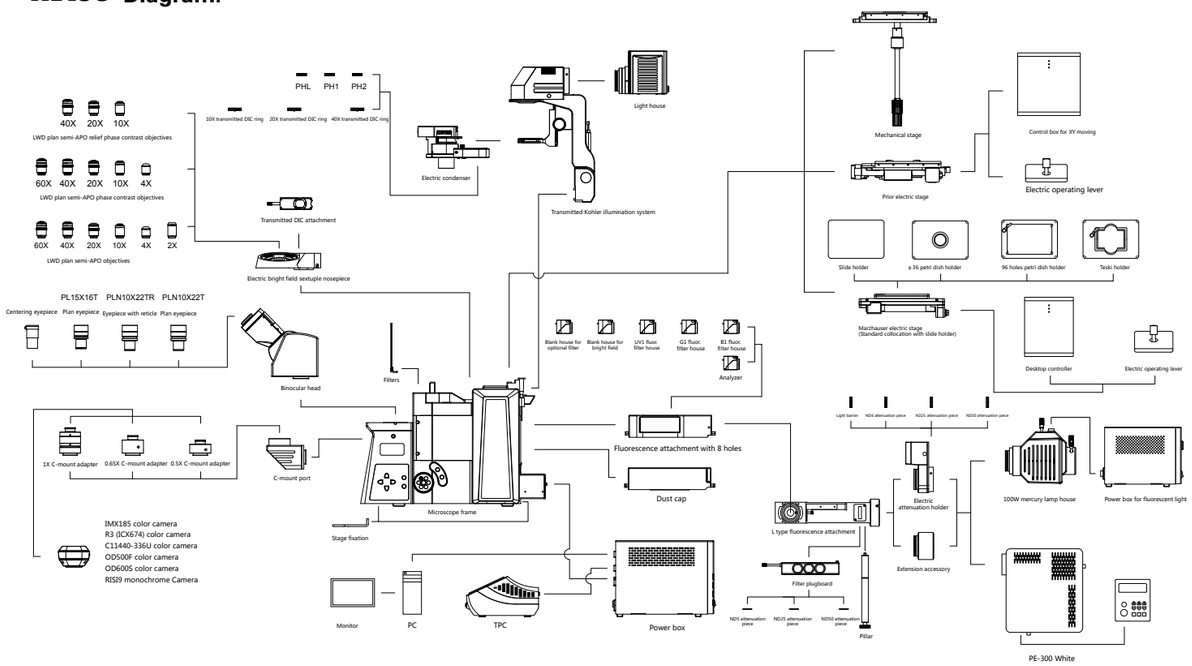
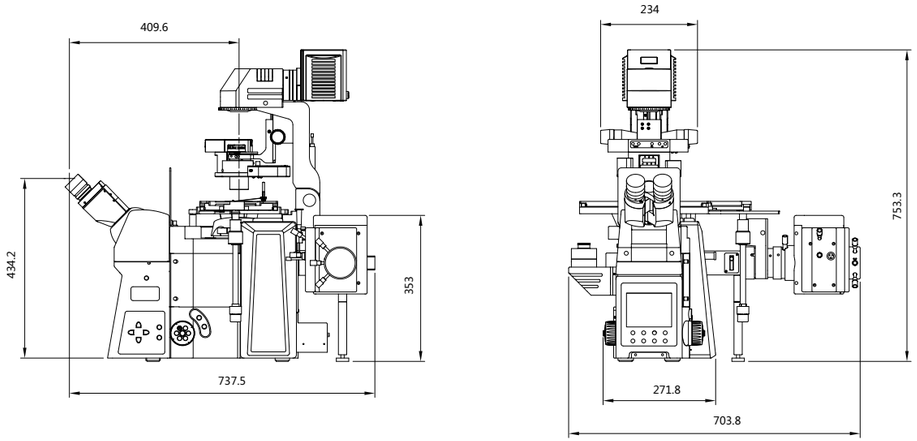
IRX60 Diagram:



IRX60 Dimension: mm



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No additional notice for changes on the specification or appearance

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SOPTOP

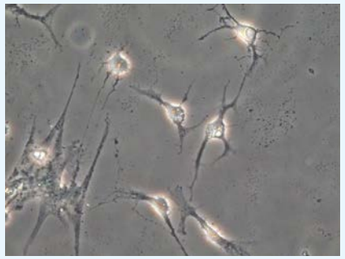
Sunny Instruments

IRX60 Series

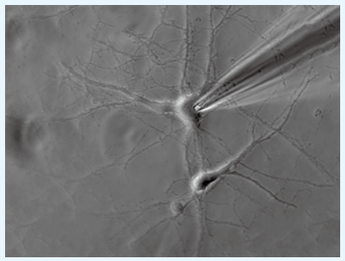
Inverted Biological Microscope

IRX60 Excellent Solution for Cell Imaging

As a representative of Chinese optical, mechanical, electrical and computing integrated microscope, IRX60 fully automatic research inverted microscope integrates multiple technologies such as electrical control, fluorescence, phase contrast, relief phase contrast, simple polarization, DIC, and objective lens with correction ring. A three–level electric control of single machine, TPC and computer is realized. IRX60 has powerful expansion functions, providing a more complete solution for life science research.
With flexible structural design and excellent optical performance, IRX60 can provide you with high–definition wide–field images, providing powerful technical support for cell observation, single–cell patch clamp, microinjection and other research and applications.



cell observation



single–cell patch clamp

microinjection and other research and applications

Elevation Adjustable Viewing Head

The IRX60 is equipped with a 20–45° adjustable binocular viewing head, which can raise the eye point by 78mm (65mm interpupillary distance) as required. It can be observed easily and quickly even in a standing state, which is effective avoiding fatigue of eyes and limbs.

Integrated Button

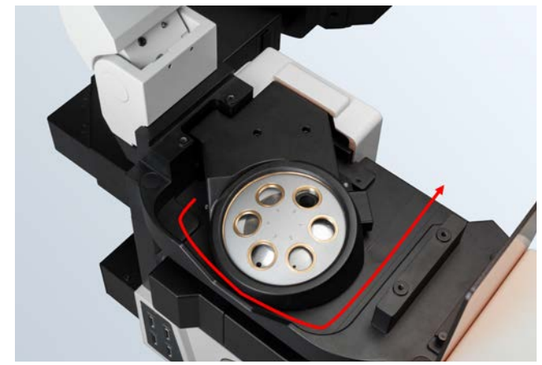
IRX60 retains the traditional coarse and fine adjustment mode, cancels the gear mechanism, integrates electric control technology, and realizes manual and automatic integration. The brightness, objectives, attenuator turntable and fluorescent turntable can be quickly switched or rotated through the corresponding buttons on the button panels on both sides. AF one–key auto focus can quickly adjust the Z–axis height according to the real–time image, and eliminates the need for fine–adjusting steps and improves work efficiency.

Low-position Platform Handwheel

The low–position platform handwheel can be rotated 360° , which can effectively reduce the hand fatigue caused by long–term operation and is ergonomic and improves the convenience of operation.

Tilting Transmission Lighting Structure

The tilting structure of the transmission bracket ensures a large working space for users and facilitates the replacement of specimens.



Waste Liquid Drainage Structure

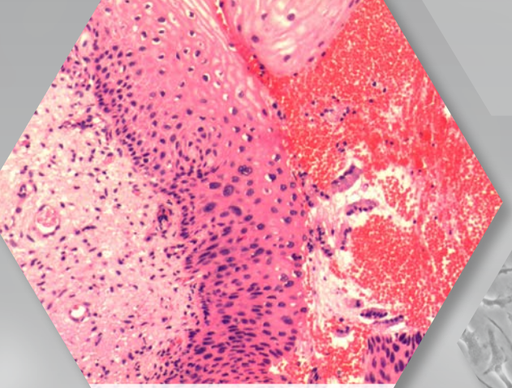
The drainage groove structure is designed under the objective nosepiece, which can prevent the optical components and modules from accidentally being wetted by the cell culture medium or soaking liquid, contaminating and damaging the microscope, simplifying maintenance.

Integrated Panel Control

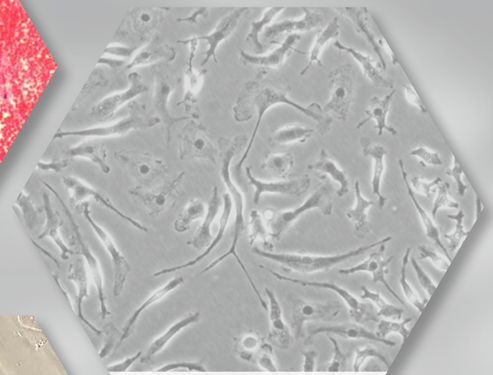
IRX60 front digital display screen can display the status of multiple components such as microscope objective lens magnification, brightness, and fluorescence band in real time, and can complete the setting of all observation methods, the selection of optical port status, and the switch of fluorescence shutter. Greatly enhance the customer experience and make research work more convenient.

High Scalability

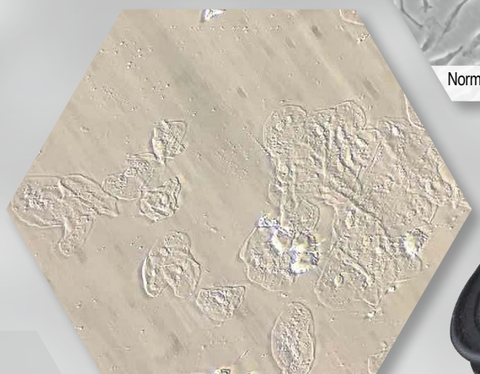
The IRX60 has a very large rack that provides redundant space for third–party configurations. You can choose single–layer or double–layer optical path according to your needs, up to 16 color filters can be replaced;Multi–light port design can be equipped with confocal module, wide–field fluorescent camera, infrared camera, etc., which provides maximum scalability for the research work.



Skin papilloma bright field 40X

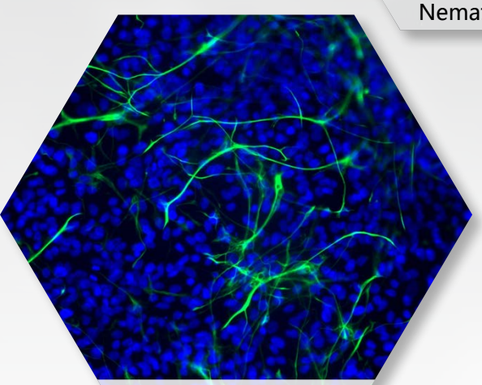


Normal rat kidney cells phase contrast 10X



Oral epithelial cells Relief phase contrast 10X

Nematode DIC 40X



Human smooth muscle cells Fluorescence 20X

Long workind distance semi apochromat objectives

Different objectives are designed to observe different cells. 20X/40X/60X objectives are equipped with correction collars that can be used in a variety of applications where conventional cover glasses and plastic covers with thicknesses from 0–2mm/1–1.3mm are used.

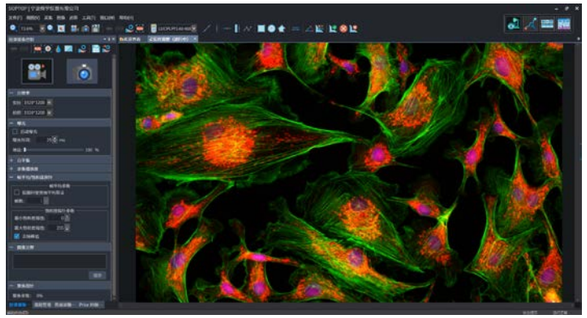
Series	Magnification	N.A. (mm)	W.D. (mm)	Cover glass (mm)
Long working distance plan semi apochromat objectives	2X	0.08	6.10	/
	4X	0.13	17.56	/
	10X	0.30	9.34	/
	20X	0.45	6.50–7.60	0–2
	40X	0.60	2.85–4.05	0–2
	60X	0.70	1.58–2.10	1–1.3
Long working distance plan semi apochromat positive phase contrast objectives	4X	0.13	17.56	/
	10X	0.30	9.34	/
	20X	0.45	6.50–7.60	0–2
	40X	0.60	2.85–4.05	0–2
	60X	0.70	1.58–2.10	1–1.3
Long working distance plan semi apochromat relief phase contrast objectives	10X	0.30	9.34	/
	20X	0.45	6.50–7.60	0–2
	40X	0.60	2.85–4.05	0–2

CoolLED high-performance fluorescent light source

Compact LED power box, is able to provide illumination to excite common fluorescent filter with different wavelengths, is available to be applied for multi–channel fluorescent filters.

Microscope revolution

With 50 different image adjustment and processing algorithms, the software is able for photography, image stitching, auto focusing, DOF extension, multichannel acquisition, image measurement. One click to generate a report, reliable and effective.



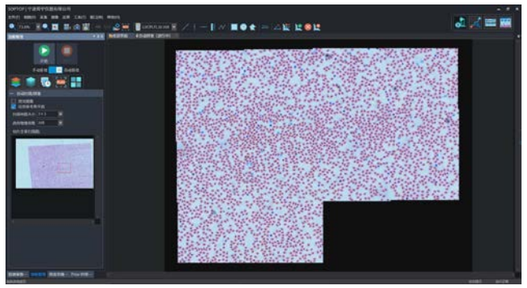
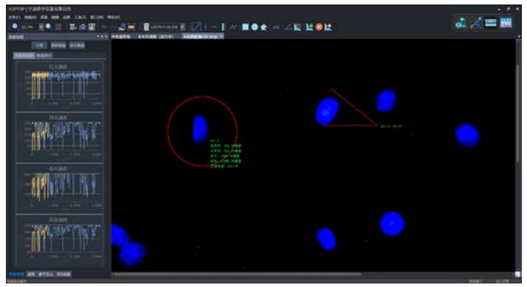


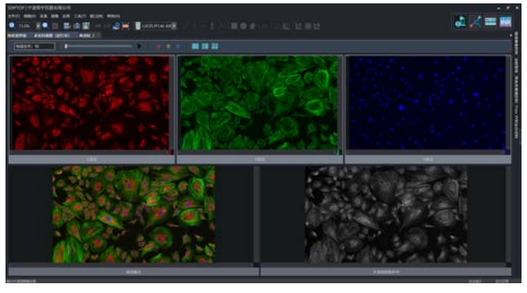
Image stitching

It is able to stitch the local image, with 8X8 field of view.



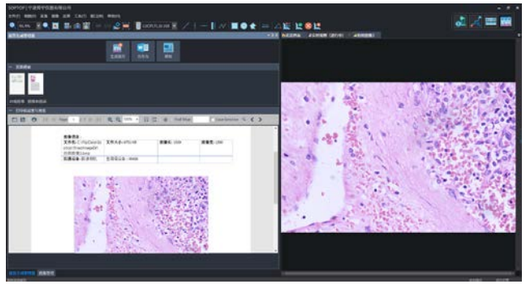
Cell measurement

Image software with measuring function, is available to analyze cell size, intercellular space, synapse length and so on, including distance, angle, rectangle and round measurement.



Fluorescent synthesis

The images from different fluorescent channels, are able to be synthesized automatically and kept separately. Each image is available to be adjusted and the final composited image would be auto updated.



Report generation

Built–in module to fast generate a report, supports to output WORD document.

IRX60 Specification

Optical system	Infinity color correction system
Viewing head	20~45 degree tilting binocular head, inverted image, interpupillary distance: 50~76mm
Eyepieces	High eye–point plan eyepiece PL10X/22mm, diopter adjustable, reticle attachable
Objectives	LWD plan semi–APO objectives (2X/4X/10X/20X/40X/60X)
	LWD plan semi–APO phase contrast objectives (4X/10X/20X/40X/60X)
	LWD plan semi–APO relief phase contrast objectives (10X/20X/40X)
Nosepiece	Electric bright field sextuple nosepiece with DIC slot
Frame	Low position coarse and fine coaxial electric focusing mechanism, range: 10.5mm, precision: 1 μm. Built–in electric upper camera port, splitting ratio: 100:0/0:100; built–in electric left camera port, splitting ratio: 0:100/50:50/100:0; dual optical path, with fluorescent light barrier. Condenser lifting adjustable, range: 65mm, is able to set 4 filters (LED/green/ground glass)
Stage	Manual mechanical stage, size: 300mm(X) x 240mm(Y), moving range: 135mm(X) x 85mm(Y), stage thickness: 30mm. Right universal handle, X/Y axis limitable and lockable, moving range 50mm x 50mm; with ϕ110mm replaceable disc
	Prior electric stage, moving range: 114mm(X) x 75mm(Y); resolution 0.01 μm; repeatability ±2 μm, with control box and operating handle
	Marzhauser electric stage, moving range: 120mm(X) x 80mm(Y); resolution 0.02 μm; repeatability < 1 μm, with control box and operating handle; with slide holder
Condenser	Electric septuple condenser, NA ⩾ 0.55,WD ⩾ 27mm; 3 holds for ϕ30mm(phase contrast), 4 holds for ϕ38mm(DIC); support for bright field/phase contrast/DIC (with polarizing kit)
	Super long working distance condenser with more than 4 holds, NA ⩾ 0.3, WD ⩾ 73mm;support for 4X–60X phase contrast or 4X–60XRPC
Fluorescent illumination	Octuple disc fluorescent attachment, disc position is automatically identifiable; with electric shutter to block the fluorescent light; B1/G1/UV1 fluorescent filters for option
Lamp house	12V100W halogen illumination, filament center preset
	100W mercury lamp (OSRAM), with power box
	Cool LED pE–300–LT–L–SB–ZZ fluorescent light (B/G/UV)
Cameras	SOPTOP/Hamamatsu/Qimage cameras for option
Other accessories	0.5X/0.65X/1X C–mount adapters, focus adjustable; Electric control box; TPC; PC and monitor; Centering eyepiece; phase contrast & DIC attachment; Professional software