

Digi-Cube™ Scan Head

Self-Tuning, Digital Laser Scan Head

Technologically Advanced Digital Processor

The Digi-Cube Digital Scan Head is designed for easy OEM integration and plug-and-play replacement of existing analog scan heads, simplifying installation, and compatibility issues. Using the standard XY2-100 communication protocol, the Digi-Cube has industry standard mechanical bolt patterns, power and communication pinouts, and comes in a wide range of mirror coatings and lenses. The Self-Tuning Technology automatically compensates for mechanical wear, extending service life and eliminating the issue of traditional analog servo filters.

Using the Digital Signal Processing (DSP) technology to rapidly compute and predict the exact drive impulses required to achieve small mirror movements with the fastest possible acceleration, the Digi-Cube offers an impressive 1000 impressions per second. Detailed self-diagnosis and system check determine the operating parameters of the individual galvos, ensuring accuracy and precise, error-free laser marking positioning; analog models need complicated manual recalibration after prolonged use. The Digi-Cube offers improved 50% to 100% speed performance when marking time is limited to galvo performance, rather than laser power.



Features and Benefits

- Increased productivity with significantly faster scan speeds
- Fits easily into any new or existing production line
- Plug-and-Play system simplifies installation and compatibility
- Much lower heat generation than other DSP scan heads, the Digi-Cube runs as cool as a typical analog scan head
- Improved dynamic performance
- Fast “On the Fly” processing
- Small mirror moves without waiting for feedback
- Simple and fast set-up
- Most cost-effective and unbeatable method of increasing performance
- Automatic tuning checks when powered up
- Compatible with analog scan heads using XY2-100 protocol
- Reduced temperature drift
- Available wavelengths: 1064 nm, 355 nm, and 10.6 μm
- Optional F-Theta packages available

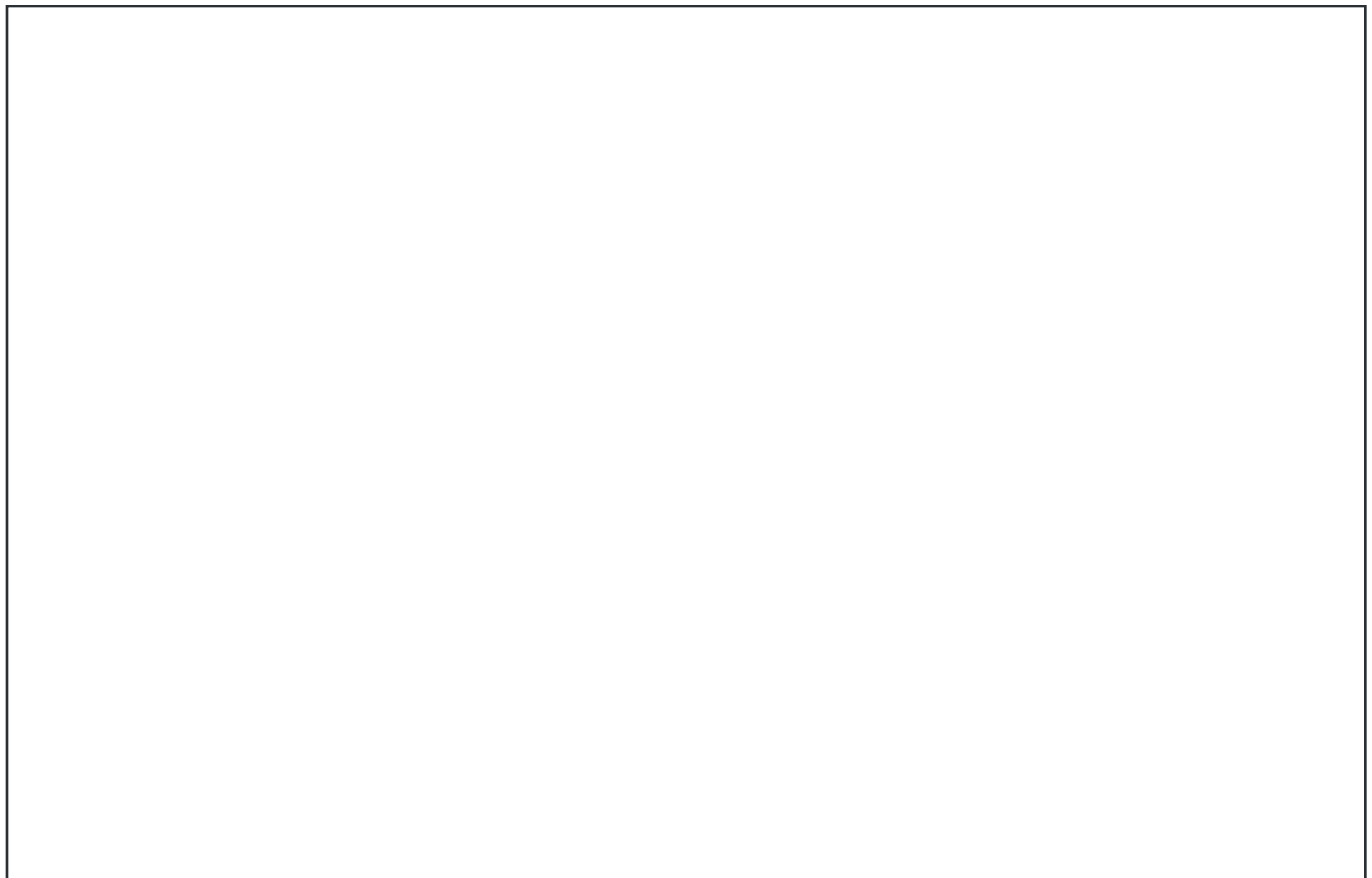
Applications

- High Accuracy Laser Marking
- Laser 3D Printing
- Photovoltaic Production
- Scribing/Engraving
- Rapid Prototyping
- Trimming
- Welding
- Mark-on-the-Fly Processing
- Scanner Control Systems in Medical Equipment

Specifications*

Power Supply Requirements	± 24V 4A
Max.	10A
Positioning Speed (m/s)	10 - 20
Marking Speed (m/s)	3 - 6
Precision Writing (cps)	500
High Quality Writing (cps)	1000
Resolution (μrad)	10
1% Step Response Setting (ms)	0.28
Scale Drift (ppm/C)	< 50
Zero Drift (μrad/C)	< 20
Linearity %	99.5
Dither RMS (μrad)	< 10
Weight (kg)	2.2
Dimensions (mm)	118 x 97 x 105

*Specifications subject to change without notice.



Digi-Cube Scan Head - All dimensions are in (mm).



Contract Holder