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Launch of next generation 4D-Nucleofector® Units and discontinuation of first generation units

In May 2021 we have launched the next generation 4D-Nucleofector® System which provides improved user experience with unaltered performance.

Features of the next generation 4D-Nucleofector® Units:

- Integration of the 96-well platform as one functional 4D-Nucleofector® Unit
- More responsive user interface
- Larger screen for improved user experience
- New processor for more computing power for advanced graphics, remote interface and network integration
- Attached [table 1](#) shows a more detailed comparison of both generations.

Unaltered performance

The performance of the next generation 4D-Nucleofector® System is unaltered due to identical power and communication interfaces between the units and identical pulse charging and power electronics. [Figure 1](#) below shows a comparison of both generations for all functional units and vessel formats.

Unit compatibility

First and next generation units are compatible with each other, except for the 96-well platform. The new 96-well Unit is only compatible with the next generation Core Unit and the former 96-well Shuttle® Add-on is only compatible with the first generation Core and X Unit. For more details see [table 2](#).

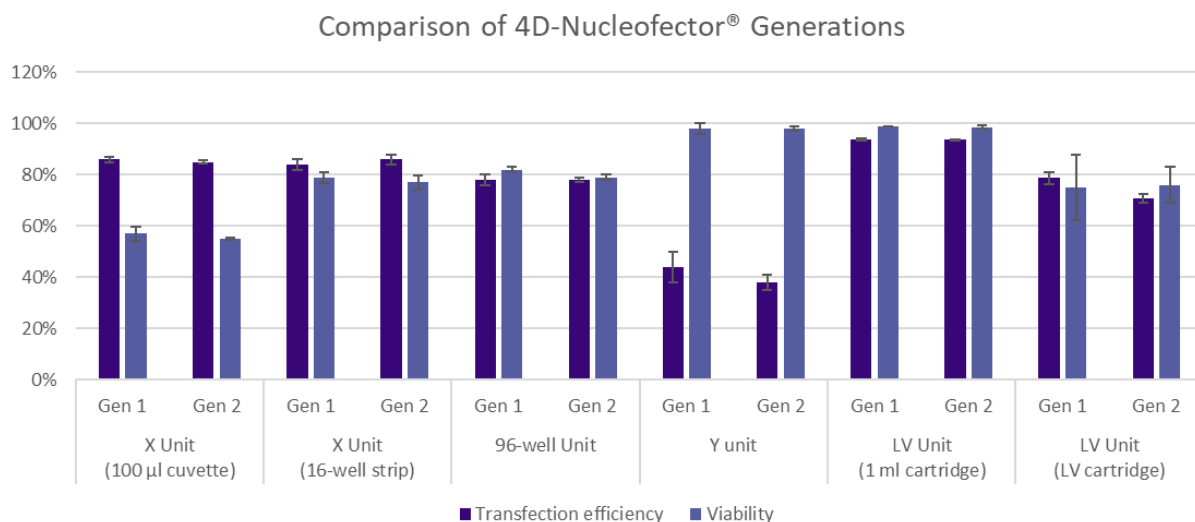


Figure1. Comparison of 4D-Nucleofector® Units of first (Gen 1) and next (Gen 2) generation for all functional units. Bars represent transfection efficiencies for maxGFP™ protein and viabilities for different cell types: Jurkat cells (X Unit and 96-well Unit), NHDF-neo (Y Unit and LV Unit with 1 mL cartridge) and suspension HEK293 cells (LV Unit with LV cartridge).

Discontinuation of the first generation 4D-Nucleofector® System

In parallel to launching the next generation 4D-Nucleofector® System, the first generation X and Y Units and the 96-well Shuttle Add-on have been discontinued in June 2021.

The first generation 4D-Nucleofector® Core Unit and LV Unit will still be sold in combination until early 2022, when the next generation 4D-Nucleofector® LogWare will be launched.

If you have any question about the matter, please contact our Scientific Support Teams:

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Yours sincerely,

Andrea Toell

Andrea Toell
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Table 1 – Comparison of first and second generation 4D-Nucleofector® Units

	Generation 1	Generation 2	Comment
Unit	Core Unit		
Cat. No.	AAF-1002B	AAF-1003B	
Touch screen	Resistive	Capacitive	More responsive user interface
Display	Foldable Portrait Screen	Fixed Landscape Screen	Larger screen for improved user interface
Resolution	320 x 240 pixels	800 x 600 pixels	
USB host interface	1	5 (2 front, 3 back)	For keyboard or memory devices
USB device interface	1	N/A	Not required anymore
Ethernet RJ45 interface	N/A	1	For network integration and remote interface
Shuttle communication interface	1	N/A	Not required anymore
Processor	Single Core Arm	Quad Core Arm	More computing power for advanced graphics, remote interface and network integration
System software	< V05.00	≥ V05.00	
Integrated storage memory	256 MB	32 GB	More space for application and data
Power and communication interface	Identical		To ensure unchanged performance
Pulse charging and power electronics	Identical		To ensure unchanged performance
Unit	X Unit		
Cat. No.	AAF-1002X	AAF-1003X	
96-well Shuttle HV output connectors	1	N/A	Not required anymore
Compatible with system software version	< V05.00 and ≥ V05.00		Both are compatible with generation 1 and generation 2 Core Units
Power electronics and interface	Identical		To ensure unchanged performance
Unit	Y Unit		
Cat. No.	AAF-1002Y	AAF-1003Y	
Compatible with system software version	< V05.00 and ≥ V05.00		Both are compatible with generation 1 and generation 2 Core Units
Power electronics and interface	Identical		To ensure unchanged performance
Unit	96-well Unit		
Cat. No.	AAM-1001S	AAF-1003S	
Functional unit of 4D-Nucleofector® System	No, separate 96-well Shuttle® Add-on	Yes	96-well functionality fully integrated into 4D-Nucleofector® System
Compatible with system software version	< V05.00	≥ V05.00	
Unit	LV Unit		
Cat. No.	AAF-1002L	AAF-1002L-W	
Compatible with system software version	< V05.00 and ≥ V05.00		Both are compatible with generation 1 and generation 2 Core Units
Power electronics and interface	Identical		To ensure unchanged performance

Table 2 – Compatibility of first and second generation 4D-Nucleofector® Units

	 Core Unit (AAF-1003B)	 X Unit (AAF-1003X)	 Y Unit (AAF-1003Y)	 96-well Unit (AAF-1003S)	 LV Unit (AAF-1002L-W)
 Core Unit (AAF-1002B)		Yes	Yes	No	Yes
 X Unit (AAF-1002X)	Yes		Yes	Yes	Yes
 Y Unit (AAF-1002Y)	Yes	Yes		Yes	Yes
 96-well Shuttle® Device (AAM-1001S)	No	No	Yes		Yes
 LV Unit (AAF-1002L)	Yes	Yes	Yes	Yes	

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