

ARTIFICIAL  
INTELLIGENCE

Your data is an extremely important asset. For the past two decades, Phison Electronics has been a market leader in delivering high speed data storage solutions for our OEM customers. In 2000, we announced the world's first system on chip USB flash controller. Fast forward 20 years - the company launches the evolved version of its flagship product - the world's first and fastest USB 3.2 Gen 2x2 native UFD controller for best-in-class high-performance professional applications.

# PS2251-17 (U17) PS2251-18 (U18)

The world's first and fastest USB 3.2  
native UFD controller for high capacity USB flash drives

## U17/U18 - Facts you should know

- Up to 4TB capacity in a small 26mmx60mm PCBA footprint
- Compatible with any device that has a USB Type-C connector (PCs, Mac, notebooks, tablets, smart phones, and gaming consoles)
- Backwards compatible to USB 2.0, USB 3.0, USB 3.1 using a USB Type-A adapter
- 15 times faster and more quiet compared to external HDDs
- High sequential read and sequential write performance
- DRAM-less
- 56% more efficient compared to bridge-based USB external SSD.

## PS2251-17 U17 USB 3.2 Gen 2x1

Best-in-class for entry-level external USB flash drive applications

3D-TLC	Sequential (MB/s)		Random (MB/s)	
	Read	Write	Read	Write
250GB	1000	375	165	250
500GB	1000	800	185	260
1000GB	1000	800	185	260
3D-QLC	Sequential (MB/s)		Random (MB/s)	
	Read	Write	Read	Write
250GB	1000	320	TBD	TBD
500GB	1000	630	TBD	TBD
1000GB	1000	800	TBD	TBD
Features	Specifications			
USB	<ul style="list-style-type: none"> <li>· USB 3.2 Gen 2x1 (10Gbps)</li> <li>· Backwards compatible with USB 3.2 Gen1 (5Gbps)</li> <li>· Backwards compatible with USB 2.0 (480Mbps)</li> <li>· Backwards compatible with USB 1.1 (12Mbps)</li> </ul>			
NAND Flash	<ul style="list-style-type: none"> <li>· Support up to 4TB</li> <li>· Support Triple-level cell (TLC) and Quad-level cell (QLC) NAND flash memory</li> <li>· Compliant with Toggle 1.0/2.0/3.0/4.0 NAND flash interface</li> <li>· Compliant with ONFI 2.0/3.0/4.1</li> <li>· Transfer rate: up to 800 MT/s</li> <li>· Support up to 2 channels/ 16 Chip Enable (CE) within Single Design</li> <li>· Flash IO Operating voltage supply 1.2v/1.8v</li> </ul>			
Data Reliability	<ul style="list-style-type: none"> <li>· 4<sup>th</sup> Generation LDPC ECC protection</li> </ul>			
OS Compatibility	<ul style="list-style-type: none"> <li>· Support Windows XP and later version</li> <li>· Support MAC OS 10.8 and later version</li> <li>· Support Linux kernel 2.4.10 and later version</li> </ul>			
Temperature Range	<ul style="list-style-type: none"> <li>· Operating Range: 0~70 °C</li> <li>· Storage Range: -40~85 °C</li> </ul>			
Humidity	<ul style="list-style-type: none"> <li>· 20%~90%</li> </ul>			
Other Features	<ul style="list-style-type: none"> <li>· Built-in internal Thermal Sensor</li> </ul>			

# PS2251-18 U18 USB 3.2 Gen 2x2

Best-in-class for high-performance USB flash drive applications

3D-TLC	Sequential (MB/s)		Random (MB/s)	
	Read	Write	Read	Write
500GB	1850	1000	250	320
1000GB	1850	1600	250	320
2000GB	1850	1600	260	330
4000GB	1900	1700	260	330
Features	Specifications			
USB	<ul style="list-style-type: none"> <li>· USB 3.2 Gen 2x1 (10Gbps)</li> <li>· Backwards compatible with USB 3.2 Gen1 (5Gbps)</li> <li>· Backwards compatible with USB 2.0 (480Mbps)</li> <li>· Backwards compatible with USB 1.1 (12Mbps)</li> </ul>			
NAND Flash	<ul style="list-style-type: none"> <li>· Support up to 4TB</li> <li>· Support Triple-level cell (TLC) and Quad-level cell (QLC) NAND flash memory</li> <li>· Compliant with Toggle 1.0/2.0/3.0/4.0 NAND flash interface</li> <li>· Compliant with ONFI 2.0/3.0/4.1</li> <li>· Transfer rate: up to 1400 MT/s</li> <li>· Support up to 2 channels/ 16 Chip Enable (CE) within Single Design</li> <li>· Flash IO Operating voltage supply 1.2v/1.8v</li> </ul>			
Data Reliability	<ul style="list-style-type: none"> <li>· 4<sup>th</sup> Generation LDPC ECC protection</li> </ul>			
OS Compatibility	<ul style="list-style-type: none"> <li>· Support Windows XP and later version</li> <li>· Support MAC OS 10.8 and later version</li> <li>· Support Linux kernel 2.4.10 and later version</li> </ul>			
Temperature Range	<ul style="list-style-type: none"> <li>· Operating Range: 0~70 °C</li> <li>· Storage Range: -40~85 °C</li> </ul>			
Humidity	<ul style="list-style-type: none"> <li>· 20%~90%</li> </ul>			
Other Features	<ul style="list-style-type: none"> <li>· Built-in internal Thermal Sensor</li> </ul>			

## Best in class low power consumption

U17 / U18	Power (mA)
Read	500
Write	550
Idle	150
Suspend	1.7