

## Model 3030 Color 3D Scanhead

The Model 3030 Color 3D Scanhead configuration options include: Standard and high-resolution range data and standard and high-resolution color texture maps.

The Model 3030 is an advanced, general-purpose implementation of Cyberware's proven 3D scanning technology. The Model 3030 incorporates a rugged, self-contained optical range-finding system, whose dynamic range accommodates varying lighting conditions and surface properties. Entirely software controlled, the Model 3030 requires no user adjustments in normal use.

In operation, the Model 3030 scanhead shines a safe, low-intensity laser on an object to create a lighted profile. A high-quality video sensor captures this profile from two viewpoints. The system can digitize thousands of these profiles in a few seconds to capture the shape of the entire object. Simultaneously, a second video sensor in the Model 3030 acquires RGB color information.

The scanning process captures an array of digitized points, with each point represented by X, Y, and Z coordinates for shape and 24-bit RGB coordinates for color. The Model 3030 transfers this data via a USB link to a graphics workstation for immediate viewing and modification.

The Cyberware Model 3030 scanhead includes a low-intensity laser light source, aluminized, dielectric-coated first-surface mirror assembly, high-quality imaging optics, premium-grade CMOS sensing optics and color sensors, and supporting electronics.

The addition of color information to 3D digitizing provides nearly all the information a graphics application needs to fully describe an object. In addition to enhanced realism in graphic models, color denotes boundaries that are not obvious from shape alone. Color



Cyberware designed the Model 3030 to satisfy a wide range of digitizing needs.

indicates surface texture and reflectance. By marking an object's surface before scanning, one can use color to transfer ideas from the object to the graphic model.

In specialized applications, color can reveal characteristics such as skin discoloration, the grain of a piece of wood, or the locations of fasteners.

Cyberware makes custom scanning systems with very high resolution color detail for nearly any type of rendering, animation or analysis. Details as small as individual hairs and the fine print on packaging are discernable with these custom systems.

### CYBERWARE MODEL 3030 CONFIGURATIONS

<b>3030RGB</b> .....	Full color and range digitizing up to 512 × 512 pixels.
<b>3030/sRGB</b> .....	Extend the resolution of the color texture map of the 3030RGB to a 2000 × 2000 pixel image.

# 3030 Specifications

Through experience gained over many years of creating 3D scanning solutions, Cyberware engineers were able to configure the 3030 for high performance as well as maximum versatility. You can therefore adapt the 3030 to your application quickly. Even highly specialized applications can be handled with software changes alone. Cyberware's engineering staff will be happy to assist you, should you need to customize any aspect of the 3030.

The Model 3030 scanheads require an external motion platform, power supply, USB interface, and software; all of which are available from Cyberware. The Model 3030 is compatible with Cyberware's PS and MS motion platforms as well as semi-custom platforms.

## MODEL 3030 3D SCANHEAD SPECIFICATIONS

### FIELD OF VIEW

	3030RGB	3030/sRGB
X or Theta	Depends upon motion platform.	
Y (at minimum Z)	300mm (11.82")	300mm (11.82")
Y (at maximum Z)	340mm (13.4")	340mm (13.4")
Z	300mm (11.82")	300mm (11.82")

### SAMPLING PITCH

	3030RGB	3030/sRGB
X or Theta	Depends upon motion platform speed; 30 samples per second in X; typically 500µm to 2mm (0.02-0.08").	
Y	350µm (0.0125")	350µm (0.0125")
Z (average)	75-300µm (0.003-0.012")	75-300µm (0.003-0.012")

### SAMPLING SPEED

30,600 points per second, digitized to X, Y, Z and R, G, and B components.

### COLOR DATA

8 bits each for red, green, and blue.

### POWER REQUIREMENTS

Input Voltage                      Selectable 100V, 120V, 220V, 240V, 47-63Hz

### 3030 DIMENSIONS

	3030RGB	3030/sRGB
Width	51cm (20")	51cm (20")
Height	36.5cm (14.4")	36.5cm (14.4")
Depth	48cm (18.9")	54.36cm (21.4")
Weight	29Kg (64 lbs)	31.6Kg (69.5 lbs)



2110 Del Monte Avenue  
Monterey, CA 93940  
Phone: +1.831.657.1450  
Fax: +1.831.657.1494  
E-Mail: info@cyberware.com  
Web: http://www.cyberware.com

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