

ATN Z4

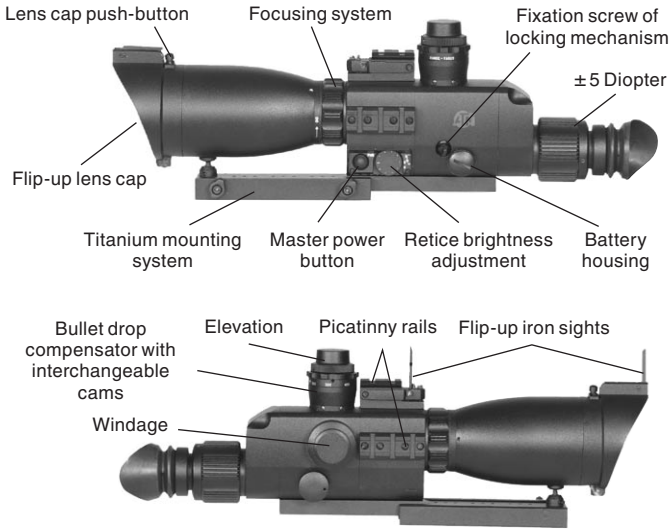
Night Vision Riflescope



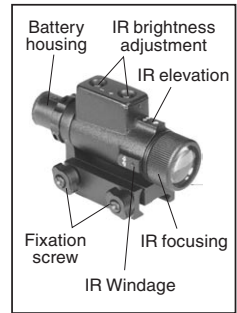
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**AMERICAN
TECHNOLOGIES
NETWORK
CORP.**





FREE ADD-ON FOR YOUR ATN Z4 SCOPE
DIGITAL INFRA-RED ILLUMINATOR



FEATURES

- **Magnification:** Fixed 4x.
- **Image Intensifier:**
 - Non-inverting Gen 2 (up to 54 lp/mm and up to 21 SNR) available as ATN Z4-G2.
 - Non-Inverting US Gen 3 (64 lp/mm and up to 24 SNR) available as ATN Z4-G3.
- **Automatic brightness protection:** Standard .
- **IR Illuminator:** Long Range 450 mW detachable, adjustable in two axes and focusable.
- **Objective Lens:** Seven-elements; 87mm aperture; fast F1:1.4 lens system and one-element focal adjustment from 3 yards to infinity.
- **Optics:** Prismatic design; highest grade heavy glass; all elements and surfaces are multicoated; developed with latest optical software and manufactured with topmost tolerances.
- **Reticle:** Scale 2 Army Mil-Dot; edged prismatic/optical glass sandwich; illuminated with adjustable brightness; standard side locking mechanism.
- **Point of impact:** Always on the center of the field of view.
- **Adjustment:** 1/8 MOA per click; with 700 clicks for windage and elevation, 7 revolutions with 100 clicks per revolution.
- **Bullet Drop Compensator:** Build in; standard for .223, .300, .308, 30-06, .50BMG calibers; with 50 yard zero-in and up to 500 yards and up to 1000 yards for .50BMG.
- **Field of View @ 4X:** 10°.
- **Target knobs:** Included.
- **Power source:** 3V; standard watch battery type CR123A; with minimum 40 hours of continuous.
- **Diopter Adjustment:** ±5.
- **Length:** 15" (350mm).
- **Weight:** 3.9lb (1.8 kilo) with built-in mounting system.
- **Front Lens Cover:** Push-button; standard built-in.
- **Mounting system:** Built-in monorail with Titanium inserts, and thumb-screws for tool-less mounting on NATO standard Picatinny rail or quality Weaver bases.
- **Environment:** water-resistant; fog-proof and nitrogen purged.
- **Added Survivability:** Visible flip-up iron sights for back-up emergency operation.
- **Operational Extendibility:** Three 2" Picatinny rails for additional lighting, laser and other mission critical tools.

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APPLICATION

ATN Z4 is the latest addition to ATN pro-oriented, dedicated Night Vision Weapon Sight line. Dubbed “revolutionary” by experts, a new prismatic “drop-down” design guides overall performance to new heights – improving light gathering by as much as 10% and enhancing the shooter’s comfort by allowing closer to the barrel line of sight and cheek rest. Additional benefits include: always-on-the-center “Red on

Green” illuminated Mil-Dot reticle, interchangeable bullet drop compensator for five most common calibers, titanium mounting system, positive 1/8 MOA per click windage and elevation adjustment with standard target turrets, rails for add-on lights & lasers and back-up iron sights making ATN Z4 unrivaled to anything on the Commercial or Military market today.

PREPARATION FOR OPERATION

Before getting started make sure to follow these steps:

- Install the battery into its housing with the polarity order shown on the main body of the unit.
- Switch on the scope with the protective tens cover still attached to the tens.
- Make sure that the green luminance of the light intensifier tube is present.
- Observe the scene, and adjust the diopter and/or lens for optimal image clarity.
- You may now enter a dark environment or simply shut the lights off in order to darken the room.



- Next, remove the lens cap/daylight filter.
- Observe the scene, and adjust the front lens for ideal focus.
- Finally, you may want to turn the infra red (IR) illuminator on. Notice the ability of the scope to see in total darkness with the aid of the IR illuminator.

OPERATING

MOUNTING

1. Slightly loosen the fixing screws on the weaver rail built into the scope.
2. Place the scope on the dovetail mount of the fire arm making certain that the mount aligns with the receptor attachment screw groove. Adjust as necessary.
3. Tighten the fixing screws.

NOTE: Receptor attachment screws may need to be tightened after continuous shooting.

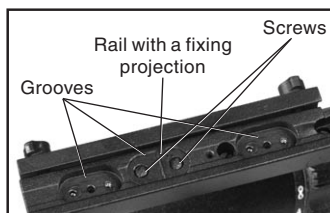
MOUNTING SYSTEM

The ATN Mounting System allows to change the position of the riflescope flexibly on the weapon in relation to a shooter in combination with the fixed positions already available on the weaver rail. For this purpose in the base of the mounting bracket there is a rail with a fixing projection. There are three grooves in the mounting bracket for mounting this rail. Besides it is possible to change the position of the riflescope additionally by 1/3 of inch. For doing this one needs to about-face the rail.

To change the position of the riflescope on the weaver rail additionally follow the steps mentioned below:

1. Unscrew the two screws, which attach the rail to the mounting bracket.
2. Take the rail out of the groove.
3. About-face the rail in case of necessity.
4. Place the rail into another groove.
5. Fix the rail with the two screws.

NOTE: If the rail is not taken out easily, screw up tight one of screws into the threaded aperture in the middle of a fixing projection of the rail. Continue rotation of the screw. Thus the screw will push out a rail from a groove.



BRIGHTNESS ADJUSTMENT

By rotating the “R” knob you may adjust the reticle’s brightness. Adjustment could be easily seen if you look through the scope while adjustment.

FOCUSING

To focus your riflescope you will need to adjust the diopter first thing. Simply turn the diopter clockwise until it stops. Then, while looking through the diopter at a subject, slowly turn the diopter back counter clockwise until the grain in the image is sharp.

NOTE: We suggest that you focus the diopter during daylight with the filter on.

Next, focus the front lens until the image and the grain are both sharp. When you are in the low-light conditions and the daylight filter is off you may focus the front lens to receive a sharp image, the diopter should not be adjusted.

NOTE: The front lens should be readjusted as you view objects at different distances.

IR ILLUMINATOR

Infra-red (IR) Illuminators are common for night vision technology. The IR light greatly enhances the performance of your scope, while remaining almost totally invisible to the naked eye. In dark environment, power up the scope. Now, find a scene and examine it without the IR on then with IR powered up. Note the difference in illumination. It is important to remember that the IR illuminator is simply an infra red light source, and like any light source it may lose its effectiveness over a great distance. To fix the IR Illuminator to the riflescope screw the thumb screw on the IR into the thread on the scope.

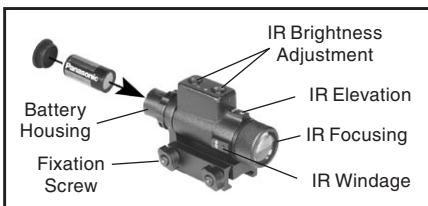
The riflescope equipped with digitally controlled IR. The IR illuminator control buttons are located on its side.

To switch the Digital IR illuminator on/off press "+" and "-" buttons simultaneously. When the IR illuminator is switched on you can see the green LED lit.

The changes of adjustment could be observed while looking through the scope.

By pushing the buttons "+" and "-" you may adjust the IR brightness.

The IR beam is focusable to change the field of coverage. To change the beam width slightly turn the IR lens.



You could change the IR control panel fitting your needs. The screw-tool included into the set should be used for weakening the fixing screw located on the IR. Rotate the IR placing it in the most convenient position. Tighten the screw with the screw-tool to fix the new position.

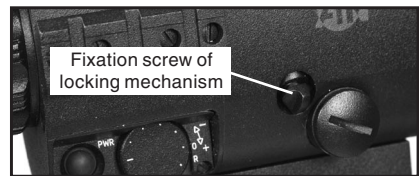


LOCKING MECHANISM

There is a locking mechanism with fixation screw for the reticle adjustment system.

Slightly loosen the fixation screw before zeroing, windage/elevation or bullet drop compensator adjustment.

After adjustment turn the fixation screw clockwise, to lock the adjustment mechanism.



WINDAGE AND ELEVATION

The vertical and horizontal adjustments for the Z4 can be achieved by turning the elevation and windage adjustment mechanisms (remove dust caps first). Each click equals to 1/8 inches at 100 yards. When reaching the maximum of rotation do not use force.

ZEROING

Pre-zeroing is recommended and can be done in accordance with a scope guide or owner's instructions.

CAUTION: Be sure gun is not loaded. Always use safe gun handling procedures. All shooting should be done at an approved range or other safe area. Eye and ear protection is recommended.

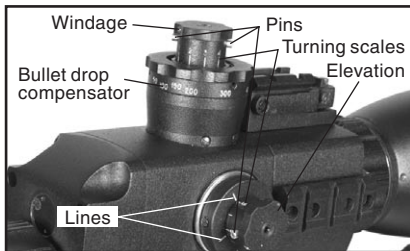
DANGER: If you used a bore-obstructing device, remove it before proceeding. If the barrel has-been drilled for a mount, check that the screws do not protrude into the bore. Do not fire live or even blank ammunition with an obstructed barrel. An obstruction can cause serious damage to the gun and possible injury to you and others nearby.

Set the shooting distance on the compensator's scale.

From a steady position, fire three rounds at a target. Observe the impact errors and estimate the correction value. Adjust windage and elevation handles as needed to correct aim.

1. Remove the dust caps from the top of the windage and elevation adjusting handles.
2. Choose one of the lines as regard to which you can take readings more conveniently.
3. Rotating the scale by protrusive pins set zero of the turning scale just opposite the chosen line.
4. Turn the windage and elevation handles through the number of clicks necessary for an amendment.

The number of clicks should be read from the scale with respect to the chosen line. Each graduation interval equals to 10 clicks.



NOTE: Each click of adjustment changes bullet strike by the amount shown on the chart below.

WINDAGE/ELEVATION
(inches of movement per click)

- 50 Yards - 1/16"
- 100 Yards - 1/8"
- 200 Yards - 1/4"
- 300 Yards - 3/8"

When you have finished adjustment of fire, recap windage and elevation mechanisms.

BULLET DROP COMPENSATOR

You should have zeroed your scope in at 50 yards. When shooting at longer ranges the bullet drop compensator can be adjusted for 100, 150, 200, 300, 400, and 500 yards (and 1000 yards for .50BMG). Pending on the distance click the bullet drop compensator to the appropriate setting. This will automatically adjust your reticle for that particular distance. Your scope also comes with other cams allowing you to change your bullet drop compensator to work with the different rifles.

CHANGING THE BULLET DROP COMPENSATOR

Set the bullet drop compensator to the 50-yard range. Then remove the elevation dust cover from the cam. Next you will find three small set screws on the bullet drop compensator right above the yardage numbers. Remove these screws and lift the cam off of the scope. Once you have done this select the desired caliber cam you would like to use and place this cam where you removed the previous one (make sure that a replacement cam is set to the 50-yard range. Then tighten the cam in place by putting the three set screws back. Finally replace the dust cover.

RANGEFINDER RETICLE

The Mil-Dot reticle used in the Z4 is a scale 2 Mil-dot. This means when you have finished your calculations for range, multiply by 2.

Mil dot reticle is a reliable means of determining distances to targets, establishing leads for moving targets, and for alternate aiming points for windage and elevation holds.

Dots are spaced in one mil (milliradian) increments on the crosshair. A distance to target can be calculated using the mil formula, that is based on the size of the object being targeted.

Look through the scope, and bracket the object between dots.

The space between dot centers subtends one milliradian (mil). One mil. subtends 3.6 inches at 100 yards or 36 inches at 1,000 yards. To use this system effectively you must know the size of the target.

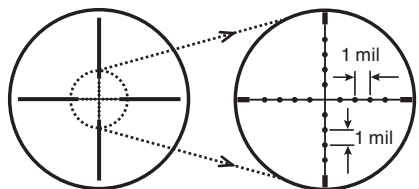
By measuring the height or width of a known (or approximately known target size) in milliradians using the reticles, the target distance can be calculated as follows.

R = range in meters, H = target size in meters, M = mil-radians of the image size:

$$R = 1000 * H / M$$

Military shooters are trained to know that the common male torso is 39 inches from crotch to top of head. This is very close to exactly one meter.

This formula then becomes **R = 1000 / M** for a one meter target size.



All of the following formulae are equivalent to the one above for estimating range.

R = range in meters, H = target size in inches, M = mil-radians of the image: $R = 25.4 * H / M$

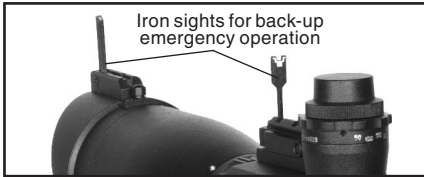
R = range in yards, H = target size in inches, M = mil-radians of the image: $R = 27.78 * H / M$

R = range in yards, H = target size in feet, M = mil-radians of the image: $R = 333.3 * H / M$

The Mil-Dot reticle used in the Z4 is a scale 2 Mil-dot. This means when you have finished your calculations for range, multiply by 2.

ADDED SURVIVABILITY

ATN Z4 has a visible flip-up iron sights for back-up emergency operation. Upright the iron sights for shooting without optic of scope.



The back-side sight has a horizontal and vertical adjustment.

CLEANING THE EYEPIECE

You may need to clean the eyepiece of the rifle scope from time to time in order to guarantee top performance.

First you will need to remove the eyepiece. To do that you will need to initially loosen the 2 set screws that can be found on the base. Then unscrew the eyepiece counter-clockwise to remove it.

NOTE: *You do not have to remove the set screws completely, they are very small and easy to misplace.*

CAUTION: *Use only Photographic lens cleaning tissue on these surfaces. Be careful not to scratch or smudge any of these surfaces. When using compressed air to blow dust away, make sure to avoid inverting the can while spraying. This can cause frozen propellant to exit the can, which can cause serious problems with the glass and phosphor screen.*

WARNINGS AND CAUTIONS

- Always remember to turn off the scope when it is not in use. Remove the batteries if you do not plan on using your scope for a period of more than 10 days.
- **Keep lens cap/daylight filter on when the scope not in use.**
- Do not disassemble except to clean the front lens and the eyepiece: **it will void your warranty.**
- Evaluate the scopes function by looking through it in a lit environment with the daylight filter lens cap on. Never use in daylight without the daylight filter lens cap on. Do not surpass ten minutes of testing.
- **Never point the scope at a bright light source.** If the scope shuts off automatically after directing it at a bright light source, turn the unit off and wait 1 - 2 minutes before turning the unit back on.
- Avoid contact with dust, steam, and gas.
- The scope are not harmful to the user or the environment.
- Adverse atmospheric conditions (fog, smog, or haze) and a lack of ambient light (moon or starlight) may diminish the effective viewing distance. All technical data for this unit was compiled in a controlled environment.

TROUBLE SHOOTING

Q: Flashes, flickers, or clicking occur while operating.

S: If it occurs within the first minutes of inserting new batteries, it is normal and the device will resume normal operation soon thereafter. If it occurs for more than 10 minutes, contact your dealer or other authorized service.

Q: Dark spots on screen.

S: This may be dust on the lens, please clean according to instructions. They may also be cosmetic blemishes in the intensifier tube which are a by-product of the manufacturing process. This is normal and will not affect the life or performance of the unit.

Q: Image not clear.

S: Adjust focus ring. If problem persists, increase viewing distance.

Q: Fixed-pattern noise in a honeycomb shape.

S: This usually occurs when viewing very bright lights.

Q: A pattern of dark thin lines which look like chicken wire.

S: Turn on illuminator, if purchased. If illuminator doesn't brighten image, replace batteries. If problem persists, contact ATN for service instructions.

PRODUCT WARRANTY

This product is guaranteed to be free from manufacturing defects in material and workmanship under normal use for a period of 2 (two) years from the date of purchase. In the event a defect that is covered by the foregoing warranty occurs during the applicable period stated above, ATN, at its option, will either repair or replace the product, and such action on the part of ATN shall be the full extent of ATN's liability, and the Customer's sole and exclusive remedy. This warranty does not cover a product (a) used in other than its normal and customary manner; (b) subjected to misuse; (c) subjected to alterations, modifications or repairs by the Customer or by any party other than ATN without prior written consent of ATN; (d) special order or "close-out" merchandise or merchandise sold "as-is" by either ATN or the ATN dealer; or (e) merchandise that has been discontinued by the manufacturer and either parts or replacement units are not available due to reasons beyond the control of ATN. ATN shall not be responsible for any defects or damage that in ATN's opinion is a result from the mishandling, abuse, misuse, improper storage or improper operation, including use in conjunction with equipment which is electrically or mechanically incompatible with or of inferior quality to the product, as well as failure to maintain the environmental conditions specified by the manufacturer. **CUSTOMER IS HEREBY NOTIFIED THAT OPERATION OF THE EQUIPMENT DURING DAYLIGHT HOURS OR UNDER ANY EXCESSIVE LIGHT CONDITIONS MAY PERMANENTLY DAMAGE THE INTERNAL COMPONENTS OF THE UNIT AND SAID DAMAGE WILL NOT BE COVERED UNDER THIS WARRANTY.** This warranty is extended only to the original purchaser. Any breach of this warranty shall be waived unless the customer notifies ATN at the address noted below within the applicable warranty period.

The customer understands and agrees that except for the foregoing warranty, no other warranties written or oral, statutory, expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose, shall apply to the product. All such implied warranties are hereby and expressly disclaimed.

LIMITATION OF LIABILITY

ATN will not be liable for any claims, actions, suits, proceedings, costs, expenses, damages or liabilities arising out of the use of this product. Operation and use of the product are the sole responsibility of the Customer. ATN's sole undertaking is limited to providing the products and services outlined herein in accordance with the terms and conditions of this Agreement. The provision of products sold and services performed by ATN to the Customer shall not be interpreted, construed, or regarded, either expressly or implied, as being for the benefit of or creating any obligation toward any third party of legal entity outside ATN and the Customer; ATN's obligations under this Agreement extend solely to the Customer. **ATN's liability hereunder for damages, regardless of the form or action, shall not exceed the fees or other charges paid to ATN by the customer or customer's dealer. ATN shall not, in any event, be liable for special, indirect, incidental, or consequential damages, including, but not limited to, lost income, lost revenue, or lost profit, whether such damages were foreseeable or not at the time of purchase, and whether or not such damages arise out of a breach of warranty, a breach of agreement, negligence, strict liability or any other theory of liability.**

PRODUCT WARRANTY REGISTRATION

In order to validate the warranty on your product, ATN must receive a completed Product Warranty Registration Card for each unit. Please complete the form below and immediately mail it to our Service Center: ATN Corporation, 20 South Linden Ave., Suite 1B, South San Francisco CA 94080. Products qualifying for warranty repair will be either repaired or replaced within 10 business days of receipt of merchandise unless the customer is notified otherwise.

OBTAINING WARRANTY SERVICE

To obtain warranty service on your unit, take or send the product, postage paid, with a copy of your sales receipt to our service center, ATN Corporation at the address noted above. All merchandise must be fully insured with the correct postage; ATN will not be responsible for improper postage, or, missing or damaged merchandise during shipment.



For customer service and technical support, please contact
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