

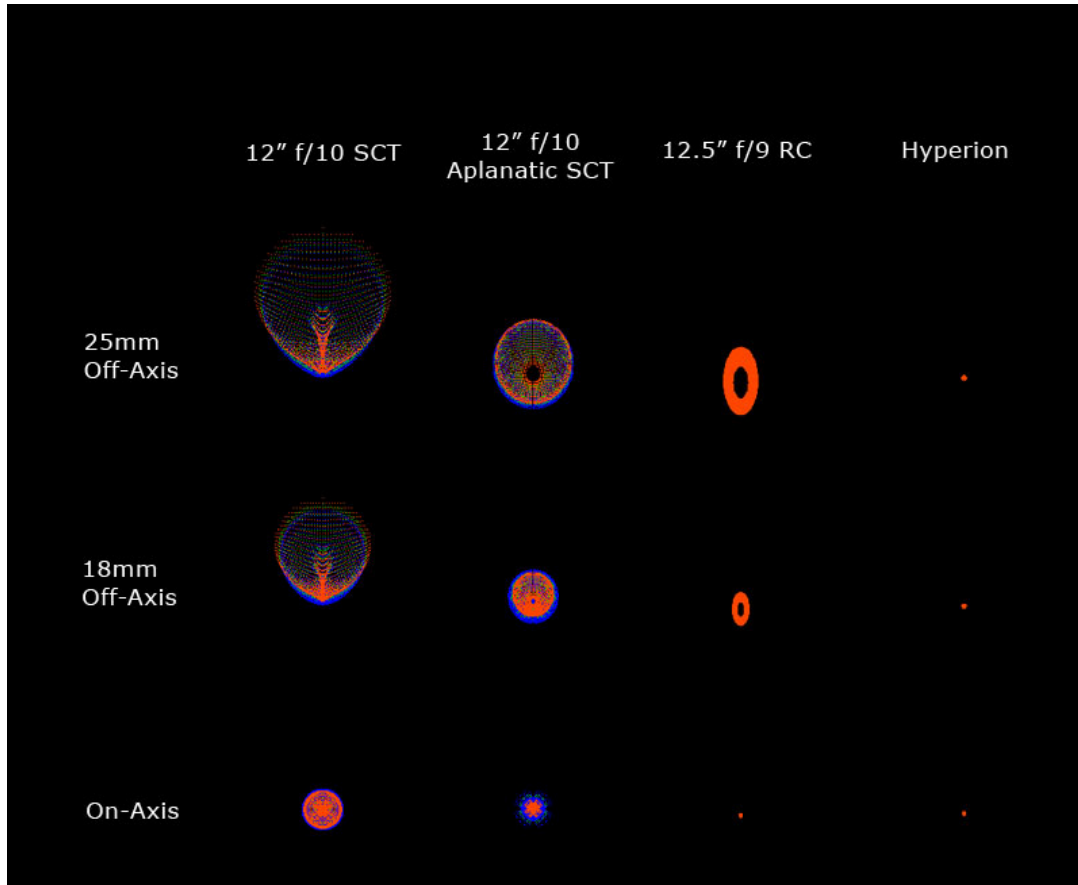
STARIZONA
Hyperion
12.5" F/8



Starizona has developed a high-performance astrographic telescope. The goal of the design is to offer an instrument which provides better performance than any other instrument in its class, yet has a much lower cost. Despite the lower price point, the Starizona telescope has high optical and mechanical quality and a comprehensive set of standard features. It is designed with the advanced CCD imager in mind, and it will accommodate a larger range of CCD cameras than most other telescopes.

Comparing Optical Designs

The Hyperion is designed to outperform any other high-end imaging telescope on the market, while doing so at a fraction of the cost. Ritchey-Chrétien (RC) telescopes produce a curved field of view that suffers from astigmatism, causing stars at the edge of the field to be elongated. The Hyperion produces a true flat field with no aberrations. The diagram below compares popular optical designs.



The bottom row of spots corresponds to the center of the field, the upper row to the corners of a 50mm-diagonal format CCD chip. The SCTs both suffer from slight chromatic aberration, while the RC and Hyperion do not. The asymmetrical shape of the standard SCT design results from the inherent coma. The elliptical shapes of the coma-free SCT and RC are due to astigmatism and field curvature. Note the star images from the Hyperion remain unchanged from the center of the field to the edge. An important aspect of the above diagram is that it shows stars over a **flat focal plane**, corresponding to what a CCD would actually see, not the idealized, curved focal surface shown by some manufacturers.

Standard Features

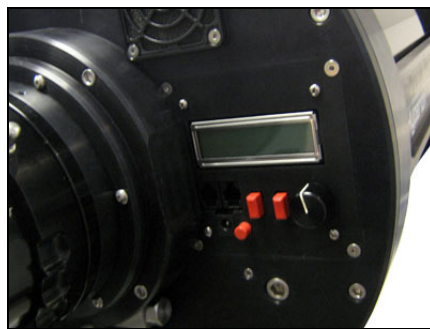
- *High-Precision Instrument Rotator*
- *Feathertouch 3.5" Focuser*
- *Temperature-Compensating Autofocuser*
- *Integrated Telescope Control Panel*
- *Dual Cooling Fans*
- *Primary and Secondary Dew Heaters*
- *Wireless Control of All Electronic Features*
- *Top and Bottom Losmandy-Style Dovetail Plates*

The **instrument rotator** can be used to accurately position the camera for framing an object or finding a guidestar.

The **Feathertouch 3.5" focuser** is capable of carrying heavy loads. Its large aperture allows full illumination of very large CCD sensors. Various end caps are available for different equipment setups.

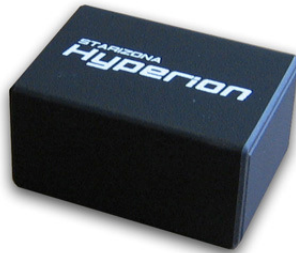
The Hyperion uses Starizona's proven **MicroTouch autofocuser**. The autofocuser quickly and accurately focuses the telescope. It has a temperature compensation function where the focuser learns how to adjust for changes in focus due to temperature fluctuations.

The integrated **Telescope Control Panel** allows manual operation of all the electronic features. It features an LCD display and control dial to set orientation of the rotator, focuser position, fan speed, and more.



Cooling fans allow rapid thermal stabilization of the optics, reducing tube currents and the resultant degradation of image quality. **Dew heaters** prevent moisture from forming on the primary or secondary mirrors.

Perhaps the most innovative feature of the Hyperion is its **wireless control**. All of the electronic features are **ASCOM compatible** and can be controlled from a computer through a **single USB port** and tiny wireless transmitter box. Included software will control all of the telescope's devices. Third-party software can also control the telescope for automated operation.



Hyperion 12.5

Features

- Flat-field Harmer-Wynne optical design
- Diffraction-limited image circle 70mm (1.6°) in diameter
- RMS spot diameter less than 9 microns over 84mm (1.9°) in diameter
- No chromatic aberration over 350-1100nm range
- High-precision instrument rotator
- Starlight Instruments Feathertouch 3.5" focuser
- Temperature-compensating autofocuser
- Integrated telescope control panel
- Dual cooling fans
- Primary and secondary dew heaters
- Wireless interface
- Top and bottom Losmandy-style dovetail plates

Specifications

Aperture: 12.5" (320mm)

Focal Ratio: f/8

Focal Length: 2540mm

Secondary Mirror Diameter: 5.5"

Overall Length of OTA: 39"

Overall Length with Focuser: 45"

Total Weight: 60 lbs.

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