



Better Counts for Better Science

LUNA FX7™ Automated Cell Counter



LUNA-FX7™ Automated Cell Counter

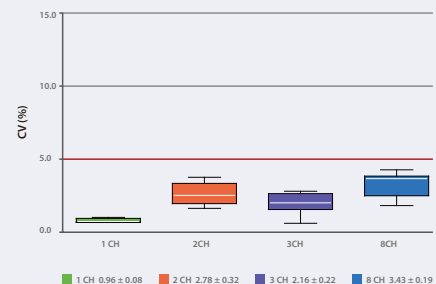
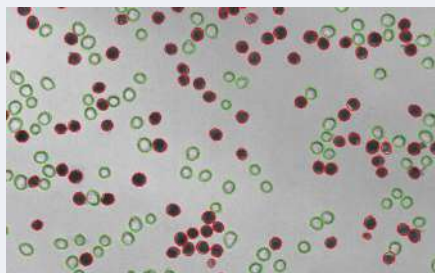
Introducing the LUNA-FX7™ - the newest member of the award-winning LUNA™ Cell Counter family. The LUNA-FX7™ is our most powerful cell counter to date, with unmatched cell counting accuracy, new 1, 3 and 8-chamber slide options, state of the art optics, dual fluorescent and brightfield detection, precision autofocus, and 21 CFR PART 11 compliance. The LUNA-FX7™ has built-in quality control features and precision validation slides for monitoring QC and production. By combining the trademark ease of use characteristic of all LUNA™ counters with the enhanced accuracy, higher throughput, and software upgrades - the LUNA-FX7™ will improve the efficiency and security of your lab's workflow.

Better Counts for Better Science



Ending the Accuracy Debate

Expanded cell concentration. The debate on the gold standard in cell counting accuracy still rages between manual counting and automated counting. The impact of counting volume on the accuracy and precision of cell counting is often overlooked. The LUNA-FX7™ has a maximum counting volume of 5.1 μL . Manual counting and most other automated cell counters use a counting volume of 0.5 μL . The 10X greater counting volume of the LUNA-FX7™ makes it one of the most accurate automated counting devices on the market. The LUNA-FX7™ will end this debate.





LOAD



COUNT



RESULTS

Convenient and High-speed Workflow

As easy as 1-2-3. With a highly intuitive user interface, the LUNA-FX7™ eliminates unnecessary operations. In THREE easy steps, the precise autofocus feature produces accurate and reliable results in less time. LOAD – COUNT – READ RESULTS. It's that easy.

The LUNA-FX7™ truly streamlines workflow creating an efficiently run lab with exceptionally accurate data.

Simple Optimization & Data Management

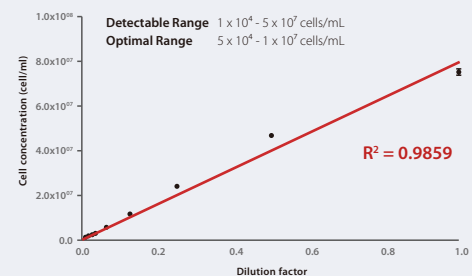
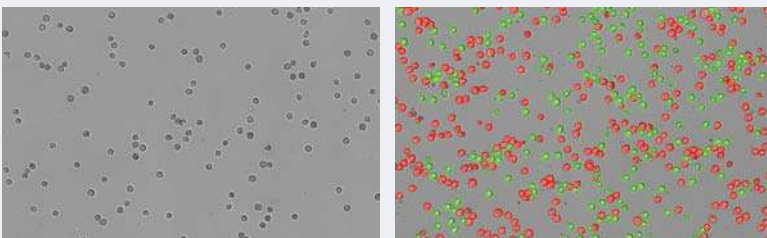
Manage Your Data with Precision. With brightfield and dual fluorescent detection options, multiple counting modes and customizable protocols, the LUNA-FX7™ gives you control over your data. You have the flexibility to optimize for your cell and sample type with the assurance of built-in quality control features. The re-analysis feature lets you easily review and analyze previous counts using different protocol settings providing more options for data parsing. Counting results can be transferred and saved by USB, Wi-Fi or Ethernet connection. In addition, results may be exported as a CSV summary or a comprehensive PDF report with raw and tagged images.



Reliable Results across a Wide Concentration Range

Meeting demand. Researchers across the globe have spoken and demanded an extremely accurate cell counter that has a fast and reliable autofocusing ability that can produce high quality images. The state-of-the-art optical system, superior dynamic range, and advanced declustering algorithm allow the LUNA-FX7™ to meet this demand.

Diverse Cell Counting Applications. The LUNA-FX7™'s broad cell detection range, 1×10^4 cells/mL to 5×10^7 cells/mL eliminates the need to dilute or concentrate samples, making the LUNA-FX7™ suitable for diverse cell counting applications including single-cell sequencing and CAR-T cell therapy.



Beyond Cell Counts

SpectraSlide® AP-1 : The Smarter Way to Count Cells – No Pipettes, No Stains

The SpectraSlide® AP-1 is a disposable cell counting device designed for use with the LUNA-FX7™ automated cell counter, integrating cell sampling and staining into one convenient tool. Simply insert the slide into your sample, press the Cell Sampling button, then count your sample. No mixing, no mess, and no pipetting.

Automated Cell Counting Made Even Easier

The SpectraSlide® AP-1 simplifies cell counting with built-in volume control and a haptic feedback system for consistent results. Its proprietary dry-coated stain dissolves instantly for immediate staining without mixing.

Minimizing Sampling Volume and Maximizing Analysis Volume

Requiring less than 20 µL of sample, the SpectraSlide® AP-1 minimizes waste and can analyze up to twice the volume of a standard hemocytometer.

Eliminate the Potential for Contamination

The disposable SlideBed™ frame prevents residual liquid from contaminating the counter.



Multiple Slide Options, Simple Handling

Versatile Slide Options. The LUNA-FX7™ can accommodate multiple slide options. The multi-channel pipette compatible 8-channel slides maximize throughput; the 3-channel slides facilitate easier data handling and organization; and the single channel slides, with a nearly 5 µL counting volume, promote increased accuracy and precision. With 'One and Done' slide insertion, a slide is inserted once and the LUNA-FX7™ will count all the chambers without the need to remove and reinsert the slide.

Compatible slides	LUNA™ 1-Channel Slides	LUNA™ Cell Counting Slides PhotonSlides™	LUNA™ 3-Channel Slides	LUNA™ 8-Channel Slides	LUNA™ Reusable Slide	SpectraSlide® AP-1
Sample throughput	1 sample	Up to 2 samples	Up to 3 samples	Up to 8 samples	1 sample	1 sample
Sample loading volume	50 µL	10 µL / chamber	10 µL / chamber	10 µL / chamber	10 µL	Less than 20 µL
Maximum analysis volume	5.1 µL	1.3 µL / chamber	1.3 µL / chamber	0.5 µL / chamber	1.3 µL	1.1 µL

Unique Bioprocess Mode

Cell Monitoring. The LUNA-FX7™ offers a Bioprocess mode that monitors cell health and growth and tracks bioprocessing activities. By easily tagging a batch to a specific protocol, the progression of multiple batches may be monitored. The Bioprocess application calculates doubling times and charts proliferation curves, allowing you to trace the production and health of your cells. With up to a terabyte of internal storage, the LUNA-FX7™ can store days, weeks, months, and years of counting results. Cell number concentrations and viabilities are provided with a single tap on the screen.



The screenshot shows the 'RESULTS' tab of the LUNA-FX7 interface, displaying detailed results for a specific protocol. The 'Protocol List' on the left includes DEFMA7, HL69, K562, M1, and L197. The 'RESULTS' section shows the following data:

Start	31 Mar 2020 05:21:59
Runs	11
Last result	
Date	05 Apr 2020 21:11:13
Elapsed	195.821 hours
Growth rate	0.021169 / hour
Doubling time	32.7326 hours
Total cells	4.54 x 10 ⁶ cells / mL
Viability	24.1 %

Quality Control - Trust in Your Data

Innovation at Your Fingertips. Our innovative quality control feature ensures that you can be confident in your data. In conjunction with our pre-fixed fluorescent or brightfield validation slides, the QC functions allow you to store, monitor, and analyze instrument performance over time. By establishing user-defined acceptance limits, the automated tracking and charting functions will help ensure compliance with the most rigorous QA/QC criteria.



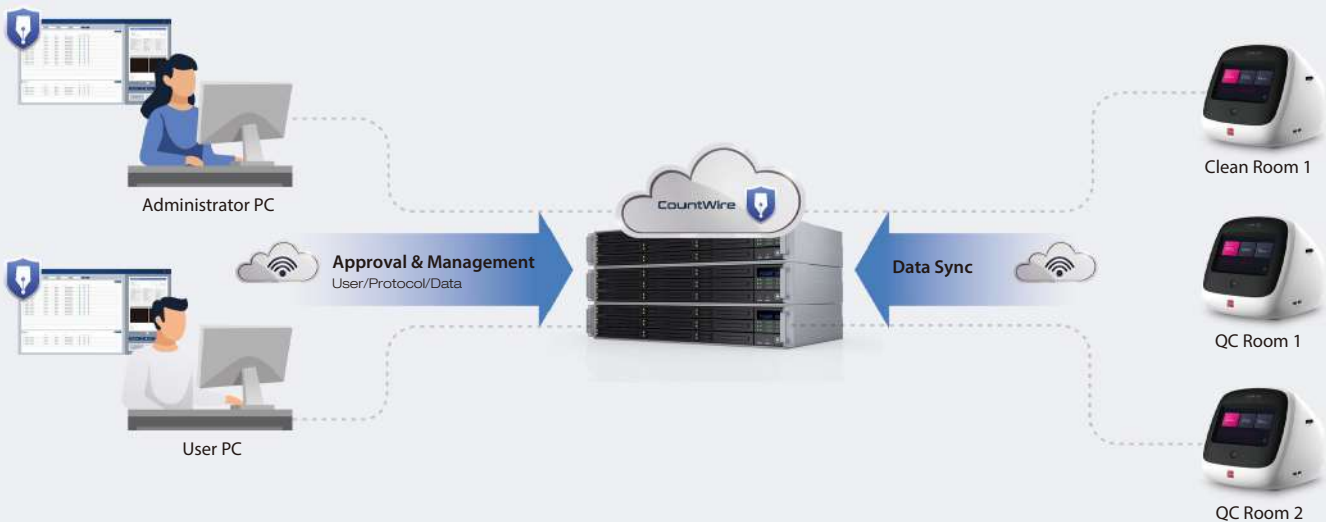
CountWire™-FDA 21 CFR Part 11

FDA Regulation Ready. Established by the U.S. Food & Drug Administration, 21 CFR Part 11, defines the criteria under which electronic records and electronic signatures are considered trustworthy, reliable, and equivalent to paper records. The FDA 21 CFR Part 11 regulations focus on the security and confidentiality of information, administration of e-documents, and the approval requirements for e-documents and signatures.

The LUNA-FX7™ is equipped with the innovative **CountWire™ software**. With user-accessibility management including encrypted activity logs, it delivers data securely and remains compliant with 21 CFR Part 11 regulations and GMP requirements.



The CountWire™: Remote Access. The CountWire™ software enables remote access and data management for multiple LUNA-FX7™s connected to your network. With the right level of user access, you can retrieve data from the LUNA-FX7™ in the clean room next door without leaving your desk.



Everything you love about our LUNAs and more

Unmatched cell counting accuracy

- ✓ All-new optics
- ✓ Increased counting volume for the lowest CV per count
- ✓ Fast and precise autofocus
- ✓ More robust and sophisticated counting algorithms
- ✓ Customizable cell-detection protocols

Optimized for production facilities

- ✓ Quality control and validation software
- ✓ Range of standard validation slides
- ✓ Bioprocess monitoring software

21 CFR Part 11 ready

- ✓ User log-in and approval management
- ✓ Encrypted logs for audit trails
- ✓ Data security
- ✓ Data storage and control by network

SPECIFICATIONS

LUNA-FX7™ Automated Cell Counter L70001



LUNA-FX7™ Automated Cell Counter Bioprocess L70002



Onboard storage	250 GB	1 TB
Software	Standard software	Bioprocess software
Cell concentration range	Detectable: 1×10^4 - 5×10^7 cells/mL, optimal: 5×10^4 - 1×10^7 cells/mL	
Cell diameter range	Detectable: 1-90 μ m, optimal: 3-60 μ m	
Optics	Brightfield, dual fluorescence	
Green fluorescence	Ex : 470 \pm 20 nm, Em : 530 \pm 25 nm	
Red fluorescence	Ex : 530 \pm 20 nm, Em : 620 \pm 30 nm	
Focusing	Auto focus / Manual focus	
Display	7" Capacitive touch screen LCD	
Data format	PDF, CSV, TIFF	
Data export	USB, WiFi, Ethernet	
Printer	External printer (optional)	
21 CFR Part 11	CountWire™ software (optional)	
User management	CountWire™ software (optional)	
IQ/OQ	Yes (optional)	Yes
Dimensions	245 x 280 x 240 mm	
Weight	5.0 kg	

CELL LINES VALIDATED On The LUNA-FX7™ Automated Cell Counter

Cell Type	Vendor	Animal	Organ
3T3-L1	ATCC	Mouse	Embryo
A549	ATCC	Human	Lung
AsPC-1	ATCC	Human	Pancreas
BAEC	ATCC	Cow	Aorta
Colon26L5	ATCC	Mouse	Colon carcinoma
DLD-1	ATCC	Human	Colon
H1975	ATCC	Human	Lung
HCT116	ATCC	Human	Colon
Hek-293	ATCC	Human	Embryonic kidney
HL60	ATCC	Human	Peripheral blood
J774A.1	ATCC	Mouse	Ascites
RAW264.7	ATCC	Mouse	Abelson murine leukemia virus-induced tumor; ascites
YSY	ATCC	Human	Bone marrow
U2OS	ATCC	Human	Bone
U937	ATCC	Human	Pleura/pleural effusion, lymphocyte, Myeloid
K562	ATCC	Human	Bone marrow
PBMC	ATCC	Human	Blood
M1	ATCC	Mouse	Myeloblast

This is partial list of cell line tested on the LUNA-FX7™.

ORDERING INFORMATION

LUNA-FX7™		L70001	LUNA-FX7™ Automated Cell Counter	1 unit
		L70002	LUNA-FX7™ Automated Cell Counter, Bioprocess Package	1 unit
Counting Slides	1-channel slides	L72011	LUNA™ 1-Channel Slides, 50 Slides	1 box
		L72012	LUNA™ 1-Channel Slides, 500 Slides	10 boxes
		L72013	LUNA™ 1-Channel Slides, Sterile - gamma-irradiated, 500 Slides	10 boxes
	8-channel slides	L72001	LUNA™ 8-Channel Slides, 50 Slides	1 box
		L72002	LUNA™ 8-Channel Slides, 500 Slides	10 boxes
		L72003	LUNA™ 8-Channel Slides, Sterile - gamma-irradiated, 500 Slides	10 boxes
	3-channel slides	L72021	LUNA™ 3-Channel Slides, 50 Slides	1 box
		L72022	LUNA™ 3-Channel Slides, 500 Slides	10 boxes
		L72023	LUNA™ 3-Channel Slides, Sterile - gamma-irradiated, 500 Slides	10 boxes
	2-channel slides [Brightfield]	L12001	LUNA™ Cell Counting Slides, 50 Slides	1 box
		L12002	LUNA™ Cell Counting Slides, 500 Slides	10 boxes
		L12003	LUNA™ Cell Counting Slides, 1000 Slides	20 boxes
	2-channel slides [Fluorescence]	L12005	PhotonSlide™, 50 Slides	1 box
		L12006	PhotonSlide™, 500 Slides	10 boxes
		L12007	PhotonSlide™, 1000 Slides	20 boxes
	Reusable Slide	L12011	LUNA™ Reusable Slide	1 unit
L12014		LUNA™ Reusable Slide Coverslips	10 unit	
SpectraSlide	L72061	SpectraSlide® AP-1, 30 Slides	1 box	
	L72062	SpectraSlide® AP-1, 300 Slides	10 boxes	
	L72063	SpectraSlide® AP-1, Sterile - gamma-irradiated, 300 Slides	10 boxes	
Validation Slides		L72030	Cell Counter Validation Slide-FL	1 unit
		L72041	Cell Counter Validation Slide-BF II	1 unit
Reagents	F73101		LUNA-FX7™ Calibration Beads Kit	1 kit
	T13001		Trypan Blue Stain, 0.4%	2 x 1 mL
	T13011		Trypan Blue Stain, 0.4%, Sterile-filtered	2 x 1 mL
	L13002		Erythrosin B Stain	2 x 1 mL
	F23001		Acridine Orange/Propidium Iodide Stain	2 x 0.5 mL
	F23011		Acridine Orange/Propidium Iodide Stain, Sterile-filtered	2 x 0.5 mL
	CountWire™		L71001	CountWire™ Basic (CountWire™ Data Storage + 1 PC License)
		L71002	CountWire™ Verification Key (additional)	1 unit
IQ/OQ		L74003	LUNA-FX7™ IQ/OQ Protocol	1 copy
		L74004	LUNA-FX7™ IQ/OQ Package : IQ/OQ Protocol + Validation slide (BF, FL)	1 copy
Printer-related Items		P17011	LUNA™ Printer III	1 unit
		P17002	Thermal Printer Refills, Paper and Ribbon	2 x 5 rolls



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