FOV is available for export when licensing requires it)

PERFORMANCE CHARACTERISTICS

RANGE: Recognize a Standing Man under Clear conditions:>2000 m
Recognize a Standing Man under Dirty Battlefield: >1000 m
BORESIGHT: (US Patent 7,143,359) <.5 MOA, no change to daysight point of impact
BORESIGHT RETENTION: <0.5 MOA over 300 rounds of .300 Win Mag.
WEAPONS CERTIFICATION: Acceptable for use with calibers up to and including .50 BMG.
WIRELESS COMMUNICATION: The weapon sight utilizes KAC's Soldier Personal Area Network™ (SPAN™) ultra-wideband wireless communication technology to transmit and receive full motion digital video.
DIGITAL ZOOM: 2X
LASER RANGEFINDER: Able to receive Laser Rangefinder data via SPAN™ wireless link

UNS-F

(UNIVERSAL NIGHT SIGHT DUAL CHANNEL PVS-30)

Knight's Armament Company is excited to introduce the UNS-F. As KAC's newest addition to our Clip on Weapon Sight family, the UNS-F combines the best of both our highly successful AN/PVS-30 Image Intensified sights and our UNS thermal sight with a high resolution 12µ detector. This grants the user the benefits of both technologies in one lightweight sight. The UNS-F maintains all the attributes that have made us the market leader in night vision clip on weapon sights including a robust weapon hardened sight with standard KAC weapon sight attributes such a Boresight Accuracy Retention.

SPECIFICATIONS

SIZE: ≤ 10" (254mm) long
WEIGHT:3.3 lbs. (1.49kg)
FINISH: Flat Black Matte or Desert Sand Brown, Corrosion Resistant
CONTROLS: Pull On/Off Gain Control Knob, Manual Focus Ring
POWER: Three AA Batteries
BATTERY LIFE: >8 hours 0° C (L91 Lithium)
MOUNT: KAC 26597 for Quick Attach /Detach to Mil-STD-1913 Rail or equivalent mounting surface
WATERPROOF: 3 ft. for 4 hours
FOV: 9° (Image Intensified) 6° (Thermal)
WATERPROOF: N/A

OPTICAL CHARACTERISTICS

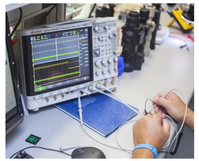
LENS DESIGN: 120MM Refractive Telephoto Lens Image Intensified / 50MM Refractive Thermal
MAGNIFICATION: Unity
FOCUS RANGE/TYPE: 20 Meters to Infinity
IMAGE INTENSIFICATION: ANVIS 18 MM configuration Image Intensified Tube 320 x 240, 12 Micron Thermal Detector, 15 Micron Emagin Display

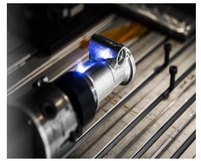
PERFORMANCE CHARACTERISTICS

RANGE: Recognize a Standing Man under Starlight: >800 m
Recognize a Standing Man under ¼ Moon: >1000 m
Recognize a Vehicle under Starlight: >1000 m
Recognize a Vehicle under ¼ Moon: >1500 m
BORESIGHT: (**US Patent 7,142,359**) <.5 MOA, no change to daysight point of impact
BORESIGHT RETENTION: <0.5 MOA over 300 rounds of .300 Win Mag.
WEAPONS CERTIFICATION: Acceptable for use with calibers up to and including .50 BMG.
CHEEK WELD: Unchanged
EYE RELIEF: Unchanged

VISION

Over 30 years ago, the US Government required clip-on weapon sight solutions that would meet the expectations of military users in fielded conditions. C. Reed Knight, Jr. had already established Knight's Armament Company (KAC) as a leader in research, development and rapid fielding of complex requirements for the special operations community. In the early 1990's, the Army's Test Lab NVESD and JSOC approached KAC requesting an interim solution while Army's Integrated Night Operations Devices (INOD) systems were perfected. The INOD concept ultimately culminated in weapon sight technology. In 1994 JSOC funded a program that resulted in the NADS (Night Augmented Day Sight). This system mounted above the day sight and was stable under weapon shock up to 50cal. These devices were engineered to be adapted to the day sights. It was during the development and testing of the NADS systems that Mr. Knight first imagined developing an inline clip on weapon sight. Rapid improvements in followed, including an inline solution allowing placement of the clip on weapon sight directly on the rail and the incorporation of a unique KAC patented boresight technology (BAR). This allowed the night sight to be used in front of an existing DVO without ever losing boresight or requiring any DVO boresight adjustments. Together, the BAR patent and the single throw lever mount created a strong force multiplier for Clip-On WS capability, requiring zero boresight adjustment when a WS was moved from gun to gun to gun. This capability began to reduce, if not eliminate, the need for the Warfighter to carry multiple special purpose and mission specific guns. These systems were built and sold to the U.S. Army in the mid 1990's. The AN/PVS-22, AN/PVS-26, AN/PVS-27, AN/PVS-29 and AN/PVS-30 Clip-On Weapon Sights are next generations of those early production sights.





The value of the clip-on weapon sight was originally underestimated by the US Government. Specialized user groups needed a solution that maintained the position of their day scope rather than remove the day scope and attach in its place a larger, more complicated device that degraded their usual day resolution simply to add night capability. These warriors spent thousands of hours honing their skills with the weapon platform (rifle and day scope) and refused to remove it for what they felt was a less optimized device. The ability to add a "Clip-On" device, that added night time capability without disturbing the original weapon platform, suited their needs much better. Over time, the "Clip-On" device met all the users' requirements without disturbing their established rifle and day scope setup. Using a boresighted "clip on" system allows the shooter to maintain his zero (relationship between the rifle and day optic) with no additional changes or adjustment. That is to say the eye relief, cheek-weld, shooting dope and characteristics of the weapon, including the bullet strike point, remain the same. Every KAC Clip on Sniper Night Sight (CoSNS) uses factory set wedge-prisms (US Patent 7,142,357 B2) that compensate for any image shift in the day optics caused by manufacturing and assembly errors or wear in the night optics over time. The advantages of this Knight's inline approach are trust/confidence, precision, speed and familiarity.

Knight's Armament Company and its KnightVision™ business continues its unrelenting focus on research, design and production of Weapon Sights and rifles adapted to Special Operator requirements. These design improvements include the constant attention for reduction in size and weight, increased power and extended range performance. From its humble beginnings of developing a temporary solution in the early 1990's, KAC now has an entire Family of Inline Clip-on Universal Night Sights (UNS) including IR and 12 'in-line' types of night vision devices. All KAC night vision devices are designed to be positioned in front of conventional 'day scopes' on the user's rifle providing the user with the same night time zero as their unaided day scopes. The UNS products can be fitted onto most fielded weapons and/or day optical sights. This innovative design and engineering solution has been awarded with milestone US contracts as their longer range version of USSOCOM's UNS. All KAC's UNS products are manufactured in-house at KAC's Titusville facility to ensure the highest quality for these state-of-the-art electro-optical units.

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PROUDLY SUPPLIED TO THE US MILITARY

KNIGHT VISION™

ITAR

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ICON KEY

FAMILY OF THERMAL SIGHTS

These high performance ITAR controlled Knight's Armament Company (KAC) unity magnification (1X) thermal weapon system devices allow for operation under daytime, nighttime (through complete darkness) or adverse all-weather conditions augmentation of any weapon system equipped with MIL-STD-1913 rail or with a KAC Rail Adapter System (RAS). They are intended for use in conjunction with day optics mounted to weapons as the primary sighting system. These thermal CoWS devices can be mounted clip-on and inline forward of the day optics without any adverse effect on the weapon's point of aim or point of bullet impact. Each device includes KAC's patented Boresight Accuracy Retention (BAR®) to maintain factory boresight to within 0.5 MOA of alignment to the Day Scope point of impact. These devices do not require any zeroing procedure when installed in front of the day optics. These devices are equipped with manual or motorized focus control, combined single pull On/Off & image gain control switch for variable display brightness to allow users to maintain their dark-adapted vision, calibration, polarity, zoom and reticle selection. These devices also include a power management system that provides over 6 hours of continuous use and optimization of size, weight, power and cost for either Individual Soldier use in an urban battlefield environment or Sniper Soldier use in an extended range battlefield environment.

FAMILY OF IMAGE INTENSIFIED SIGHTS

These high performance ITAR Controlled Knight's Armament Company (KAC) CoWS night vision devices allow for night operation augmentation of any weapon system equipped with MIL-STD-1913 rail or with a KAC Rail Adapter System (RAS). They are intended for use in conjunction with day optics mounted to weapons as the primary sighting system. These low light (quarter moon) image intensification (I2) devices can be mounted clip-on and inline forward of the day optics without any adverse effect on the weapon's point of aim or point of bullet impact. Each device includes KAC's patented Boresight Accuracy Retention (BAR®) to maintain factory boresight to within 0.5 MOA of alignment to the day scope point of impact. These devices do not require any zeroing procedure when installed in front of the day optics. These devices are equipped with manual focus control and combined single pull On/Off & image gain control switch for variable brightness to allow users to maintain their dark-adapted vision. These devices also include KAC's patented Single Interchangeable Battery power system allowing for either a single standard alkaline AA battery or a CR123 battery that will provide over 36 hours of continuous use.