

RED-i XYClone®

For Research and Investigational Use Only in U.S.

The RED-i XYClone includes laser - 40x or 20x objective combination with built-in RED-i target locator; 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:	1480 nm, Infrared Solid State Diode
Maximum Power:	@ Focus = 300 mW (Class I)
Laser Pulse:	Adjustable 1 - 3000 μ s Slider resolution: adjustable increments of 1, 10, or 100 μ 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.
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

RED-i Target Locator

Source:	Red LED built into laser module
Alignment:	X-Y mechanical adjustment to center of laser beam using Isotherm Rings as guide
Intensity:	On-screen intensity adjustment

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

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

Laser Safety

Class I Laser: Laser pulse and energy cannot exceed Class I limits.

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

RED-i XYClone Computer (subject to change)

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