

Scope Specs Table

SHORT Scopes — and WIDE FoV 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" short)

with 10y Parallax

Exposed Turrets

Holdoff Reticle

Under \$500 (most are under \$200-300)

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Requirements for this Table (few exceptions are included)

Bottom magnification = 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*

Top magnification = between 9x and 12x | if a scope has a higher top magnification it is listed *only if the scope is 13" (33cm) or shorter*

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

Turrets = exposed; however, scopes with capped turrets that check the 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 (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 34mm tube (somewhat limiting scope mount choices), 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): 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 target shooting*.

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 3ft at 10y (1m at 10m) (which translates to 30ft @100y as FoV is usually reported at 100y; it is color coded black).

The color coding 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.

42ft or more | **41-36ft** | 35-30ft | **29-23ft** | **22-17ft** | **16ft or less**

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

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

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 updated as follows: 2021-06: all Hawke

A little caution for 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.

in 2019, some 2020, 2021	Price: Low; Mfctr.'s in US \$	Warranty	Spring-Loaded	Magnification	FoV of View @ 100y (ft)	Obj. Dia (mm)	Exit Pupil (mm)	IR	Max. Elev. Adj. (MOA)	1 Click =	1 T. Turn =	Turrets in:	Reticle in:	FFP Thick 0/3 Posts? SFP Calibration at?	Enough Dots, No's	Line Thickness	1" or 30mm Tube	Weight (oz) (g)	Length (inch) (cm)	Misc. + Reviewers' "Comments"
SFP Scopes																				
Monstrum: V2 Tactical AO No. S31242-M-RGA0-V2-1	?; 100	1y, R. 0.Own	?	3-12x	?	42	?	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 No. NSCM22044	410; ?	Life, 0.Own	?	2-20x	47-5	44	22-2.2 calculated	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.OOwn	No	3-12x	61-17 super wide	24	8-2.0 calculated	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.OOwn	No	3-12x	61-17 super wide	32	11-2.7 calculated	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. No. SCP-216UMOA	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. No. OP3-GM3124UMOA	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. No. OP3-GM4164UMOA	210; 255	Life	Yes!!	4-14x	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 No. SCP3-UG312A0IEW	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 No. SCP-M312A0WQ = w/ Picatinny r. No. SCP-M312A0D = w/ Dovetail r.	125; 130	Life	Yes!!	3-12x	31-10	32	10-2.7	NO	??	1/3 inch	24 inch	SMOA≠	≠MIL	SFP 10x	D	?	1"	12.7 360g	8.1" 21c	Min. Parallax: 3y Wire reticle
UTG: Bugbuster No. SCP-M392A0D = w/ Dovetail rings	110; 125	Life	Yes!!	3-9x	37-12	32	10-3.6	NO	??	1/3 inch	24 inch	SMOA≠	≠MIL	SFP 9x	D	?	1"	12.0 340g	7.9" 20c	Min. Parallax: 3y Wire reticle
UTG: Bugbuster No. SCP-M392A0IEW = red-green-blue IR + Picatinny rings Right side turret is IR! No. SCP-M392A0LWQ = 36-color IR + Picatinny rings	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 4-12x40AO •MH12 Ret. Code 37559 •EMD12 Ret. Code 37522	?; ?; 270, 200	Life	Yes (?)	4-12x	34-11	40	10-3.3	NO	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	NO	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-MH10X Ret.	380; 430	Life	?	3-12x	37-9	44	14-4.0	Y	50	0.1 mil	4.8 mil!!!	MIL =	=MIL	SFP 10x	D, (N)	.05 ^{mi} .17 ^{mo}	30	27.7 700g	13.3" 34c	
Athlon: Talos Mildot No. 215004	150; 180	Life, NoRec	?	3-12x	34-9	40	13-3.4	NO	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 No. 793139-260130	450; 520	Life	Yes!!	3-16x	32-6	42	?	NO	70	1/4 moa	15 moa	MOA=	=MOA	SFP 16x	D	.02 ^{mi} .08 ^{mo}	30	23.5 666g	12.9" 33c	Capped Turrets! BUT Clickable T Turn Counter

				Magni. → FoV	→ Eye Box	Exposed Turrets			Holdoff Reticle				Dimensions							
in 2019, some 2020, 2021	Price: Low; Mfctr.'s in US \$	Warranty	Spring-Loaded	Magnification	FoV = Field of View @ 100y (ft)	Obj. Dia (mm)	Exit Pupil (mm)	IR N	Max. Elev. (MOA)	1 Click =	1 Turn =	Turrets in:	Reticle in:	Thick O/S Posts? FFP Calibration at?	Enough Dots, No's	Line Thickness	1" or 30mm Tube	Weight (oz) (g)	Length (inch) (cm)	Misc. + Reviewers' "Comments"
Bushnell: Nitro [not FFP!] • Deploy MOA SFP Ret. No. RN2104GS1 (black) • No. RN2104GS1 Gun Metal Gray	350; 450?	Life, NoRec	?	2.5-10	37-9	44	?	NO	50 or 60?	¼ moa	15 moa	MOA =	=MOA	SFP 10x	D	.06 ^{mi} .2 ^{mo}	30	23.9 678g	13.6" 35c	Capped Turrets! BUT Clickable
Bushnell: Engage No. REN21044DG	250; 343	Life, NoRec	?	2.5-10x	45-11	44	17- 4.4	NO	50	¼ moa	15 moa	MOA =	=MOA	SFP ?x	D		30	19.3 547g	13.5" 35c	
Bushnell: Nitro [not FFP!] • Deploy MOA SFP Ret. No. RN3124GS1 (black) • No. RN3124GS1 Gun Metal Gray	400; 400	Life, NoRec	?	3-12x	30-8	44	?	NO	60	¼ 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. T3300 Discontinued	374; 429	Life, R. OOwn	Yes!!	3-12x	31-8	50	17- 4.0	Y N	95	¼ moa	15 moa	MOA ≠	≠MIL	SFP 10x	D	?	30	27.5 780g	13.6" 35c	
Bushnell: Engage No. REN31242DG	243; 328	Life, NoRec	?	3-12x	30-6	42	?	NO	50	¼ 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. OOwn	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. OOwn	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	¼ moa	15 moa	MOA =	=MOA	SFP 16x	D	.06 ^{mi} .20 ^{mo}	30	23.0 652g	12.0" 30c	Capped Turrets! BUT Clickable
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
Discovery: VT-3 4-16x44 SF SFP	150; 172	3y	Yes	4-16x	35-9	44	?	NO	65	0.1 mil	6 mil	MIL =	=MIL	SFP 10x	D, N	?	30	19.4 550g	10.6" 27c	Locking Turrets
Discovery: VT-3 3-12x44 SF SFP No. 170612	145; 180	3y	Yes	3-12x	35-9	44	?	NO	68	0.1 mil	6 mil	MIL =	=MIL	SFP 10x	D, N	?	30	18.4 521g	10.0" 25c	Locking Turrets Eye Relief: 9.0-8.5cm
Hawke: Airmax 30 Touch No. 13260	370; 450	Life, R. OOwn	Yes!!	3-12x	64-18 wide!	32	10- 2.7	Y	250!	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)
Hawke: Airmax 30 SF Compact No. 13200	380; 419	Life, R. OOwn	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
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
FFP Scopes – with Thick Outside Posts in the Reticle																				
Monstrum: FFP-G1 No. FFPS41444-M	?; 200	1y, R. OOwn	?	4-14x	?	44	?	Y	??	0.1 mil	6 mil	MIL =	=MIL	FFP ⁵ Thick O/S Posts	D, N		30	26.0 737g	13.0" 33c	T Turn Counter
Discovery: HS: 4-14x44 FFP No. 170402	200; 280	3y	Yes	4-14x	26-8	44	11- 3.1	NO	55	¼ moa	15 moa	MOA =	=MOA	FFP Thick O/S Posts	D, N	?	30	25.0 750g	13.0" 33c	Locking Turrets
Discovery: HS: 4-14x44 FFP No. 170404	210; 290	3y	Yes	4-14x	26-8	44	11- 3.1	NO	70	0.1 mil	6? mil	MIL =	=MIL	FFP Thick O/S Posts	D, N	?	30	20.1 570g	13.0" 33c	Locking Turrets

Footnotes: Links for Views/ 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/>