

The XYClone includes laser - 40x or 20x objective combination, 4 turret adapters, video camera, c-mount, proprietary laser drilling software, desktop or laptop computer and accessories.

Dimensions	H	W	D	lb. (kg)
	in. (mm)	in. (mm)	in. (mm)	
XYClone Module:	1.65 (42)	1.1 (28)	2.1 (54)	0.5 (0.22)
Controller:	3.8 (95)	2.5 (63.5)	1.8 (46)	1.0 (0.45)
Desktop Computer:	16.1 (408)	7.4 (187)	17 (433)	26.5 (12)
Monitor:	13.5 (343)	17.5 (444)	1.5 (38.1)	17.0 (7.7)
Laptop Computer:	1.3 (3.3)	15.3 (388)	9.9 (251)	6.2 (2.8)

Electrical	Desktop	Monitor	Laptop
Input Voltage:	100/240 VAC	110-240 VAC	100-240 VAC
Power:	300 W	30 W	90W
Line Frequency:	50/60 Hz	50/60 Hz	50/60 Hz

### Laser

Type: 1450 nm, Infrared Solid State Diode  
 Maximum Power: @ Focus = 300 mW (Class I)  
 Laser Pulse: Adjustable 1 - 3000  $\mu$ s  
 Slider resolution: adjustable increments of 1, 10, or 100  $\mu$ s  
 Laser Power: Adjustable 1% - 100%  
 Laser Modes: Single laser control  
 Double laser control  
 Firing: By mouse (Optional: Foot switch firing)  
 Target Marker: Circle or arrow, adjustable "Blink Time" after firing.  
 Isotherm Rings, showing peak temps and hole size. Select which rings to display.  
 Optional: RED-i LED target locator  
 Crosshairs: Activation, size and color set by user (used for positioning embryo)  
 Laser Alignment: Aligned and locked at factory. No on-site physical laser alignment required  
 Target: Adjust target alignment on-screen  
 Safety: Class I Laser: Laser pulse and energy cannot exceed Class I limits.

### Objective

Standard: 40x or 20x, 0.60 N.A., I.R. (High transmission in both the visible and near-infrared, long working distance)  
 Scale Calibration: Performed interactively on-screen  
 Calibrate and save multiple objectives  
 Scale Bar: Scale bar graphic overlay automatically adjusts based on calibrated objective.  
 May be saved with images/video.

### Video

Camera: High resolution analog or digital color  
 Image Area: NTSC: 640 x 480 pixels  
 Digital: 1280 x 1024 pixels  
 Zoom: 2x, 4x, and 8x with user defined image panning  
 Illumination: Microscope, image on screen

### Double Validation Panel

Set two separate power and pulse length combinations

### Image Capture and Storage Utility

Capture and store unlimited images. Images stored in user-selected JPG, BMP, or TIF format. Capture unlimited thumbnail images and select which to save. Automatic image capture on laser fire. Manual or automatic file naming. Images may be saved with graphic overlay.

### Image Annotation Tools

Unlimited automatic image labels may be stored and enabled. Freehand text, circles, rectangles, lines, and image measures may be added to captured images.

### Video Capture

Capture and store real time and time lapse video in .avi format. Ability to set maximum recording length. Manual and automatic naming options. Open and play saved videos within program.

### Measurement Toolbox

Tools allow measurement of various embryo parameters on captured images. Each measure visible as graphic overlay, including length in micron  
 Zona: 5 zona thickness measurements; Mean & Standard Deviation  
 Embryo: 2 diameter measurements; Mean & Standard Deviation;  
 Blastomere count  
 Pronuclei: 2 diameter measurements for two separate pronuclei;  
 Mean for each pronuclei  
 Drill: 5 hole size measurements; Mean & Standard Deviation  
 Ruler: 5 user-defined measurements; Mean & Standard Deviation

### Reports and Output

Data Input: Data from keyboard  
 Data from measurements  
 ASCII Import critical fields  
 Report: Ova/embryo information, procedure/protocol information, choice of 2 images plus evaluation data or 4 images  
 Output: Printout of report  
 Report stored in JPG format  
 ASCII output of all numerical and alphanumeric fields in TXT & MER formats

### Staccato Multi-pulse Option

Allows rapid, multi-pulse firing for near-continuous application of laser to the sample

### XYClone Computer (subject to change)

Type:	Tower/desktop Model	Laptop Model
OS:	Windows 7 Professional	Windows 7 Professional
CPU:	Pentium Dual Core 3 GHz or Core i5	Intel Core i5
Memory:	2 GB DDR	4 GB RAM
Drives:	250 GB HD 16x DVD+/-RW SATA	250 GB 8x DVD+/-RW
Display:	20" flat panel, UXGA	15.6" Typical, XGA+
Ports:	Serial, Parallel, USB 2.0 PS/2	Parallel, USB 2.0 VGA, 1394, HDMI Memory card reader
Network:	10/100/1000 Ethernet	10/100 Mps Ethernet Intel WiFi