



# STARLIGHT XPRESS

SCIENTIFIC IMAGING SYSTEMS



## Lodestar PRO & Ultrastar PRO

### KEY FEATURES

- **Incredibly sensitive**
- **High QE**
- **Ultra-low dark current**
- **USB powered & controlled**
- **RG12 Autoguider output**
- **Faster download speed**
- **Compact and lightweight**
- **1.25" in diameter x 100mm**



The **Lodestar PRO** cameras are an upgraded version of the very popular Lodestar X2 autoguiders with quicker download times and lower read noise electronics. The original Lodestar used the ICX429 Exview chip from Sony and offered excellent sensitivity. However, the Lodestar X2 and now the Lodestar PRO utilise Sony's upgraded version of the CCD, the ICX829, with considerably improved QE and read noise. This new 'Exview 2' chip approximately doubles the Lodestar sensitivity and adds nearly a full star magnitude to the minimum guide star brightness.



The **Ultrastar PRO** cameras are advanced versions of our 'Superstar' guide camera and have a similar resolution of 1392 x 1040 pixels. However, the CCD chip has 70% more area and the QE is considerably greater, at around 75% peak. These characteristics give the Ultrastar an excellent performance as both a guide camera and an imaging camera, which is especially well suited to 'Live Viewing' mode. Some years ago, Paul Shears released a simple to use program called 'Lodestar Live', which uses the SX Lodestar in 'Live Viewing' mode. This has now been upgraded to 'Starlight Live' and is capable of controlling both the Lodestar and the Ultrastar in Live view. It can also colour convert and stack images from the single-shot colour versions of these cameras.



### Monochrome Autoguider Specifications

Product	CCD	No. of Pixels	CCD Size (mm)	No of Pixels/Size	Download Time	Read Noise	Size Dia/Length	QE	Weight	Full Well Depth	Data Format
Lodestar PRO	ICX829AL	330K	6.47x4.81	752 x 580 (8.6um x 8.3um)	0.3 secs	5.5-e	1.25" x 70mm	77%	100g	>30K	16 bit
Ultrastar PRO	ICX825-AL	1.45M	9 x 6.7	1392 x 1040 (6.45um x 6.45um)	0.5 secs	3.5-e	1.25" x 100mm	75%	100g	>23K	16 bit

### Colour Autoguider Specifications

Product	CCD	No. of Pixels	CCD Size (mm)	No of Pixels/Size	Download Time	Read Noise	Size Dia/Length	QE	Weight	Full Well Depth	Data Format
Lodestar-C PRO	ICX829AK	330K	6.47x4.81	752 x 580 (8.6um x 8.3um)	0.3 secs	5.5-e	1.25" x 70mm	77%	100g	>30K	16 bit
Ultrastar-C PRO	ICX825AQ	1.45M	9 x 6.7	1392 x 1040 (6.45um x 6.45um)	0.5 secs	3.5-e	1.25" x 100mm	75%	100g	>23K	16 bit

For further information, please contact us at [info@starlight-xpress.co.uk](mailto:info@starlight-xpress.co.uk)