

Much more than an eyepiece

HYPERION[®]-eyepieces

How to use the modular eyepiece system – illustrated instructions for the whole range of Hyperion accessories



Free case with purchase of 7pc eyepiece set



Individually packaged Hyperion eyepieces:



Scope of supply for each Hyperion 68°-eyepiece (1-5):

dual 2" and 1 1/4" nosepiece

Soft-leather bag provides perfect protection – takes very little space

1 1/4" (31,7mm) Ø Dust Cap

Two end dust caps with inner diameters of 48mm and 45mm

68° Hyperion eyepiece with Phantom-Group[®] Coating and two Photo-threads M 43 and SP 54

Winged rubber eyepieces included with full set

HYPERION MODULAR EYEPIECES
Barrels for both 1 1/4" and 2" built in 68° Wideangle and long eye relief, perfectly matched to the human eye. Phantom Group[®] Multicoatings for maximum contrast and total freedom from reflections. Modular design allows adjustment of eyepiece focal length with optional finetuning rings.
Adapter threads for afocal and projection photography built in. Optional threaded adapters permit attachment to practically any camera.
Soft-leatherette bag and 3 dustcaps included.



1 1/4" barrel with captive groove and filter thread, suitable for all 1 1/4" eyepiece-filters, as well as for the Baader 1 1/4" extension tube (#1905130)

End dust caps

All Hyperion eyepieces are equipped with two dust caps which protect the eye lens side. This leaves you the choice of storing the eyepiece protected from dust with rubber eye cap folded down (especially for persons who wear glasses) or folded up.

System-threads M 43 and SP 54

The Hyperion threads are located beneath the rubber eye cap, or rather beneath the thread-protecting ring (made of high-quality, non-aging silicone rubber). The large number of Baader adapter rings allows use of the Hyperion eyepiece for (almost) every task in astronomical – and nature – photography as a high-quality projection optic or as a tele-extender.

The following pages describe in detail many of the adaptations and variations that are possible with the Hyperion system.



1 System thread M43



2 System thread SP54

Variable focal lengths with the Hyperion 2" finetuning rings (FTR) 14 and 28 mm



Hyperion eyepiece with FTR 14 and 28 mm

Hyperion eyepiece with FTR 14mm (this combination is also portrayed in the picture below which features the 2" mirror star diagonal)

Available combinations of Hyperion eyepieces with Finetuning Rings or 2" Baader Filter to modify the focal length and the field of view.

	Effective focal length in mm	Field-stop mm	with 14 mm FTR	with 28 mm FTR	with 14 + 28 mm FTR	with 2" Baader Filter*	without first group of lenses
Hyperion**	24.0	28.0	--	--	--	--	--
Hyperion	21.0	22.5	17.6	19.9	15.5	17.5	14.0
Hyperion	17.0	20.9	13.1	17.1	10.8	14.1	9.2
Hyperion	13.0	17.7	10.8	14.6	9.2	12.5	8.1
Hyperion	10.0	15.0	8.4	11.6	7.1	9.8	6.1
Hyperion	8.0	10.7	6.0	8.6	5.0	7.1	4.3
Hyperion	5.0	6.5	4.0	5.4	3.2	4.5	2.6



Hyperion eyepiece with built-in 2" eyepiece filter (e.g. Infrared-Blocking-Filter # 2459210 A)

A variety of additional Hyperion focal lengths can be obtained at very moderate prices by using our 2" Finetuning Extension Rings 14 and 28 mm, or even our 2" eyepiece filters. Thus an eyepiece of 5 mm focal length can be converted into one of 2.6 mm focal length – without loss of sharpness – above all, because no additional lenses are introduced into the beam, which is unavoidable when using a Barlow lens.

For marginal cost such experimentation is possible. You will discover how much your telescope can achieve, exceeding the recommended range of magnification without an additional Barlow lens. You will experience surprising results especially with refractors. With real apochromats the usable exit pupil may be considerably smaller than the literature recommends!

* Baader 2" eyepiece filter with a height of 8 mm. Yellow column of the table: focal length, Light-Grey column: diameter of the field stop
** non variable focal length

Hyperion eyepiece with 1 1/4" barrel unscrewed

Finetuning 2" Extension ring 28 mm # 2958228

Finetuning 2" Extension ring 14 mm # 2958214

2" Stop ring with captive brass locking ring and two locking screws # 2958027



Hyperion eyepiece 2" Stop ring #2958027

Finetuning ring 14 mm #2958214

1 1/4" Hyperion barrel with built-in negative lens group

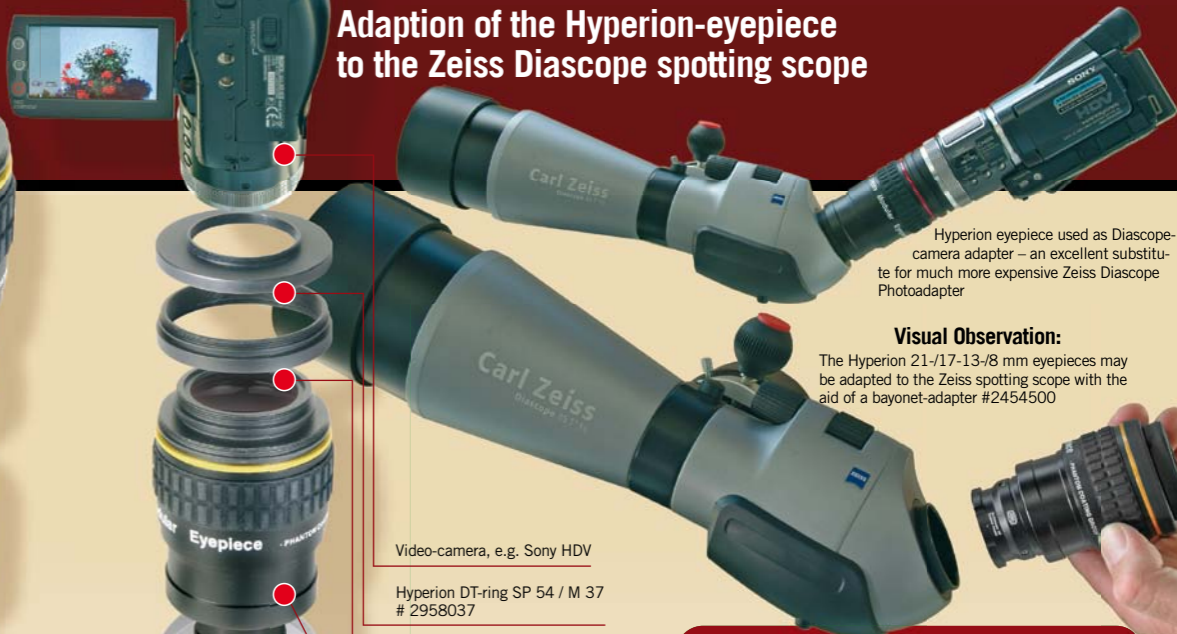
Baader ClickLock[®], Astro-Physics Maxbright Star Diagonal

The M48 filter thread is located here! To remove the first group of lenses, all Hyperion eyepieces must only be opened here (exception 24 mm). Disassembling the eyepiece elsewhere will void the warranty!

Combination of the Hyperion eyepiece and the 14 mm Finetuning Ring as well as the 2" stop ring

The stop ring prevents the eyepiece barrel from hitting the mirror star diagonal or prism.

Adaption of the Hyperion-eyepiece to the Zeiss Diascope spotting scope



Hyperion eyepiece used as Diascope-camera adapter – an excellent substitute for much more expensive Zeiss Diascope Photoadapter

Visual Observation:

The Hyperion 21-/17-/13-/8 mm eyepieces may be adapted to the Zeiss spotting scope with the aid of a bayonet-adapter #2454500

Video-camera, e.g. Sony HDV

Hyperion DT-ring SP 54 / M 37 # 2958037

Hyperion extension DT-ring 11 mm SP 54i / SP 54 a # 2958090

Hyperion eyepiece

1 1/4" Baader Diascope bayonet-adapter # 2454500 with built-in captive brass locking ring – slipped over and fastened onto the chromium-plated eyepiece barrel

Carl Zeiss Diascope 85 T*FL

more information: www.hyperion-okulare.de

... and if everything fails...

... for instance – if you want to use a small digital camera without lens thread for afocal projection-photography... why not use our

Baader-Microstage II Digiscoping Adapter (#2450330) – it will solve all adaptation problems!

The Baader Microstage II enables camera adaptation onto almost any telescope, spotting scope and many binoculars.

The camera support arm rotates to the side for visual aiming (with Clickstop action!). Camera remains completely adjusted and is ready for shooting the image when the support arm is clicked back into working position.

The whole family of Hyperion 68° eyepieces:



5 mm #2454605

8 mm #2454608

10 mm #2454610

13 mm #2454613

17 mm #2454617

21 mm #2454621

24 mm #2454624



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Hyperion eyepieces classical eyepiece projection

M43/T-2 adapter ring # 2958080 fits the smaller M43 system thread of the Hyperion eyepiece. Thus every Hyperion eyepiece can be used as a classical projection eyepiece. The whole range of adapter rings of our Baader Astro T-2 System® for moon- and planetary photography is available for this purpose. With eyepieces of 5 and 8 mm focal length, highest projection magnifications are easily attained.



Celestron NexImage CCD-Webcam

More conveniently priced alternative to the Click-Lock clamp – the standard eyepiece clamp 1 1/4" / T-2 # 2458120

Video or CCD-camera with 1 1/4" barrel

Baader Click-Lock 1 1/4" eyepiece clamp # 8 (# 2458100)

As needed: T-2 extension tube 40 mm (# 1508153) for enlarging the factor of projection

Recommended: T-2 extension tube 7,5 mm # 1508155

Hyperion M43/T-2 ring # 2958080

Hyperion eyepiece system thread M 43 is exposed by removing the rubber eye cap

Simple alternative to the DSLR T-ring (on the right side): Standard EOS T-ring without dust-seal (# 2408319)

DSLR-camera e.g. Canon EOS (DSLR)

Protective Baader Canon EOS T-ring with built-in dust protection infrared blocking filter # 2958550 L

Optional: T-2 extension tube 15 mm, increases the projection factor (# 1508154)

Optional: T-2 extension tube 40 mm (# 1508153), increases the projection factor

Recommended: T-2 extension tube 7,5 mm # 1508155

Hyperion M43/T-2 ring #2958080

Rubber protecting ring for the SP 54 system thread

M43/T-2 Adapter # 2958080

Adapter system SP 54 –for afocal projection:

The Hyperion DT-rings SP 54 are optimized to provide the shortest possible distance between the eye lens of the eyepiece and the digital camera lens. Only in this way is a fully illuminated photographic field possible without vignetting

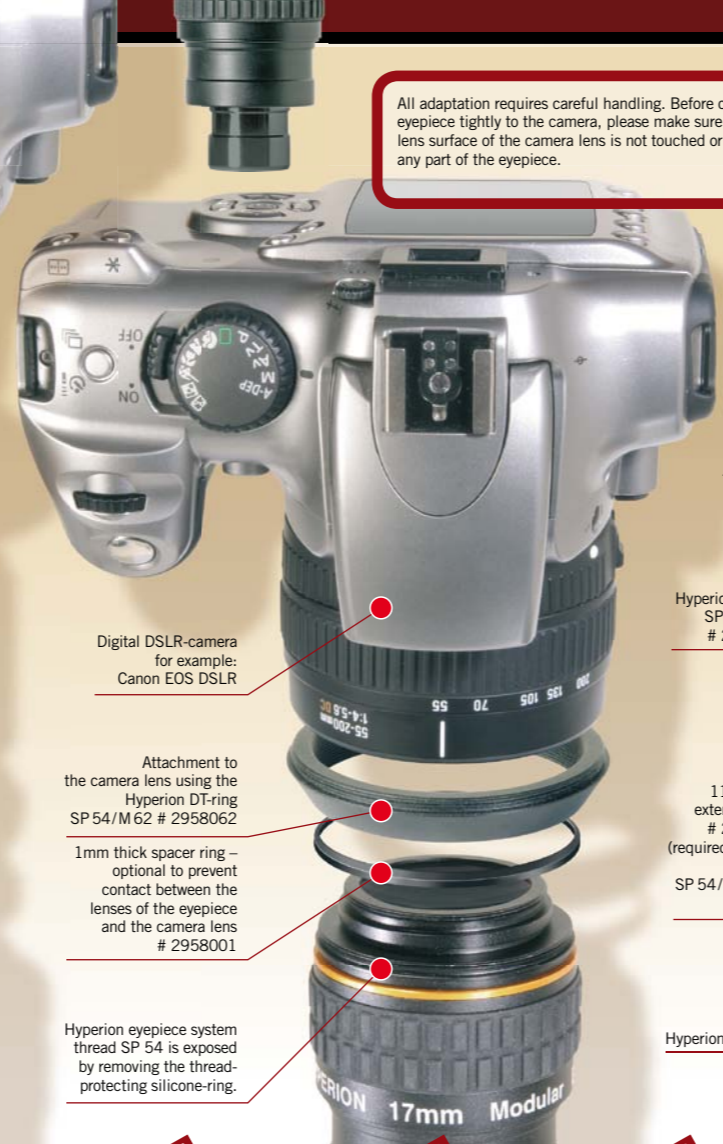


2 adjustment Spacer Rings made of hard plastic for the SP 54 thread are part of each Hyperion DT-ring free of charge. With these spacer rings (each ring has a thickness of only 1 mm), differences in mechanical heights may be adjusted, to be able to adapt the camera front lens as close as possible, without having to use the 11 mm Extension ring (# 2958090). Caution when mounting the camera! Camera-front lenses may be too close to the first lens of the Hyperion eyepiece only by a tenth of a millimetre. When mounting the Hyperion-eyepiece onto any camera-front-lens, always proceed with the greatest care, possibly using the additional Spacer rings.

Using SP 54 connecting rings, the objective of the camera and the Hyperion eyepiece may be connected with a minimum of separation distance.

Hyperion eyepieces afocal projection with DSLR-cameras

All adaptation requires careful handling. Before connecting the eyepiece tightly to the camera, please make sure that the lens surface of the camera lens is not touched or scratched by any part of the eyepiece.



Digital DSLR-camera for example: Canon EOS DSLR

Attachment to the camera lens using the Hyperion DT-ring SP 54/M 62 # 2958062

1mm thick spacer ring – optional to prevent contact between the lenses of the eyepiece and the camera lens # 2958001

Hyperion eyepiece system thread SP 54 is exposed by removing the thread-protecting silicone-ring.

Hyperion DT-ring SP 54/M 28 # 2958028

Hyperion 11mm long extension ring # 2958090 (required to adapt DT-rings SP 54/M 28 and M 37)

Hyperion eyepiece

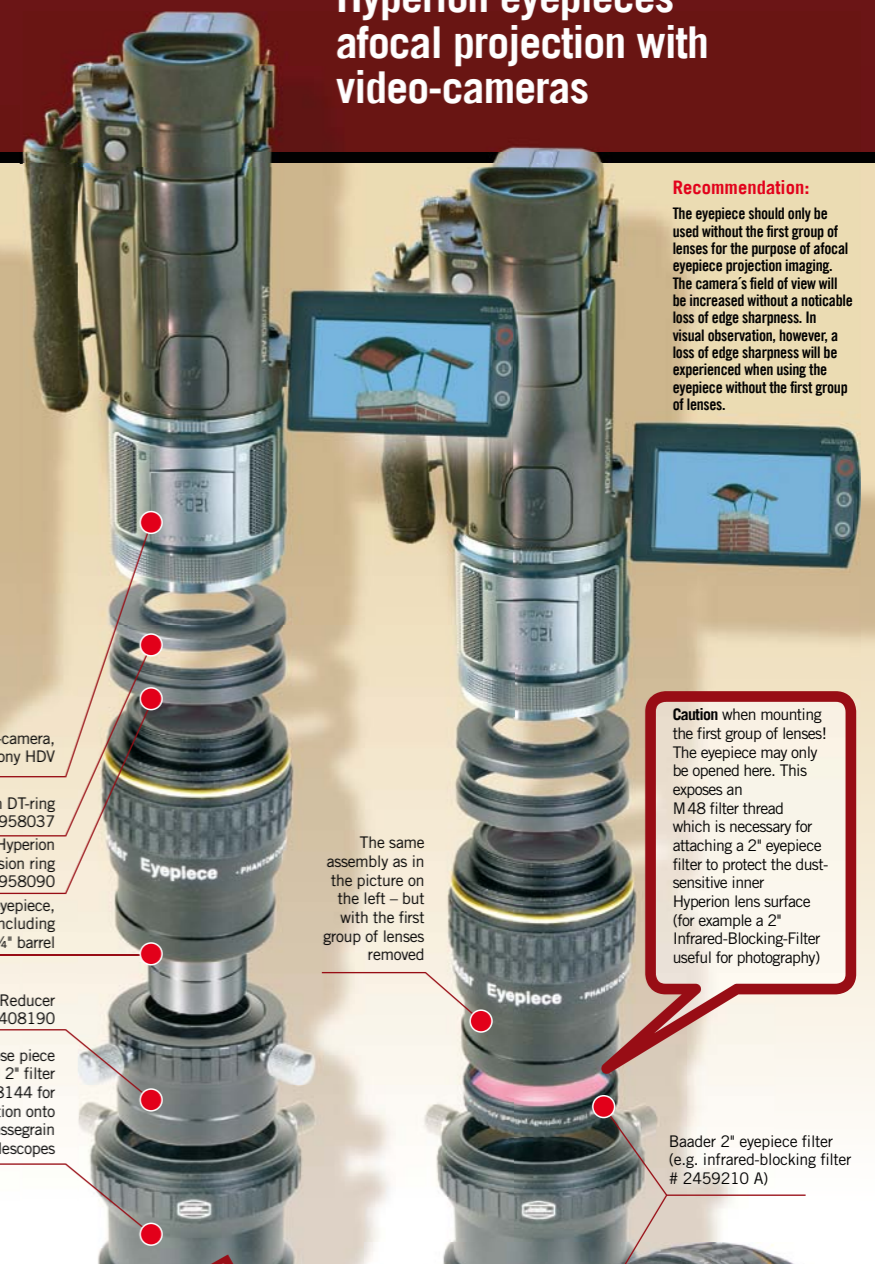
Video camera with M 28 filter thread in front of the lens

Please consult our Astro-accessory list to find further adapter rings, including the Astro T-2 System®.

Hyperion eyepieces afocal projection with video-cameras

Recommendation:

The eyepiece should only be used without the first group of lenses for the purpose of afocal eyepiece projection imaging. The camera's field of view will be increased without a noticeable loss of edge sharpness. In visual observation, however, a loss of edge sharpness will be experienced when using the eyepiece without the first group of lenses.



3 CCD Video-camera, e.g. Sony HDV

Hyperion DT-ring SP 54/M 37 # 2958037

Hyperion DT-extension ring # 2958090

Hyperion eyepiece, complete, including 1 1/4" barrel

2" to 1 1/4" Reducer #2408190

2" deluxe nose piece with integrated 2" filter holder # 2958144 for adaptation onto Schmidt-Cassegrain telescopes

The same assembly as in the picture on the left – but with the first group of lenses removed

Baader 2" eyepiece filter (e.g. infrared-blocking filter # 2459210 A)

Caution when mounting the first group of lenses!

The eyepiece may only be opened here. This exposes an M 48 filter thread which is necessary for attaching a 2" eyepiece filter to protect the dust-sensitive inner Hyperion lens surface (for example a 2" Infrared-Blocking-Filter useful for photography)