

Scope Specs Table

SHORT Scopes — and 3-12x and 3-9x Scopes

Bottom Magni. = 3x or lower (or higher if at least a 30ft FoV)

Top Magni. = 9x to 12x (or more magni. if 13.2" short)

with 10y Parallax

Exposed Turrets

Holdoff Reticle

Almost all under \$500 (most are between \$200-300)

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Requirements for this Table (few exceptions are included)

Bottom magnification – Field of view (FoV) = 3x or lower | If a scope has a higher bottom magnification it is listed *only if the scope has at least a FoV of 30ft* at 100y (10m at 100m), or *if the scope is 13" (33cm) or shorter*.

Also listed are *longer scopes* if they have a 2x bottom magnification and at least a 12x top magnification.

Top magnification = between 9x and 12x (with a couple of exceptions for high-feature LPVO's) | If a scope has a higher top magnification it is listed *only if the scope is 13.2" (33.5cm) or shorter*.

Minimum parallax = 10 yards or less (a few exceptions with 15y)

Turrets = exposed; however, some scopes with capped turrets that check many other boxes are included

Side parallax adjustment (almost all)

Reticle = Holdoff reticle (evenly spaced hash lines or dots for aiming with holdoff/ holdover; some exceptions are listed due to their exceptionally light weight or short size)

Price = usually between \$200 and \$500 (most are between \$200 and \$300); some are a bit more expensive as they have all around very good specs

Abbreviations in the Table

Green is a good thing... – e.g.: a very good warranty, a shorter size or lighter weight than average for this magnification range, a larger than average elevation adjustment range, a very wide field of view (FoV), or some additional feature (bubble level, zero stop, turret turn counter, numbers on the hash lines of the reticle), etc.

Red is less of a good thing... – e.g.: a not so great warranty, a longer size or heavier weight than average, a smaller than average elevation adjustment range, a very narrow field of view (FoV), or some other negative or limiting feature, like: a small exit pupil (reducing the eye box), a min. parallax longer than 10y, a reticle without illumination, capped turrets, an FFP reticle without thick outside posts, or a price higher than the max. price that was set for this scope table), etc.

Purple is something noteworthy that could be either good or bad, depending on the shooting scenario... – e.g.: an objective lens that is exceptionally small or large for its magnification (e.g., a small lens allows less light to enter, and reduces the need to focus to correct parallax errors), or an exceptionally short or long eye relief (affecting the scope mounting location and eye/head placement), etc.

Orange is a caution flag, a marginal feature or characteristic... – e.g.: warranty limitations, a marginal FoV, a smaller objective diameter for (supposedly) less light than average for the magnification range, an uneven number of mils or moas per turret turn (not multiples of 5mil or 10moa), a price so low as to shed doubt on the quality of the scope, etc.

SFP vs. **FFP** = table starts with **SFP** (*second focal plane*) scopes, then *first focal plane* (**FFP**)

Thick O/S Posts [for **FFP**] = thick black outside posts, i.e., 3 or 4 of the crosshairs are thick toward the outside (the posts are not hollow rectangles, but filled in with black), which allows seeing the crosshairs easily even when at low magnification. Some have no thick posts, and some have *semi thick* posts.

10x [or 16x, or another number] [for **SFP**] = the magnification at which the holdoff hash lines or dots have been calibrated, i.e., where 1 moa indicated on the reticle actually is 1.047" in reality at 100 yards

Series and Part No. = the manufacturer's product or parts number; helpful to identify the scope at a seller's page as some scopes are very similar and the seller's description is either misleading or insufficient to identify the scope with certainty; also for shopping for the lowest price it helps to enter the number in the search

Discont. = product has been discontinued (but still could be purchased used)

Warranty Info: **Life** = life time warranty | **5y** = 5 years warranty | **OOwn** = warranty only for the original owner | **Unlmt** = unlimited warranty | **Anyb.** = warranty applies to any owner, anybody (e.g., even if you bought it used) | **NoRec.** = no receipt (proof of purchase) required | **Rec.** [or: **R.**] = receipt (proof of purchase) required | **30d** = must register the scope within 30 days of purchase

FoV = Field of View (in ft at 100y):

- *FoV @ bottom magnification:*

A large FoV at the bottom end of the magnification range is important for *hurried close range shooting*, as the large FoV helps rapid target acquisition. Note that a wide FoV is not critical for *unhurried shooting*, i.e., shooting on stationary targets (or quarry that isn't skittish and gives the shooter time to set up the shot).

The color coding in the table is based on my very personal, unabashedly subjective estimation: *For my kind of hurried close range shooting* I'd like to have a FoV of at least around 3ft at 10y (1m at 10m) (which translates to around 30ft @100y, as FoV is usually reported at 100y; it is color coded black).

The color coding at the bottom end of the mangification is applied irrespective of the scope's magnification, so naturally 6-24x scopes for example don't usually get a green rating, but orange or red. Note however that there are sometimes huge differences in FoV between scopes with the same magnification range which makes the bottom end magnification an unreliable indicator of FoV when scope shopping.

41ft or more | **40-35ft** | 34-28ft | **27-22ft** | **21-17ft** | **16ft or less**
7.8° or more | **7.7-6.7°** | 6.6-5.3° | **5.2-4.1°** | **4.0-3.2°** | **3.1° or less**

● *FoV @ top magnification:*

Between two scopes with the same top end magnification the one with a larger FoV is preferable, all other things being equal. This is because the larger FoV might allow to see more clues to how the wind is behaving, or allows to see additional quarry, or makes following the quarry easier if it decides to move. The color coding in the table is based on what is typical for this magnification, i.e., what I have observed to be average for this top magnification.

Examples: At 16x a FoV of 6.3ft normal, whereas a FoV of **4.7ft** is rather narrow and limited. A FoV of **8.5ft** would be great.

| Color Coding for the Evaluation of FoV at the <i>Top End</i> Magnification | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|--|-------------|--|--|--|--|----|------|----|------|----|----|----|------|-----|-----|-----|-----|----|-----|----|----|-----|-----|----|----|--|----|--|----|--|----|----|----|--|--|--|
| Magnification | 1 | | | | | | | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | | | | | | | | | | | | | |
| Magnification | 1 | | | | | | | | 8 | | | | | | | | 16 | | | | | | | | 32 | | | | | | | | | | 64 | | | |
| “times life size” | 1x | | | | | | | 7x | 8x | 9x | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | | 39 | | 46 | | 53 | | 60 | 64 | | | | |
| Evaluation of Field of View (FoV): Top End* FoV @ 100y | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FoV in ft | from worst to best | | | | | | | | | ft | | | | ft | | | | ft | | | | ft | | | | ft | | | | | | | | | | | | |
| red bold | red/orange gets this evaluation if the value is as indicated or worse | | | | | | | | 8.5 | 8 | 7.5 | | 6 | | 5 | 4.6 | 4.2 | 4.0 | 3.9 | | 3.7 | | | 2.8 | 2.8 | | | | | | | | | | | | | |
| red | | | | | | | | | 9.5 | 9 | 8.5 | | 7 | | 5.8 | 5.2 | 4.7 | 4.5 | 4.4 | | 4.1 | | | 3.2 | 3.2 | | | | | | | | | | | | | |
| orange | | | | | | | | | 10.5 | 10 | 9.5 | | 8 | | 6.5 | 5.9 | 5.4 | 5.2 | 4.9 | | 4.5 | | | 3.6 | 3.6 | | | | | | | | | | | | | |
| Typical Value | | | color black | | | | | | 13 | 12 | 11 | | 9 | | 8 | 7.1 | 6.3 | 5.9 | 5.5 | | 4.9 | | | 4 | 4 | | | | | | | | | | | | | |
| green | green gets this evaluation if the value is as indicated or better | | | | | | | | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8.1 | 7.2 | 6.7 | 6.2 | | 5.3 | | | 4.1 | 4.1 | | | | | | | | | | | | | |
| green bold | | | | | | | | | 17.5 | 17 | 15.5 | | 13 | | 10.1 | 9.3 | 8.5 | 7.7 | 7 | | 5.7 | | | 4.4 | 4.4 | | | | | | | | | | | | | |
| Magnification | 1 | | | | | | | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | | | | | | | | | | | | | |

IR = illuminated reticle [Y = yes | **NO**]

Reticle; Ret. *D* = "dots" = enough dots or hash lines on the crosshairs for holdoffs for elevation and windage

N = "numbers" = the dots or hash lines are numbered for quicker holdoffs

Grid = the reticle is a grid style ("Christmas tree style"): for some shooters and for scope cams it "clutters" the reticle, but it allows for more precise elevation *and* windage holdoffs simultaneously

BDC = bullet drop compensating reticle, meaning that the spacing between the hash lines is uneven and therefore not usable for holdoffs unless shooting the ammo the reticle was calibrated for

Capped Turrets! BUT Clickable = means that though the turrets are capped, when uncapped they are finger adjustable, the numbers are visible from behind the rifle, and the zero can be reset

Hawke scopes: Careful when purchasing them, new or used. Hawke has the annoying habit of coming out with new scope models but fails to either add the designation "Gen. 2" or to

give them a new series name. In addition they have the habit of adding a couple of innocuous letters or numbers to the name of the scope – which mean massive changes in the features or the performance. These letters or numbers are easy to miss for both the buyers and commercial and private sellers. To assure you are getting the scope with the features you are thinking you are getting, check that the manufacturer's model number is the correct one. The Scope Specs Table notes the numbers for most scope models for that very reason.

Prices

In US dollars

Price Low = lowest *street prices* in US dollars I found in 2019 – and updated according to the list below. An additional price is separated by a *comma* ,

Price Mfctr.'s = manufacturer's price [last price in that field, after the semicolon ;]

Prices and/or models updated as follows: 2021-06: all Hawke | 2023-07: Discoveryopt, aka Discovery | Primary Arms

A Little Caution When Using Short Scopes

Short scopes have short tubes. That means:

- Less flexibility of where to put scope rings, especially if the magazine of a PCP sticks up between a two-part scope rail.
- Less flexibility of where to put a voluminous scope ring (like the Burris XTR; those rings can obstruct your view of the turret settings if it is mounted smack next to the turret).
- Less space to mount anything else on the scope tube: bubble level, flashlight holder, IR gear, etc.

Considerations On Using a Scope Cam

- Depending on the scope cam a *short or very short eye relief* probably will not work!
- A *gridded reticle* will clutter the view.
- An *illumination dial on the ocular lens* (instead of the parallax turret) will obstruct most scope cams that are mounted with a sleeve over the ocular lens.
- *Very short scopes* might make mounting of certain scope cams a bit more complicated.
- A *larger objective lens* allows more light into the system, which is needed as the prism of the scope cam mount diverts a percentage of the light to the camera, and lets another percentage through to the shooter's eye. Even more light is needed when filming with a high frame-per-second rate ("fps") to permit slow-motion playback later.
- Of course, higher quality glass will also permit more light into the system, without the need for a larger objective lens. A large objective lens will decrease the DoF (depth of field) – what I call the *sharpness and parallax range (SPR)* – the range at which a target is in focus and parallax is dialed out. A longer SPR (or DoF) will require less precise parallax adjustments (esp. for quick shots when hunting!) – and for that reason will be less precise for parallax ranging.

| | | | | Magni. → FoV | → Eye Box | Exposed Turrets | | | Holdoff Reticle | | | | Dimensions | | | | | | | | |
|--|--------------------------------|-----------------------------|----------------|---------------|---|-----------------|-------------------------------------|--------|-----------------------|-----------|--------------|-------------|-------------|--------------------------------------|-------------------------------------|-------------------------------------|-----------------|-----------------|--------------------|---|--|
| *in 2019, some 2020, 2021, 2022, 2023 | Price*: Low; Mfctr.'s in US \$ | Warranty | Springer-Rated | Magnification | FoV = Field of View @ 100y (ft) | Obj. Dia ∅ (mm) | Exit Pupil (mm) | IR Y/N | Max. Elev. Adj. (MOA) | 1 Click = | 1 T. Turn = | Turrets in: | Reticle in: | Thick O/S Posts? SFP Calibration at? | Enough Dots, No's, Grid Center Dot? | Line Thickness | 1" or 30mm Tube | Weight (oz) (g) | Length (inch) (cm) | Misc. + Reviewers' "Comments" | |
| Brand: Series | Part No. | | | | | | | | | | | | | | | | | | | | |
| SFP Scopes | | | | | | | | | | | | | | | | | | | | | |
| Monstrum: V2 Tactical AO <small>No. S31242-M-RGA0-V2-1</small> | ?; 100 | 1y, R.O.Own | ? | 3-12x | ? <small>Field of View @ 100y (ft)</small> | 42 | ? <small>Exit Pupil (mm)</small> | Y | ?? | 1/4 inch | 15(?) inch | SMOA ≠ | ≠ MIL | SFP ?x | D | ? | 30 | 22.4 635g | 11.5" 29c | Capped Turrets! BUT Clickable | |
| Nikko Stirling: C-More X10 <small>No. NSCM22044</small> | 410; ? | Life, R.O.Own | ? | 2-20x | 47-5 | 44 | 22-2.2 <small>calculated</small> | Y | 60 | 1/4 moa | ? | MOA ≠ | ≠ MIL | SFP ?x | D | ? | 30 | 25.7 730g | 13.3" 34c | | |
| MTC: Viper Connect •SCB2 Ret. | 400; — | Life ^{30d} R.O.Own | No | 3-12x | 61-17 super wide | 24 | 8-2.0 <small>calculated</small> | Y | 120 | 1/4 inch | 12 inch | SMOA = | =MOA | SFP ?x | D | ? | 30 | 21.2 600g | 11.3" 29c | ▲Super Short Eye Relief 1.2" (3cm) | |
| MTC: Viper Connect •SCB2 Ret. Requires special \$58 mount | 400; — | Life ^{30d} R.O.Own | No | 3-12x | 61-17 super wide | 32 | 11-2.7 <small>calculated</small> | Y | 120 | 1/4 inch | 12 inch | SMOA = | =MOA | SFP ?x | D | ? | 30 | 22.9 650g | 11.3" 29c | ▲Super Short Eye Relief 1.2" (3cm) | |
| UTG: Accushot T8 Tactical •MOA Ret. <small>No. SCP3-216UMOA</small> | 178; 230 | Life | Yes!! | 2-16x | 44-6 | 44 | 22-2.7 | Y | ?? | 1/4 inch | 18 inch | SMOA = | =MOA | SFP 10x | D, N | ? | 30 | 22.6 641g | 12.4" 32c | | |
| UTG: Accushot OP3: •MOA Ret. <small>No. OP3-GM3124UMOA</small> | 198; 240 | Life | Yes!! | 3-12x | 32-10 | 44 | 13-3.9 | Y | ?? | 1/4 moa | 24 moa | MOA = | =MOA | SFP 10x | D, N | ? | 30 | 21.0 595g | 10.1" 26c | Locking Turrets | |
| UTG: Accushot OP3: •MOA Ret. <small>No. OP3-GM4164UMOA</small> | 210; 255 | Life | Yes!! | 4-16x | 26-8 | 44 | 11-3.0 | Y | ?? | 1/4 moa | 24 moa | MOA = | =MOA | SFP 10x | D, N | ? | 30 | 21.5 610g | 10.7" 27c | Locking Turrets | |
| UTG: Accushot Precision <small>No. SCP3-UG312A0IEW</small> | 142; 180 | Life | Yes!! | 3-12x | 34-9 | 44 | 13-3.9 | Y | ?? | 1/4 moa | ??? | MOA ≠ | ≠ MIL | SFP 10x | D | ? | 30 | 22.7 643g | 14.0" 36c | Locking Turrets | |
| UTG: Bugbuster <small>•No. SCP-M312A0D = w/ Picatinny r. •No. SCP-M312A0D = w/ Dovetail r.</small> | 125; 130 | Life | Yes!! | 3-12x | 31-10 | 32 | 10-2.7 | N | ?? | 1/3" inch | 24 inch | SMOA ≠ | ≠ MIL | SFP 10x | D | ? | 1" | 12.7 360g | 8.1" 21c | Min. Parallax: 3y Wire reticle | |
| UTG: Bugbuster <small>No. SCP-M392A0D = w/ Dovetail rings</small> | 110; 125 | Life | Yes!! | 3-9x | 37-12 | 32 | 10-3.6 | N | ?? | 1/3" inch | 24 inch | SMOA ≠ | ≠ MIL | SFP 9x | D | ? | 1" | 12.0 340g | 7.9" 20c | Min. Parallax: 3y Wire reticle | |
| UTG: Bugbuster <small>•No. SCP-M392A0LWQ = w/ red-green-blue IR + Picatinny rings Right side turret is IR! •No. SCP-M392A0LWQ = 36-color IR + Picatinny rings</small> | 79; 108 | Life | Yes!! | 3-9x | 38-14 | 32 | 10-3.6 | Y | ?? | 1/4" inch | 18 inch | SMOA ≠ | ≠ MIL | SFP 9x | D | ? | 1" | 14.0 397g | 8.2" 21c | Min. Parallax: 3y ▲Front Parallax! Wire reticle | |
| Optisan: HX 4-12x40A0 •MH12 Ret. •EMD12 Ret. <small>Code 37559 Code 37522</small> | ?; ?; 270, 200 | Life | Yes | 4-12x | 34-11 | 40 | 10-3.3 | N | 40 | 1/4 moa | 12 moa | MOA ≠ | ≠ MIL | SFP 12x | D, mini Grid. | | 1" | 17.6 500g | 13" 33c | Capped Turrets! BUT Clickable Front Parallax AO | |
| Optisan: CP 3-12x32P SFP. Minimized Parallax. | 329; 359 | Life | Yes!! | 3-12x | 36-9 | 32 | 10-2.6 | N | 66 | 0.1 mil | 10 mil | MIL = | =MIL | SFP 10x | D, mini Grid | .05 ^{mi} .17 ^{mo} | 30 | 17.2 487g | 9.5" 24c | Capped Turrets! BUT Clickable | |
| Optisan: EVX 3-12X44i •MIL-G4Ai12X <small>Code 37570</small> | 380; 430 | Life | Yes | 3-12x | 36.7-9.2 | 44 | 14-4.0 | Y | 50 | 0.1 mil | 4.8 mil ii!! | MIL = | =MIL | SFP 10x | D, (N) | .05 ^{mi} .17 ^{mo} | 30 | 27.7 700g | 13.3" 34c | | |
| Optisan: EVE 3-12X56Pi •MIL-G4Ai12X Ret. <small>Code 37570 Only the Pi-model has 10y Parallax!</small> | 410; 460 | Life | Yes | 3-12x | 36.7-9.2 | 56 | 19-4.5 | Y | 50 | 0.1 mil | 6 mil | N/A | N/A | SFP 12x | None, CD | | 30 | 27.2 772g | 13.5" 34c | No Hold-Off Reticle! For 12x Extremely Large Objective Lens | |
| Optisan: CP 4-16x40 Minimized Parallax. | 340; 390 | Life | Yes!! | 4-16x | 26 ⁻² .6.5 | 40 | 10-2.5 | N | 62 | 0.1 mil | 10? mil | MIL = | =MIL | SFP 10x | D, mini Grid | .05 ^{mi} .17 ^{mo} | 30 | 18.7 530g | 10.6" 27c | Capped Turrets! BUT Clickable | |
| Athlon: Talos Mildot <small>No. 215004</small> | 150; 180 | Life, NoRec | ? | 3-12x | 34-9 | 40 | 13-3.4 | N | 67 | 0.1 mil | 6 mil | MIL = | =MIL | SFP ?x | D | .05 ^{mi} .17 ^{mo} | 1" | 16.2 459g | 12.0" 30c | Capped Turrets! BUT Clickable T Turn Counter | |
| Sightron: S-TAC [SFP] •Ret. MOA-3 | 450; 520 | Life | Yes!! | 3-16x | 32-6 | 42 | ? <small>Exit Pupil (mm)</small> | N | 70 | 1/4 moa | 15 moa | MOA = | =MOA | SFP 16x | D | .02 ^{mi} .08 ^{mo} | 30 | 23.5 666g | 12.9" 33c | Dialing Turrets (capped w/ ^{N1}) T Turn Counter | |
| Bushnell: Nitro [not FFP] •Deploy MOA SFP Ret. <small>No. RN2104GS1 (black) No. RN2104GS1 Gun Metal Gray</small> | 350; 450? | Life, NoRec | ? | 25-10x | 37-9 | 44 | ? <small>Exit Pupil (mm)</small> | N | 50 or 60? | 1/4 moa | 15 moa | MOA = | =MOA | SFP 10x | D | .06 ^{mi} .2 ^{mo} | 30 | 23.9 678g | 13.6" 35c | Capped Turrets! BUT Clickable | |

| *in 2019, some 2020, 2021, 2022, 2023 | Price*: Low; Mfctr.'s in US \$ | Warranty | Springer-Rated | Magnification | FoV = Field of View @ 100y (ft) | Obj. Dia (mm) | Exit Pupil (mm) | IR Y/N | Max. Elev. Adj. (MOA) | 1 Click = | 1 T. Turn = | Turrets in: | Reticle in: | Thick O/S Posts? FFP-SEP Calibration at? | Enough Dots, No's, CD Center Dot | Line Thickness | 1" or 30mm Tube | Weight (oz) (g) | Length (inch) (cm) | Misc. + Reviewers' "Comments" |
|--|--------------------------------|-----------------------------|----------------|---------------|---------------------------------|---------------|---------------------|--------|-----------------------------|-------------|-------------|-------------|-------------|--|----------------------------------|--------------------------------------|-----------------|-----------------|--------------------|--|
| Brand: Series Part No. | | | | | | | | | | | | | | | | | | | | |
| Bushnell: Engage No. REN21044DG | 250; 343 | Life, NoRec. | ? | 25-10x | 45-11 | 44 | 17-4.4 | NO | 50 | 1/4 moa | 15 moa | MOA= | =MOA | SFP ?x | D | | 30 | 19.3 547g | 13.5" 35c | |
| Bushnell: Nitro [not FFP!] •Deploy MOA SFP Ret. No. RNS1246S1 (black) •No. RN3124GS1 Gun Metal Gray | 400; 400 | Life, NoRec | ? | 3-12x | 30-8 | 44 | ? | NO | 60 | 1/4 moa | 15 moa | MOA= | =MOA | SFP 12x | D | .06 ^{mi} .2 ^{mo} | 30 | 24.2 687g | 13.7" 35c | Capped Turrets! BUT Clickable |
| Hawke: Airmax 30 SF •AMX IR Ret. No. 13300 | 374; 429 | Life, R. O.Own | Yes!! | 3-12x | 31-8 | 50 | 17-4.0 | Y, N | 95 | 1/4 moa | 15 moa | MOA≠ | ≠MIL | SFP 10x | D | ? | 30 | 27.5 780g | 13.6" 35c | Discontinued |
| Bushnell: Engage No. REN31242DG | 243; 328 | Life, NoRec | ? | 3-12x | 30-6 | 42 | ? | NO | 50 | 1/4 moa | 15 moa | MOA= | =MOA | SFP ?x | D | | 30 | 19.5 553g | 14.0" 36c | |
| Vector: Paragon Gen. 2 No. SCOM-25 ≠ Gen. 1 No. SCOM-11 → NO! | ?; 360 | 5y, Rec. | ? | 3-15x | 37-8 | 50 | 8-3.3 | Y | 85 | 0.1 mil | 8 mil | MIL = | =MIL | SFP 10x | D, N | ? | 30 | 22.0 625g | 13.2" 34c | |
| Hawke: Airmax 30 SF Compact No. 13220 | 395; 459 | Life, R. O.Own | Yes! | 6-24x | 22-5 | 50 | 8-2.1 | Y | 53 | 0.1 mil | 6 mil | MIL = | =MIL | SFP 10x | D | ? | 30 | 23.6 670g | 13.0" 33c | Capped Turrets BUT Large for Clicking! Turn Counter |
| Hawke: Airmax 30 SF Compact No. 13210 | 390; 429 | Life, R. O.Own | Yes!! | 4-16x | 33-8 | 44 | 13-3.0 | Y | 67 | 0.1 mil | 6 mil | MIL = | =MIL | SFP 10x | D | ? | 30 | 21.9 621g | 11.7" 30c | Capped Turrets BUT Large for Clicking! T Turn Counter |
| Riton: MOD5 Gen. 2 Wide FoV No. 019962523861 | 420; 520 | Life, NoRec | ? | 4-16x | 29-8 | 50 | 12-3.1 | Y | 80 | 1/4 moa | 15 moa | MOA= | =MOA | SFP 16x | D | .06 ^{mi} .20 ^{mo} | 30 | 23.0 652g | 12.0" 30c | Capped Turrets! BUT Clickable |
| Vector: Continental X8 ED Tactical No. SCFF-190 | ?; 649 | Life | | 2-16x | 61-7.7 | 44 | 6 ⁵ -2.8 | Y | 110 | 0.1 mil | 8 mil | MIL = | =MIL | SFP 10x | D, N, Grid | ? | 30 | 23.8 675g | 13.6" 35c | Parallax 14 or 10y (yes); 0-Stop Turn Counter; Locking Turrets |
| Element: Helix HDLR •Ret. APR-1C MRAD No. 50053 •Ret. APR-1C MOA No. 50054 | 589; ? | Life, NoRec. | | 2-16x | 60-7 ⁵ | 50 | 8 ⁵ -3.1 | Y | 100 wind 45moa | 0.1mi 1/4mo | 6mi 15mo | MIL = MOA= | =MIL =MOA | SFP 16x | D, N, CD | .03 ^{mi} ? | 30 | 27.1 770g | 13.4" 34c | Turn Counter |
| MTC: Copperhead F2 [SFP] | 480; ? | Life ^{30d} R.O.Own | ? | 4-16x | 24-6 | 44 | ? | Y | 40 | 0.1 mil | 6 mil | MIL = | =MIL | SFP 10x | D, N, Wind. 1mil!! | ? | 30 | 24.3 590g | 10.8" 27c | Locking Turrets |
| MTC: Copperhead F2 [SFP] | 427; ? | Life ^{30d} R.O.Own | ? | 3-12x | 32-8 | 44 | ? | Y | 40 | 0.1 mil | 6 mil | MIL = | =MIL | SFP 10x | D, N, Wind. 1mil!! | ? | 30 | 20.0 568g | 9.8" 25c | Locking Turrets Eye Relief: 9cm |
| Vector: Veyron SFP No. SCOM-24 | 169; ? | 5y | Yes!! | 3-12x | 35-9 | 44 | 14-3.6 | NO | 58 | 0.1 mil | 6 mil | MIL = | =MIL | SFP 12x | D | .025 ^{mi} .08 ^{mo} | 30 | 17.6 500g | 9.7" 25c | Eye Relief: 9.0-8.5cm |
| Hawke: Airmax 30 SF Compact No. 13200 | 380; 419 | Life, R. O.Own | Yes!! | 3-12x | 44-11 | 40 | | Y | 100 | 0.1 mil | 6 mil | MIL = | =MIL | SFP 10x | D | ? | 30 | 20.8 589g | 10.9" 28c | Capped Turrets BUT Large for Clicking! T Turn Counter |
| Hawke: Airmax 30 Touch No. 13260 Min. Parallax 8y. W/ eye cup, 3" sidewheel. https://hardairmagazine.com/reviews/hawke-airmax-30-touch-its-a-dedicated-pc-rifle-scope-with-big-benefits/ | 370; 450 | Life, R. O.Own | Yes!! | 3-12x | 64-18 super wide! | 50 | 10-2.7 | Y | 250! = 75mil = 13 rotations | 0.1 mil | 6 mil | MIL = | =MIL | SFP 10x with a click at 10x | D | ? | 30 | 20.2 572g | 10.5" 27c | Capped Turrets BUT Large for Clicking! T Turn Counter ▲Super Short Eye Relief 1.2" (3cm) |
| FFP Scopes – without Thick Outside Posts in the Reticle | | | | | | | | | | | | | | | | | | | | |
| Vector: Veyron 6-24x44 No. SCFF-23 | 198; 289 | 5y | Yes | 6-24x | 17-4 | 44 | 7-1.8 | NO | 50 | 0.1 mil | 6 mil | MIL = | =MIL | FFP ³ No Thick Posts | D | .025 ^{mi} .08 ^{mo} | 30 | 20.5 580g | 11.7" 30c | Locking Turrets |
| Vector: Veyron FFP No. SCFF-22 | 198; 259 | 5y | Yes | 4-16x | 26-6 | 44 | 11-2.7 | NO | 60 | 0.1 mil | 6 mil | MIL = | =MIL | FFP ³ No Thick Posts | D | .025 ^{mi} .08 ^{mo} | 30 | 20.0 570g | 10.6" 27c | Locking Turrets Eye Relief: 9.0-8.5cm |
| Vector: Veyron FFP No. SCFF-21 | 174; ? | 5y | Yes | 3-12x | 35-9 | 44 | 14-3.6 | NO | 58 | 0.1 mil | 6 mil | MIL = | =MIL | FFP ² No Thick Posts | D | .025 ^{mi} .08 ^{mo} | 30 | 17.6 499g | 9.7" 25c | Locking Turrets Eye Relief: 9.0-8.5cm |

| | | | | Magni. → FoV | → Eye Box | Exposed Turrets | | | | Holdoff Reticle | | | | Dimensions | | | | | | |
|---|--------------------------------|---------------------|----------------|---------------|---------------------------------|-----------------|--------------------|---------|-------------------------|-----------------|-------------|-------------|-------------|---|------------------------------------|---|-----------------|-----------------|--------------------|---|
| *in 2019, some 2020, 2021, 2022, 2023 | Price*: Low; Mfctr.'s in US \$ | Warranty | Springer-Rated | Magnification | FoV = Field of View @ 100y (ft) | Obj. Dia (mm) | Exit Pupil (mm) | IR Y/ N | Max. Elev. Adjnt. (MOA) | 1 Click = | 1 T. Turn = | Turrets in: | Reticle in: | Thick O/S Posts? FFP- SFP Calibration at? | Enough Dots, No's, Grid Center Dot | Line Thickness | 1" or 30mm Tube | Weight (oz) (g) | Length (inch) (cm) | Misc. + Reviewers' "Comments" |
| Brand: Series | Part No. | | | | | | | | | | | | | | | | | | | |
| FFP Scopes – with Thick Outside Posts in the Reticle | | | | | | | | | | | | | | | | | | | | |
| Monstrum: FFP-G1 No. FFPS41444-M | ?; 200 | 1y, R. O.Own | ? | 4-14x | ? | 44 | ? | Y | ?? | 0.1 mil | 6 mil | MIL = | =MIL | FFP ⁶ Thick O/S Posts | D, N | | 30 | 26.0 737g | 13.0" 33c | T Turn Counter |
| Bushnell: Nitro [not SFP!] •Deploy MIL FFP Ret. No. RN2104BF2 •Deploy MOA FFP Ret. No. RN2104BF1 (black) No. RN2104GF1 Gun Metal Gray | 500; ? | Life, NoRec | ? | 25-10x | 37-9 | 44 | ? | NO | 50 or 60? | 0.1mi | 5?mi | MIL = | =MIL | FFP Thick O/S Posts | D, N, Grid | 0.05 ^{mi} .17 ^{mo} | 30 | 23.9 678g | 13.6" 35c | Capped Turrets! BUT Clickable |
| | | | | | | | | | | 1/4mo | 15 mo | MOA = | =MOA | | | .044 ^{mi} .15 ^{mo} | | | | |
| Bushnell: Nitro [not SFP!] •Deploy MIL FFP Ret. No. RN3124BF2 •Deploy MOA FFP Ret. No. RN3124BF1 (black) No. RN3124GF1 Gun Metal Gray | 550; ? | Life, NoRec | ? | 3-12x | 30-8 | 44 | ? | NO | 60 | 0.1mi | 5?mi | MIL = | =MIL | FFP Thick O/S Posts | D, N, Grid | 0.05 ^{mi} .17 ^{mo} | 30 | 24.2 687g | 13.7" 35c | Capped Turrets! BUT Clickable |
| | | | | | | | | | | 1/4mo | 15 mo | MOA = | =MOA | | | .044 ^{mi} .15 ^{mo} | | | | |
| Athlon: Talos BTR No. 215028 | 290; 360 | Life, NoRec | Yes!! | 4-14x | 27-8 | 44 | 11- 3.3 | Y | 67 | 0.1 mil | 5 mil | MIL = | =MIL | FFP ¹ Thick O/S Posts | D, N | .025 ^{mi} .08 ^{mo} | 30 | 23.6 669g | 12.9" 33c | |
| Swampfox (US) Kentucky Long | 418; 500 | Life (50000 rounds) | ? | 2-12x | 54-9 | 44 | 9- 2.6 | Y | 120 | 0.1mi | 6 mi | MIL = or | =MIL or | FFP ⁴ Semi O/S Posts | D, N, Grid | ? | 30 | 24.0 680g | 12.4" 32c | Locking Turrets |
| UTG: Accushot Pro AS3 No. AS303FA2 | ?; ? | Life | Yes! | 3-9x | 39-13 | 36 | 12- 4.0 | Y | 100 | 1/4 moa | 20 moa | MOA = | =MOA | FFP Thick O/S Posts | D, N, CD | ? | 34 | 21.9 620g | 9.4" 24c | Locking Turrets |
| Discovery: ED: 4-16x50 SF No. 171103 | 360; 400 | Life (for ED) | Yes | 4-16x | 31-8 | 50 | 10- 3.1 | NO | 80 | 0.1 mil | 6 mil | MIL = | =MIL | FFP Thick O/S Posts | D, N, Grid | ? | 30 | 22.1 625g | 12.2" 31c | Locking Turrets |
| Sightmark: Citadel •w/ MR2 No. SM13039MR2 •w/ LR2 No. SM13039LR2 •w/ LR1 No. SM13039LR1 | 340- 400; – | Life, 30d, O.Own | | 3-18x | 33-6 | 50 | 7- 2.7 | Y | 60 | 0.1mi | 6 mi | MIL = | =MIL | FFP Thick O/S Posts | D, N +Grid +Grid | .03 ^{mi} .03 ^{mi} .12 ^{mo} | 30 | 26.1 740g | 13.0" 33c | Parallax says 15y, but is c.13y. Locking turrets. Throw lever. |
| Swampfox (US): Warhawk •Sharpsh. Grid Ret. MIL No. TWK21044-3L •Sharpsh. Grid Ret. MOA No. TWK21044-3M | ??; 559 | Life (50000 rounds) | | 2-10x | 62.6- 12.5 | 44 | 13- 4.0 | Y | 120 | 0.1mi | 10 mi | MIL = | =MIL | FFP Semi Thick Posts | D, N, Grid | ? | 34 | 29.7 842g | 12.7" 32c | Locking Turrets |
| | | | | | | | | | | 1/4mo | 25mo | MOA = | =MOA | | | | | | | |
| Discoveryopt: ED-AR1 Eye box "smallish for 1x" | 190; 200 | Life | Yes | 1-8x | 133 -15.7 | 24 | 24- 3.0 calculated | Y | 130 | 0.1 mil | 6 mil | MIL = | =MIL | FFP ⁷ Thick O/S Posts | D, N, Grid, CD | ? | 34 | 24.2 687g | 11.4" 29c | Locking Turrets Min. Parallax 5y. Eye Relief 10.2-8.7cm |
| Discoveryopt: HD | 160; 160 | Life | Yes | 2-12x | 58-9 ³ | 24 | 12- 2.0 calculated | Y | 120 | 0.1 mil | 6 mil | MIL = | =MIL | FFP ⁸ Thick O/S Posts | D, N, CD | ? | 30 | 16.6 470g | 8.5" 22c | Locking Turrets Min. Parallax 5y. Eye Relief 9.6-8.2cm → Problem for scope cams and night vision clip-ons? |
| Arken: EPL4 •MIL VHR Ret. •MOA VHR Ret. | 350, 300; 400 | Life | | 4-16x | 30-7 ⁵ | 44 | ? | Y | 86 | 0.1mi | 8 mi | MIL = | = MIL | FFP ⁸ Thick O/S Posts | D, N, CD | .03 ^{mi} .10 ^{mo} | 30 | 23.7 672g | 13.2" 34c | 0-Stop; 3 screws to re-zero; T Turn Counter |
| | | | | | | | | | | 1/4mo | 20mo | MOA = | =MOA | | | | | | | |
| Athlon: Helos BTR Gen. 2 ^{M4} •AHMR2 MIL (not MOA which is BDC) No. 214105 | 450; 625 | Life, NoRec | | 2-12x | 56-10 | 42 | ? | Y | 105 =Elev. 83= Wind. | 0.1 mil | 10 mil | MIL = | =MIL | FFP ⁶ Thick O/S Posts | D, N, Grid, Circle | .025 ^{mi} .08 ^{mo} | 30 | 25.4 720g | 11.8" 30c | Zero Stop Locking Turrets Eye Relief: 9.1cm |
| Optisan: CP 4-16x40 F1 •MIL F1MRAD16 •MOA F1MOA16 Minimized Parallax | 530; 650 | Life | Yes!! | 4-16x | 26 ² - 6.5 | 40 | 10- 2.5 | NO | 60 | 0.1 mil | 10 mil | MIL = | =MIL | FFP Thick O/S Posts | D, mini Grid | .06 ^{mi} .20 ^{mo} ? ? | 30 | 18.7 530g | 10.6" 27c | Capped Turrets! BUT Clickable |
| Discoveryopt: HD [A formerly with gridded reticle, often not updated on webpages!] | 180; 200 | Life | Yes | 3-12x | 34.7- 8 | 44 | 15- 3.7 | Y | 80 | 0.1 mil | 6 mil | MIL = | =MIL | FFP Thick O/S Posts | D, N, CD | ? | 30 | 20.3 575g | 9.6" 24c | Locking Turrets Eye Relief: 9.2-8.8cm |
| US Optics: TS-12X FFP •MHR MIL Hunting Ret. FFP [not Triplex!] | 450; 595 | Life, Anyb. | ? | 3-12x | 30-8 Mine: 35ft | 44 | ? | NO | 100 ? | 0.1 mil | 6 mil | MIL = | =MIL | FFP Semi Thick Posts | D, N | ? | 30 | 18.1 513g | 9.6" 24c | Locking Turrets Eye Relief: 9.1-7.6cm → However, this was not a problem for my Tactacam! |

Notes About Different Scopes – N1, N2, N3, etc.:

N1: Sightron ExacTrack turret adjustment system: Though the turrets of the indicated scope are capped, they are made for dialing, because they use the same ExacTrack turret adjustment system as the uncapped scopes of the following series (as of the 2012 and 2022 catalog): S-TAC | SVIII | S6 | SV | SIII | SII | SII Big Sky
→ Dialing Turrets (capped w/ ^{N1})

N2: [free]

N3: [free]

N4: This scope has “Gen. 2” in its name, as it belongs to the second generation of its series – but is *not the second iteration of this particular scope* with this particular magnification range and objective diameter.

Reticles: Footnotes: Links for Views or Videos of FFP Reticles at Different Magnifications

Note on more detailed reticle diagrams:

- Athlon: Each scope on their homepage includes detailed diagrams: <https://athlonoptics.com>
- Discovery: Many scope reticles are listed here: <https://discoveryoptics.co.uk/reticles/>

¹ Athlon: Talos BTR: 4-14x44 FFP: APLR2 MIL Grid: Reticle at min. and max. magnification:

<https://athlonoptics.com/product/rifle-scopes-talos-btr-4-14x44-aplr-ffp-ir-mil>

² Vector: Veyron: 3-12x44 FFP: Reticle at all magnifications: @ 2:46min:

<https://www.youtube.com/watch?v=9En0mgrsINM>

³ Vector: Veyron: 4-16x44 FFP: Reticle at all magnifications: @ 3:20min and at @ 17:18min to 18:05min:

<https://www.youtube.com/watch?v=gXEKU27mXtQ>

⁴ Swampfox: Kentucky Long: 2-12x44 FFP: MOA: Reticle at 2x and at 12x(?):

<https://images-na.ssl-images-amazon.com/images/I/71%2B5YMUAXfL.AC.SL1500.jpg>

<https://images-na.ssl-images-amazon.com/images/I/71aX%2BZ5aDFL.AC.SL1500.jpg>

Cf. also the other models of this series that have the same six-fold magnification range, resulting in the same ratio of reticle increase/decrease (there are several videos available to see the reticles of those scopes).

⁵ Monstrum: FFP-G1: 4-14x44: (No. FFPS41444-M): Reticle at min. and max. magnification:

https://web.archive.org/web/20191122043510/https://cdn11.bigcommerce.com/s-r7nbep7374/images/stencil/1280x1280/products/252/2002/MONSTRUM-TACTICAL-4-14X44-FFP-FIRST-FOCAL-PLANE-RIFLE-SCOPE-FFPS-HUNTING-AR-15-LR-3083_95364.1551303891.jpg?c=2

⁶ Athlon: Helos BTR Gen. 2 2-12x42 FFP: Reticle at min. and max. magnification:

• MIL, No. 214105 <https://athlonoptics.com/product/helos-btr-gen2-2-12x42-dmr-scope/>

• MOA, No. 214104 <https://athlonoptics.com/product/helos-btr-2-12x42-ahmr2-ffp-ir-moa/>

⁷ Discoveryopt: ED-AR1: 1-8x24 FFP: Reticle at 1x, 4x, and 8x magnification:

<https://www.discoveryopt.com/products/89>

⁸ Arken: EPL4: 4-16x44 FFP:

MIL VHR: Reticle Subtensions:

<https://www.arkenopticsusa.com/ ipx/w 1920,q 100/https%3A%2F%2Fcdn.sanity.io%2Fimages%2Fu57cw5zd%2Fproduction%2Fdaa6661e721237bec2a01cfd12962abab2540216-4005x4005.png%3Fauto%3Dformat?url=https%3A%2F%2Fcdn.sanity.io%2Fimages%2Fu57cw5zd%2Fproduction%2Fdaa6661e721237bec2a01cfd12962abab2540216-4005x4005.png%3Fauto%3Dformat&w=1920&q=100>

MOA VHR: Reticle Subtensions:

<https://www.arkenopticsusa.com/ ipx/w 1920,q 100/https%3A%2F%2Fcdn.sanity.io%2Fimages%2Fu57cw5zd%2Fproduction%2F3917883977bc6e2f37f55eab92830f303f99d20d-4005x4005.png%3Fauto%3Dformat?url=https%3A%2F%2Fcdn.sanity.io%2Fimages%2Fu57cw5zd%2Fproduction%2F3917883977bc6e2f37f55eab92830f303f99d20d-4005x4005.png%3Fauto%3Dformat&w=1920&q=100>

⁹ Discoveryopt: HD: 2-12x24 FFP: Reticle at 2x, 6x, and 12x magnification:

<https://www.discoveryopt.com/products/106>