



LXP Hybrid Scan Head

2-Axis, Enclosed

Product Highlights

Our enclosed plug-and-play LXP scan head is self-tuning and designed to run at high marking speeds. It is ideal for demanding applications such as high-speed marking, data matrix marking, coding, surface texturing, and more. Industry-standard electrical interfaces support easy OEM system integration and the LXP is compatible with a number of F-Theta lenses to support a variety of field sizes. All of our scan heads are designed and optimized to operate in conjunction with all Cambridge Technology controllers and software.

Achieve high-efficiency and high-performance with plug-and-play LXP scan head

- Predictive scanning control supports faster scanning speeds
- High position accuracy ensures high quality output
- High processing speeds that maximize scanning throughput
- Optimized components support high performance of our scan heads

LXP Hybrid

Scan Head

Product Specifications	LXP-07	LXP-10	LXP-14
Mirror Aperture Size (mm)	7	10	14
Scan Angle	±20°	±22°	±22°
Beam Displacement (mm)	9.3	13.2	18.6
Step Response Time 1% of Full Scale ¹ (ms)	0.185	0.22	0.28
Step Response Time 10% of Full Scale ¹ (ms)	0.55	0.45	0.58
Typical Marking Speed ² (m/s)	6.5	5.0	4.0
Typical Positioning Speed ² (m/s)	36	26	18
Typical Writing Speed ^{2,3} (cps, good quality)	1350	1100	950
Typical Writing Speed ^{2,3} (cps, high quality)	1150	1000	800
Repeatability ⁴ (μrad)	30	25	20
Weight (kg, approximate)	2.7	2.7	4.4

Shared Specifications	
Wavelength Options	355 nm / 532 nm / 1030 nm - 1080 nm / 9.4 μm - 10.6 μm Broadband Coatings: 350 nm – 12 μm
Gain Error	<5 mrad
Zero Offset	<5 mrad
Skew	<1.5 mrad
Resolution	20 μrad
Tracking Error	0.00 ms
Long Term Offset Drift ⁵	<200 μrad
Long Term Scale Drift ⁵	<200 ppm
Temperature Offset Drift	<25 μrad/ °C
Temperature Scale Drift	<50 ppm/°C
Digital Communication	XY2-100 Protocol
Command Resolution	16-bit
Power Requirements	±15V to ±28V, 5A RMS, 10A max
Operating Temperature	+15°C to +35°C

Notes:

All angles are in optical degrees, unless otherwise noted. All specifications are subject to change without notice.

References:

1. Settling to within 1% of position.
2. With 160 mm F-Theta lens.
3. Single stroke 1 mm characters, SIMPLEX font.
4. <3 sigma from mean, per axis.
5. During 24 hours of operation after 30 minutes of warm up, per axis.

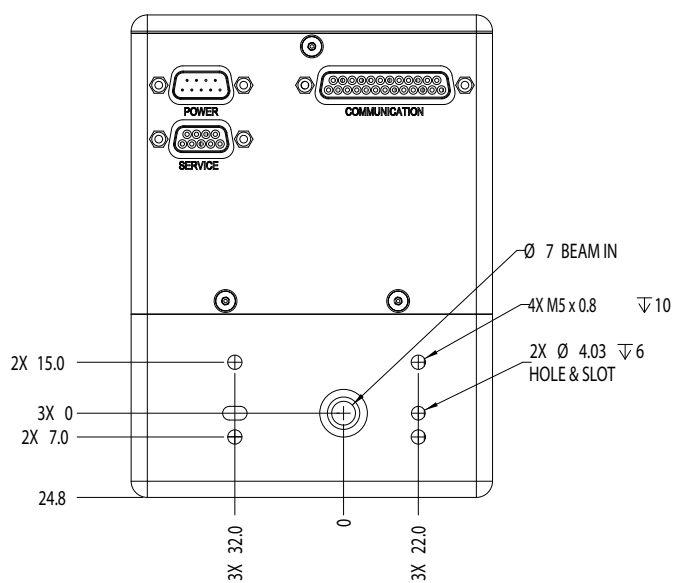
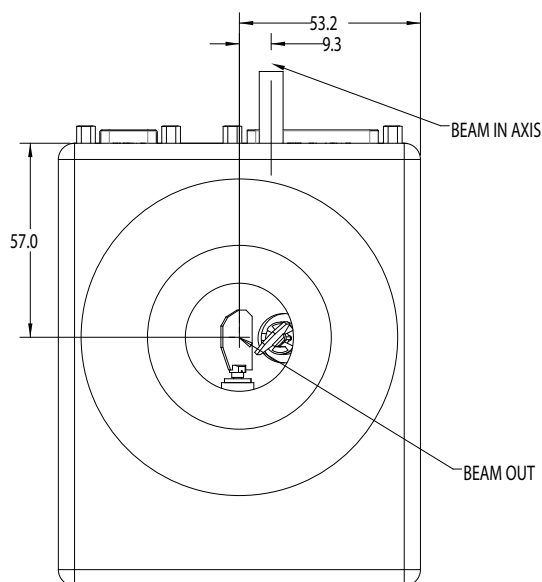
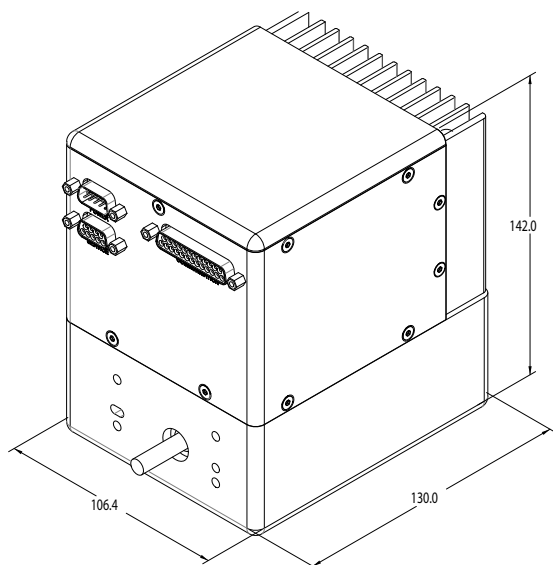


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LXP Hybrid

Scan Head

LXP-07

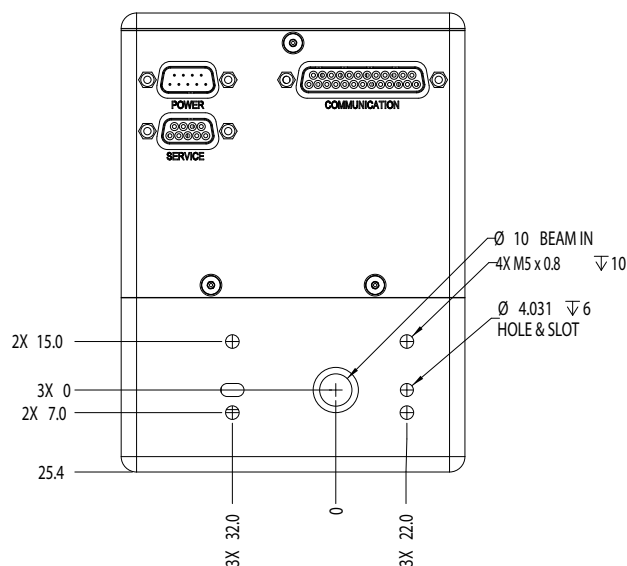
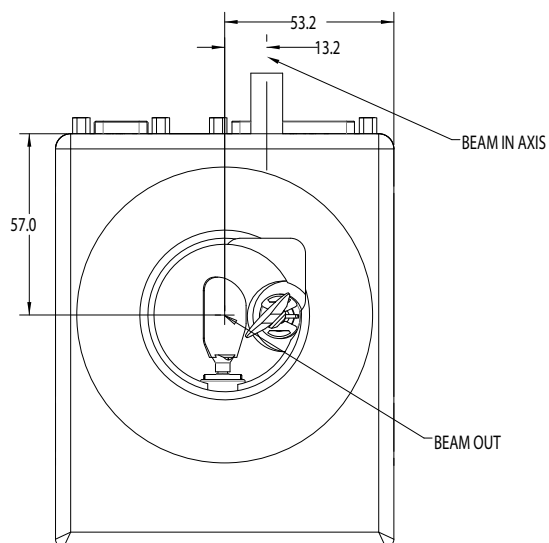
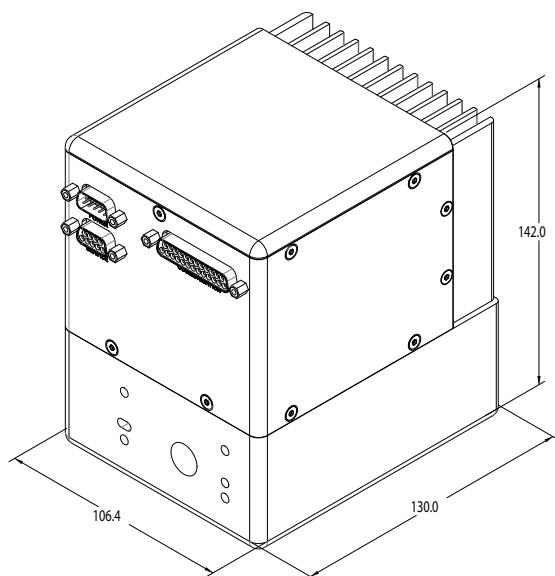


Notes:
All dimensions are in mm, unless otherwise noted. All specifications are subject to change without notice.

LXP Hybrid

Scan Head

LXP-10

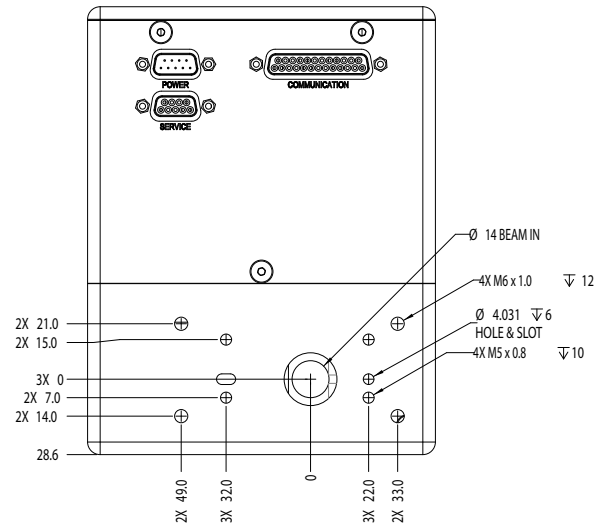
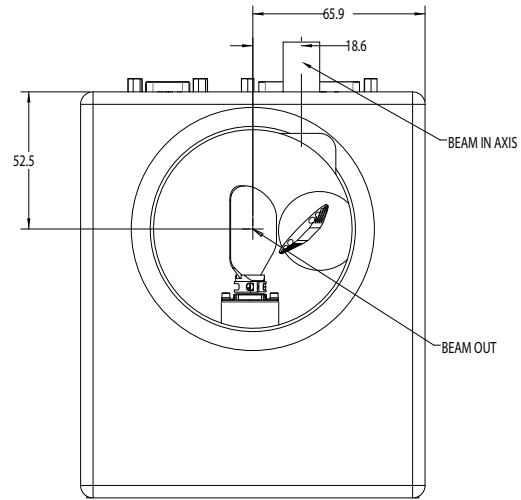
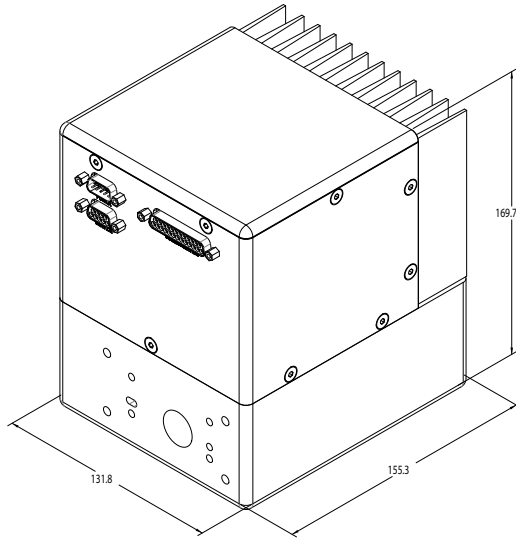


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LXP Hybrid

Scan Head

LXP-14



Notes:

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About Cambridge Technology

With close to 50 years of expertise, Cambridge Technology designs, develops, and manufactures innovative beam steering solutions including polygon- and galvanometer-based optical scanning components, 2-axis and 3-axis scan heads, scanning subsystems, high power scanning heads, and controlling hardware and software. We excel in collaborating with our key OEM partners to engineer products that meet their needs from the largest engineering solution to the smallest component. Key market applications include advanced industrial processes like additive manufacturing, laser converting, laser marking, and via-hole drilling, and medical applications such as laser treatment and optical coherence tomography. Cambridge Technology is a Novanta company.

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