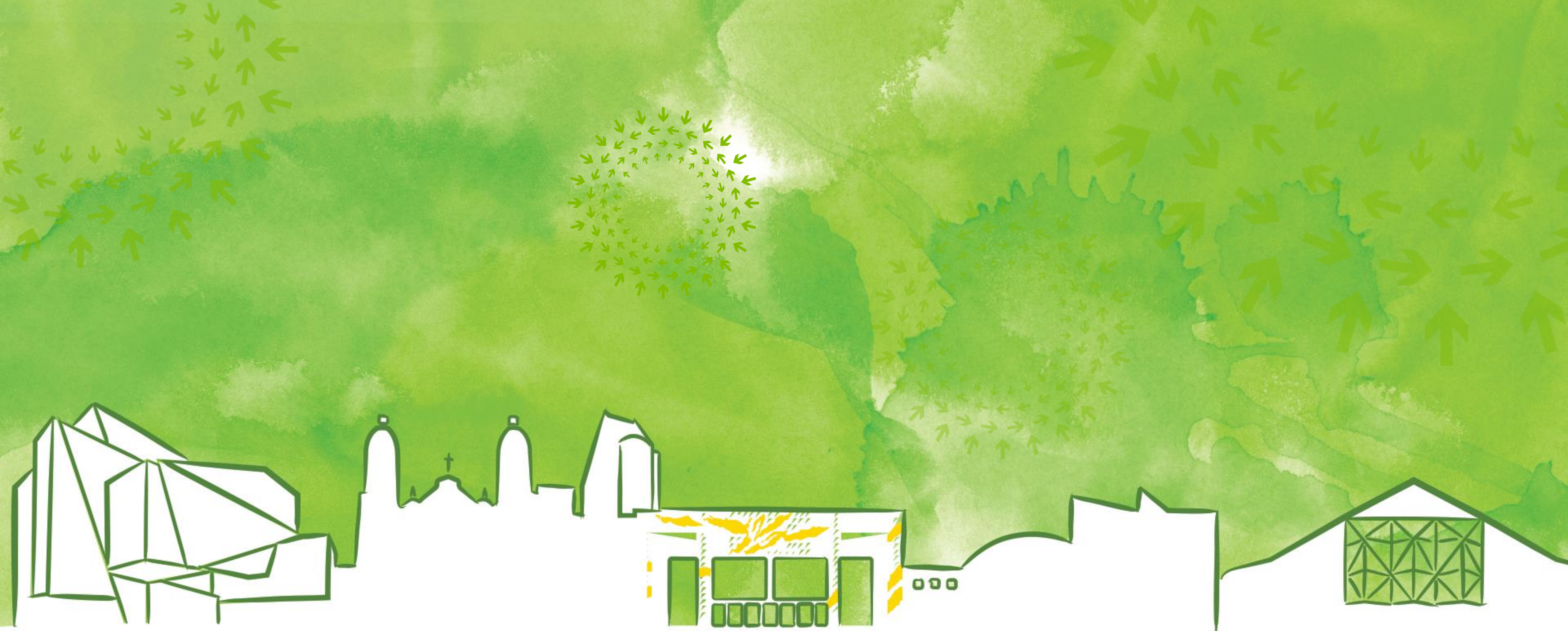




OCP U.S. SUMMIT 2016

March 9-10 | San Jose, CA

OCP U.S. SUMMIT 2016

OCP Adoption

Revolution with 21" racks vs. Transition from 19" racks

Bill Lin
Associate Director

Presenter

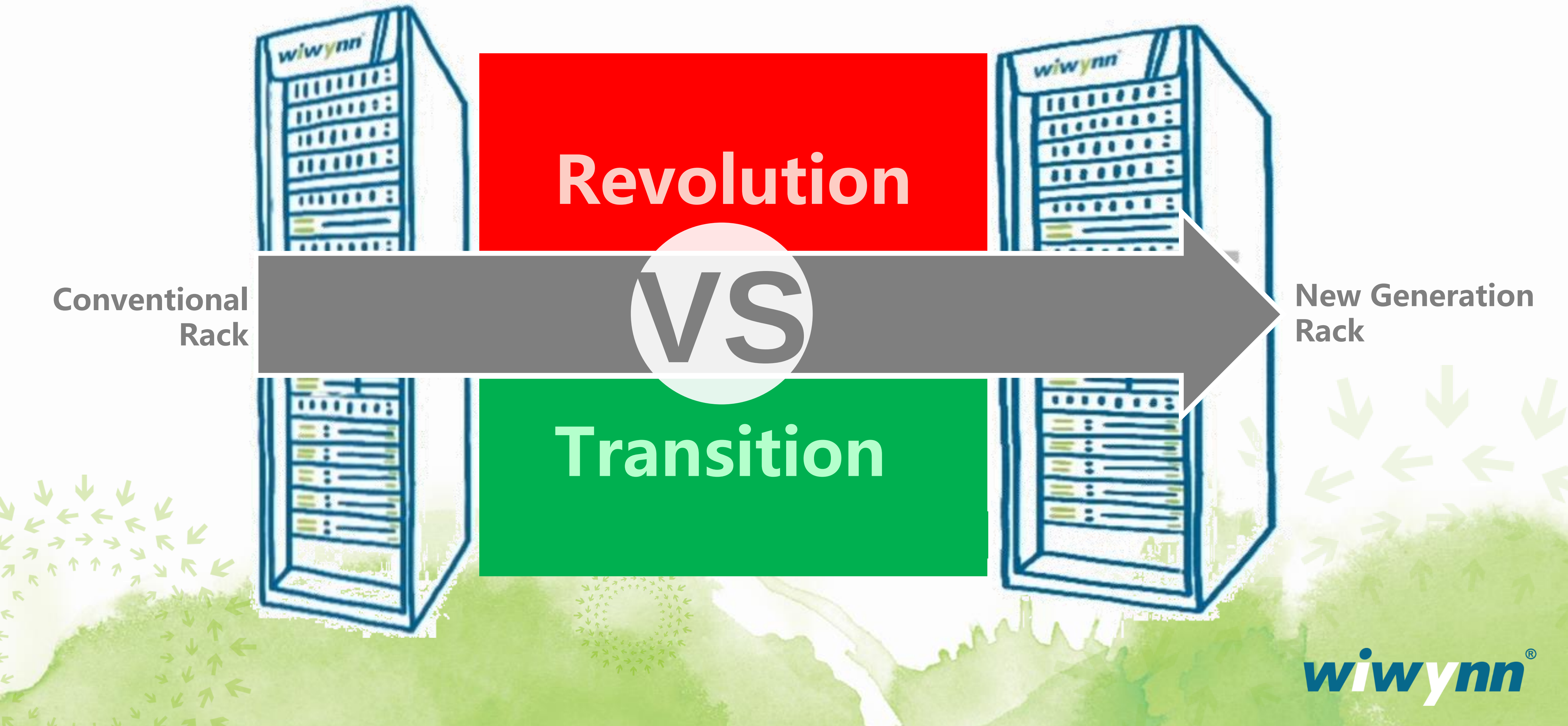
Bill Lin (林宏龍)

Bill_Lin@Wiwynn.com

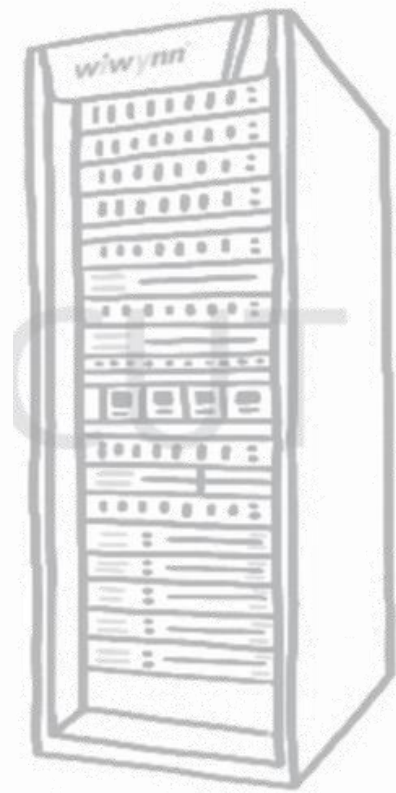
- Associate Director
- Mechanical Development Division



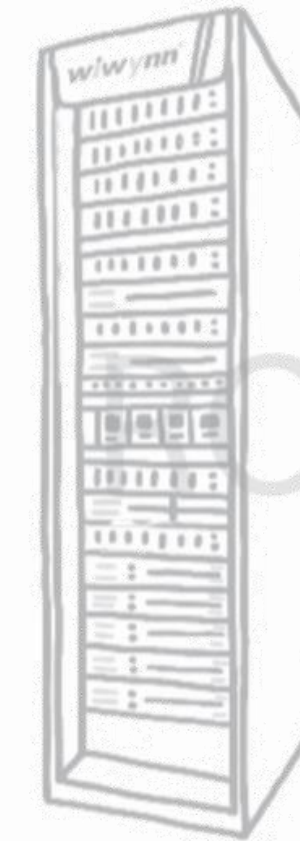
Revolution or Transition?



From 21" to 19" (Leopard + Carmel)



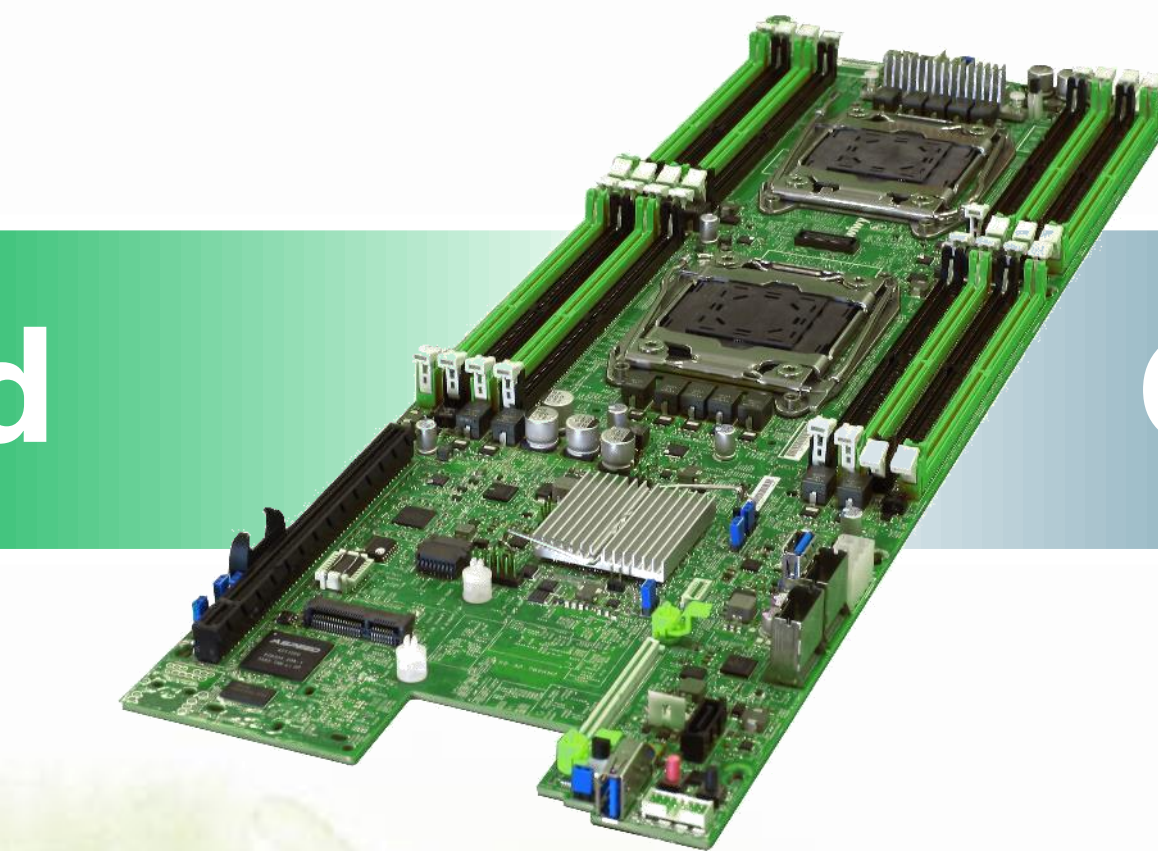
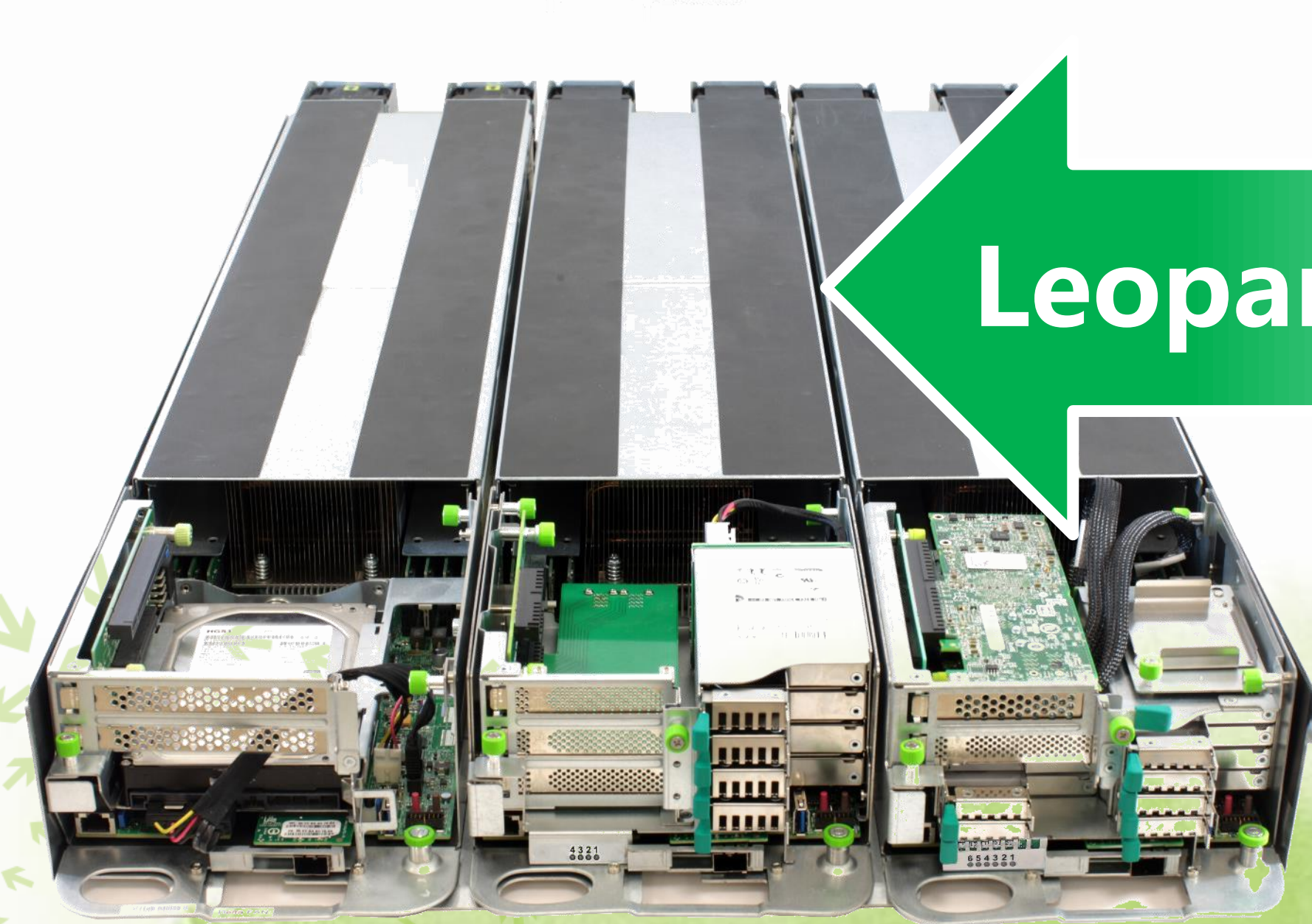
21"



19"

Leopard

Carmel

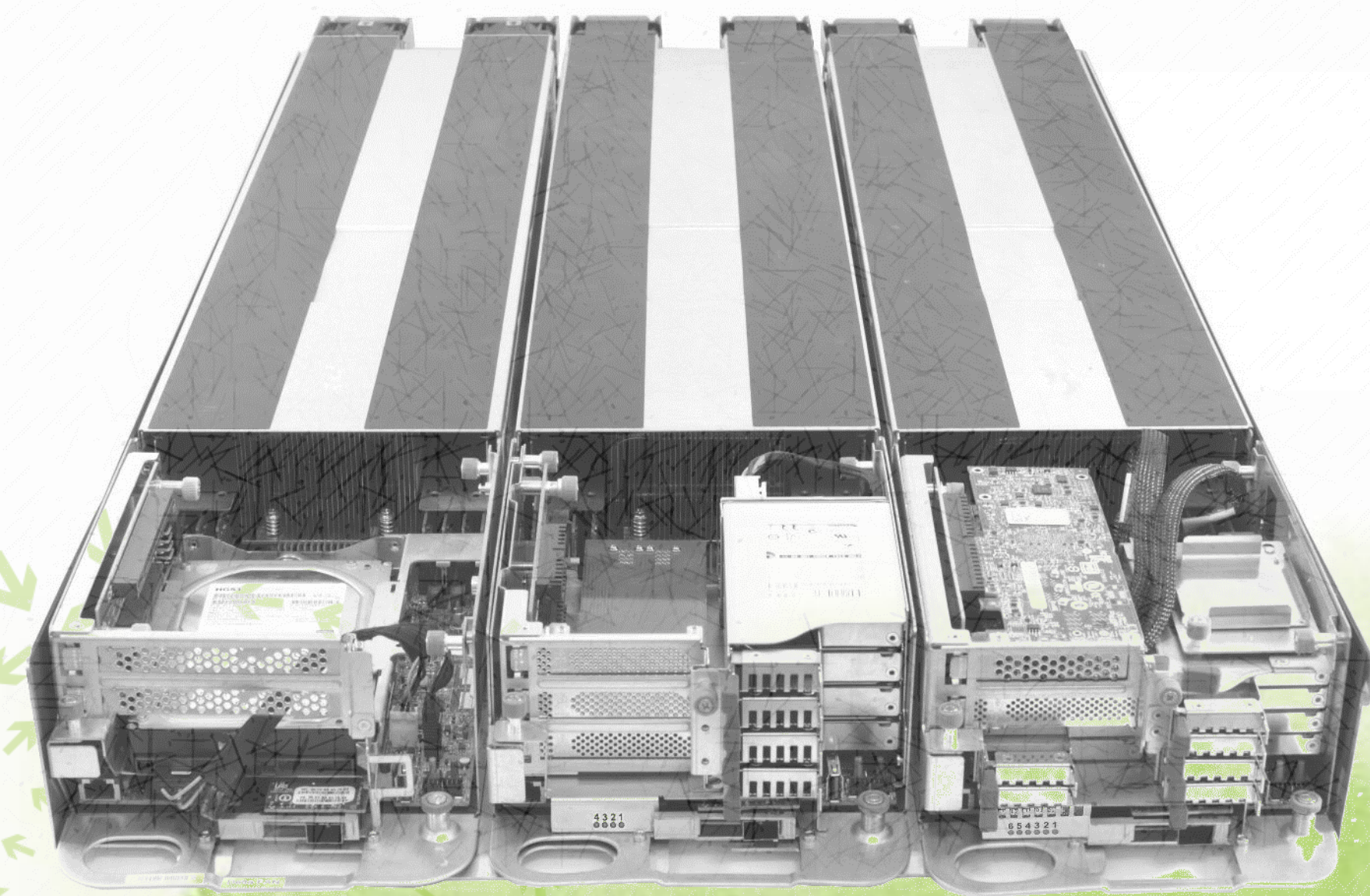


Wiwynn SV7220G2

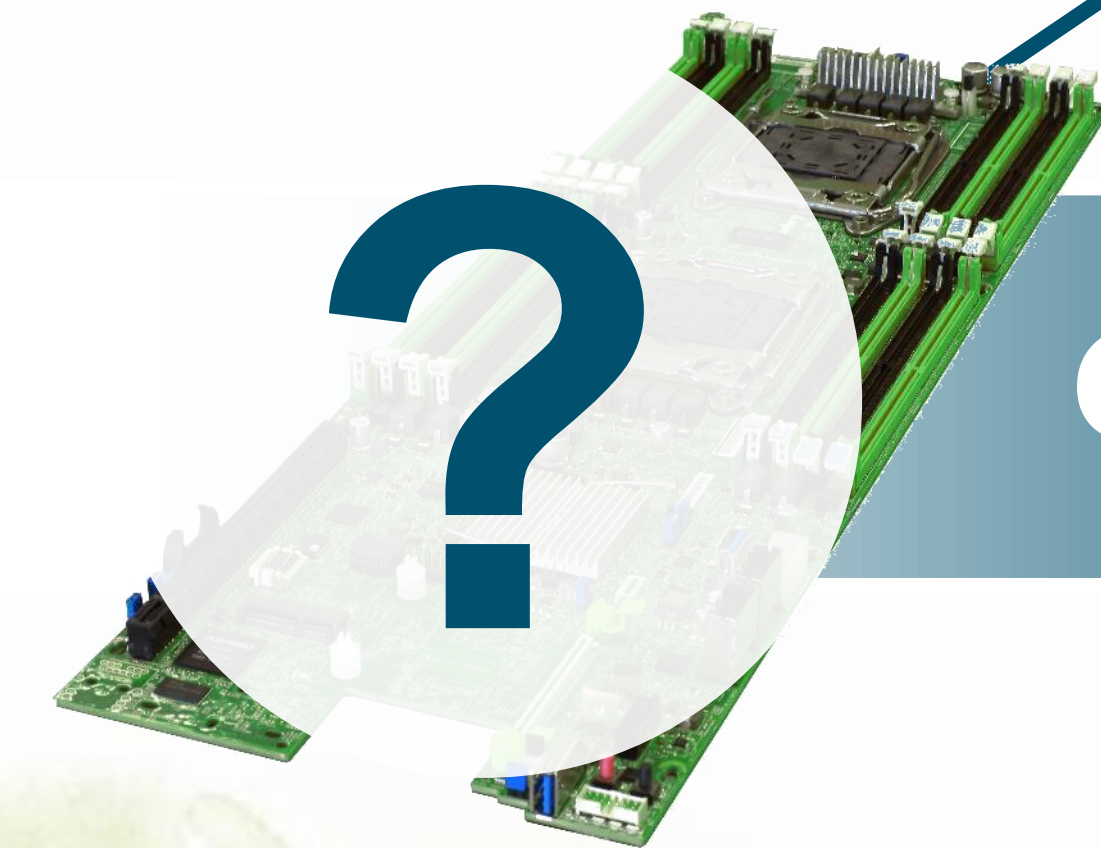
Wiwynn SV324

From 21" to 19" (Leopard + Carmel)

1. Benefits
2. System Architecture
3. 1U and 2U Node Sleds
4. Wiwynn Design (SV324)



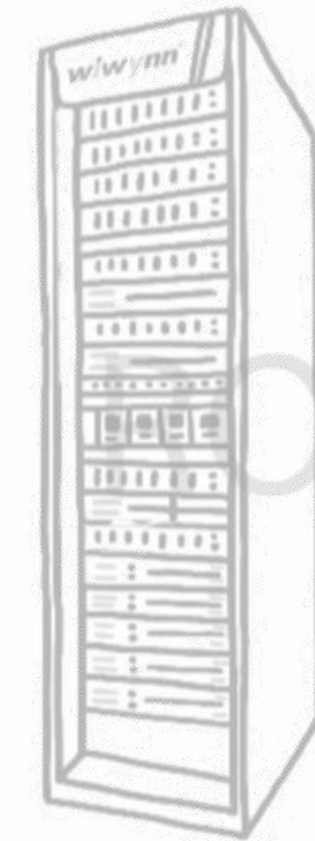
Wiwynn SV7220G2



Carmel



Wiwynn SV324



19"

Carmel Benefits

OPEX

1

Power Efficiency

Carmel uses the OCP Vanity-Free designed mother boards and great power efficiency in EIA 19" rack.

2

Cooling Efficiency

Front accessed nodes require minimal airflow and lower power consumption.

3

High-Density

Carmel accommodates 4 high performance nodes in 2U4N configuration.

4

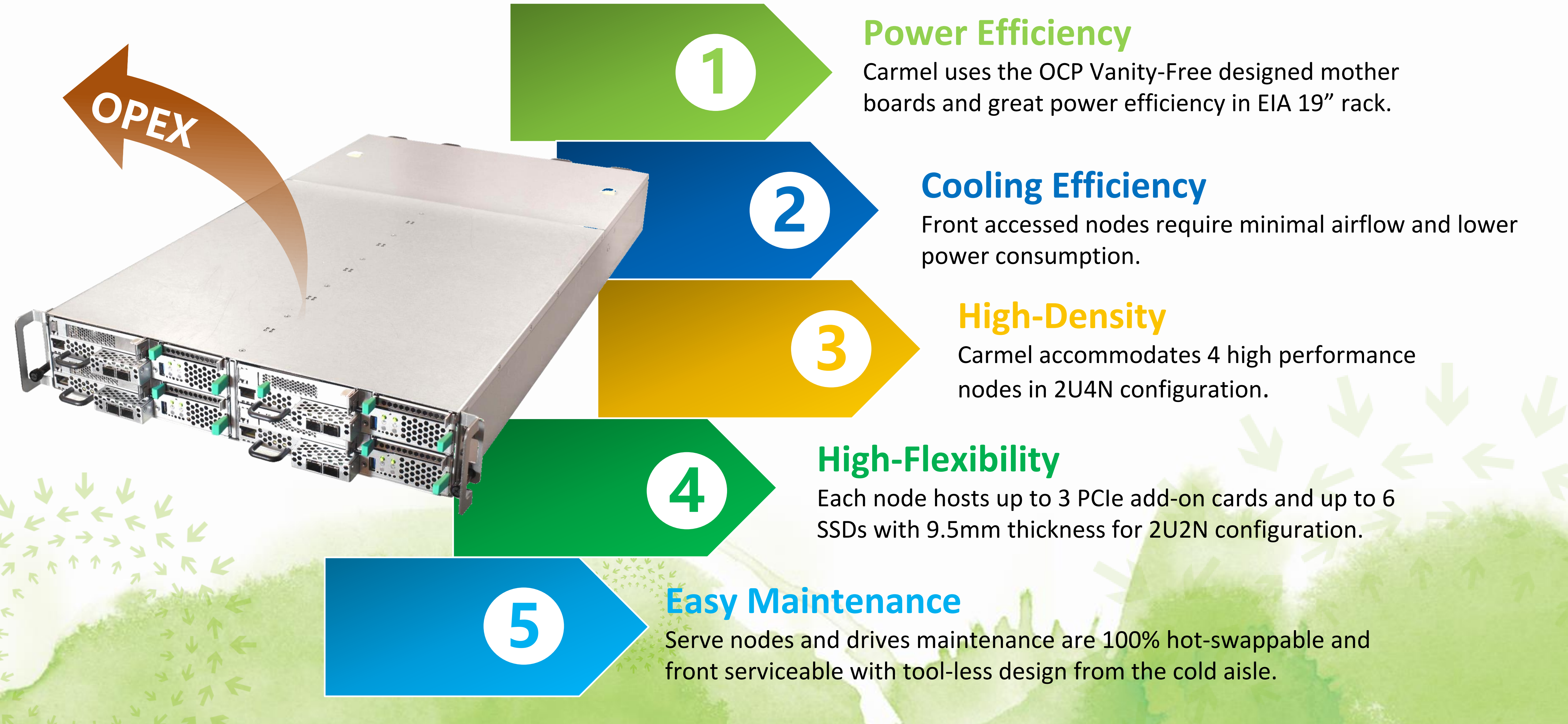
High-Flexibility

Each node hosts up to 3 PCIe add-on cards and up to 6 SSDs with 9.5mm thickness for 2U2N configuration.

5

Easy Maintenance

Serve nodes and drives maintenance are 100% hot-swappable and front serviceable with tool-less design from the cold aisle.



Architecture – System Overview

Power Supplies

Two 1600W (1+1 redundant)

Fans

Four dual rotor 8056 fans,
(7+1 rotor redundant)

1U Node

2U Node

Node Sleds

Four or Two nodes with OCP MBs

Configurations for Your Applications

	Type A (1U Node)	Type B (2U Node)
	Compute-intensive applications	Compute-intensive and high performance data centric applications
PSU	2 x 1600W, 1+1 Redundant	2 x 1200W, 1+1 Redundant
CPU (TDP)	Dual Intel Xeon E5-2600 (145W)	Dual Intel Xeon E5-2600 (145W)
M.2 SATA SSD	1	1
2.5" 9.5mm HDD/SSD	1	6
PCIe Add-on Card	1 x PCIe 3.0 x16, FHHL	3 x PCIe 3.0 x8, FHHL
NIC	10/25/40/50GbE Mezzanine card	
Density	2U4Node	2U2Node

Node Sled – Type A (1U Node)

DIMM

16 pcs DDR4 ECC RDIMM
1600/1867/2133/2400 MT/s

CPU

Dual socket Xeon E5-2600 v4

PCIe add-on card

1 pc PCIe 3.0 x16, FHHL

HDD/SSD

- 1 pc 2.5" 9.5 mm HDD/SSD, front serviceable
- 1 pc M.2 / mSATA

OCP Mezz NIC

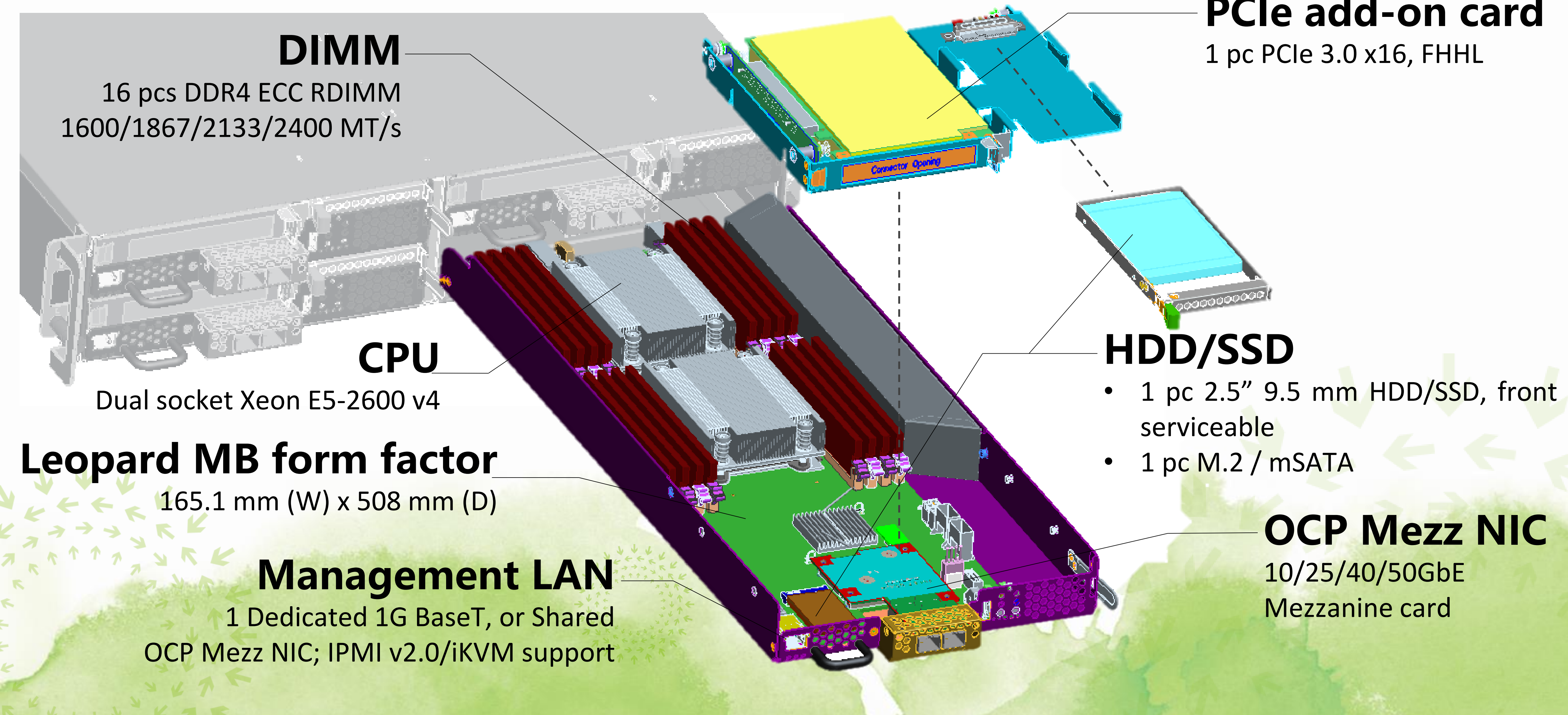
10/25/40/50GbE
Mezzanine card

Management LAN

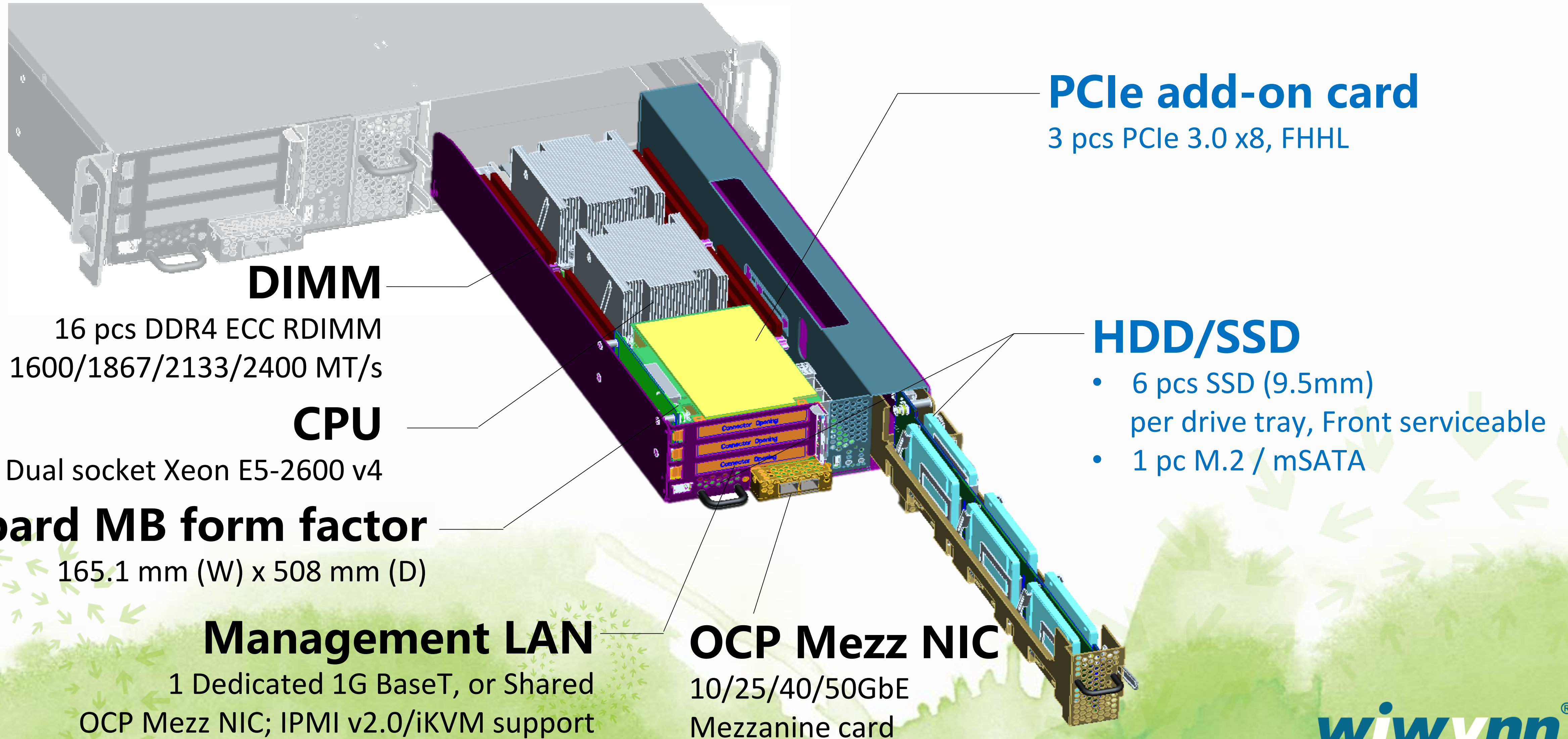
1 Dedicated 1G BaseT, or Shared
OCP Mezz NIC; IPMI v2.0/iKVM support

Leopard MB form factor

165.1 mm (W) x 508 mm (D)



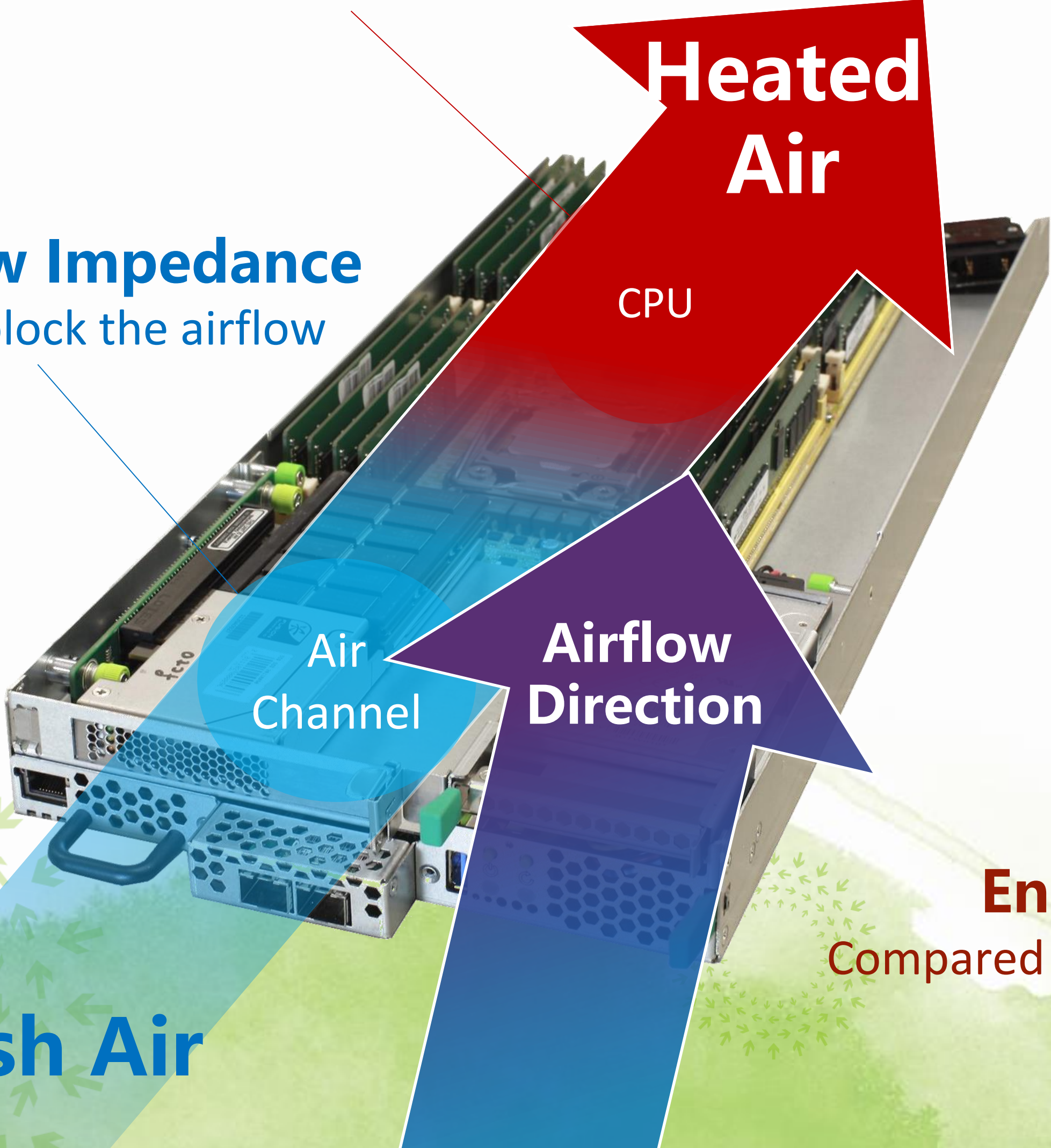
Node Sled – Type B (2U Node)



Thermal Optimization for Power Saving

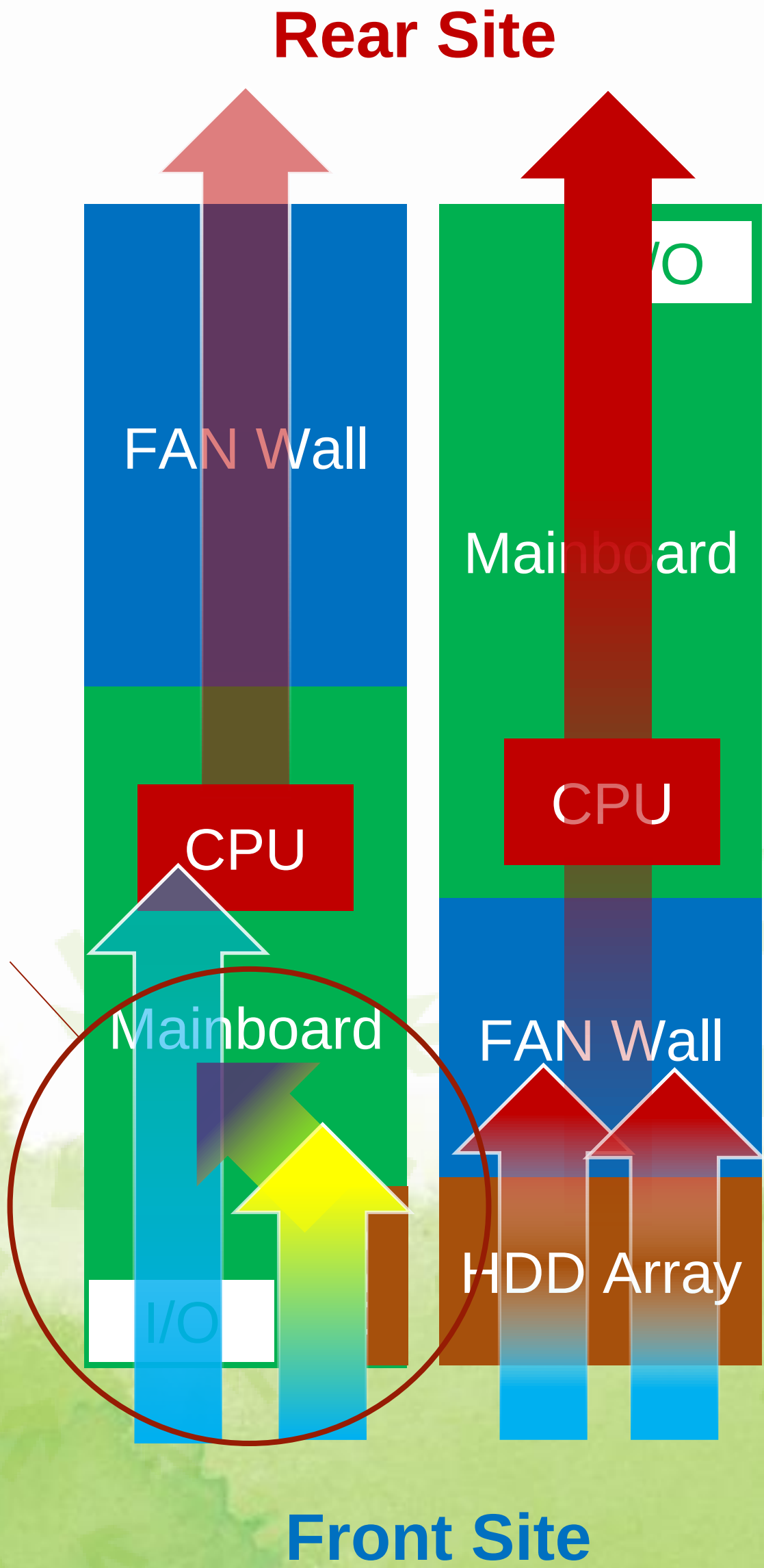
Heated air has no impact
on SSD or Cards

Lower Flow Impedance
HDD doesn't block the airflow

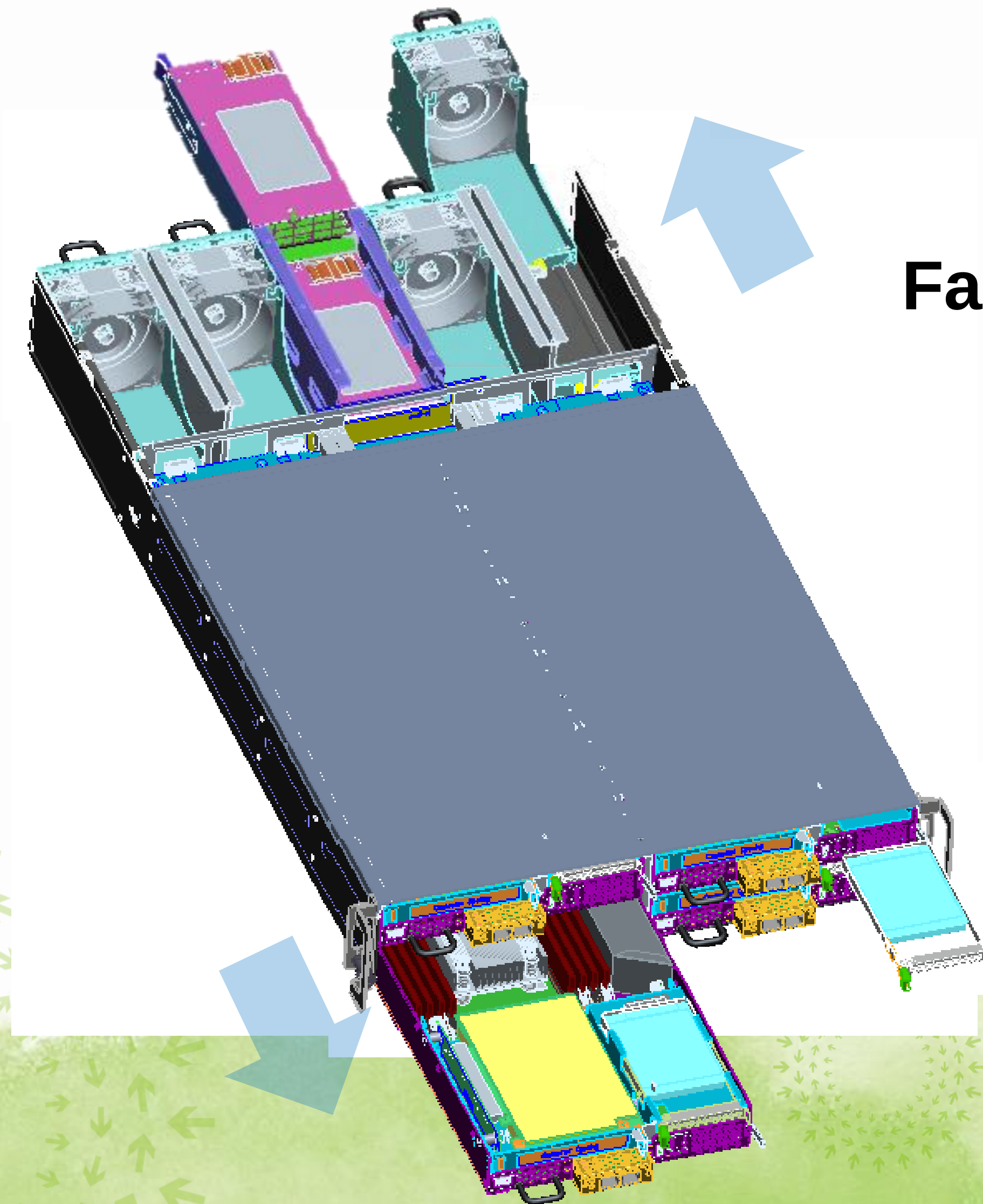


30%

Enhanced Cooling Efficiency
Compared to the system with front HDD array



Easy Maintenance for Cost Saving



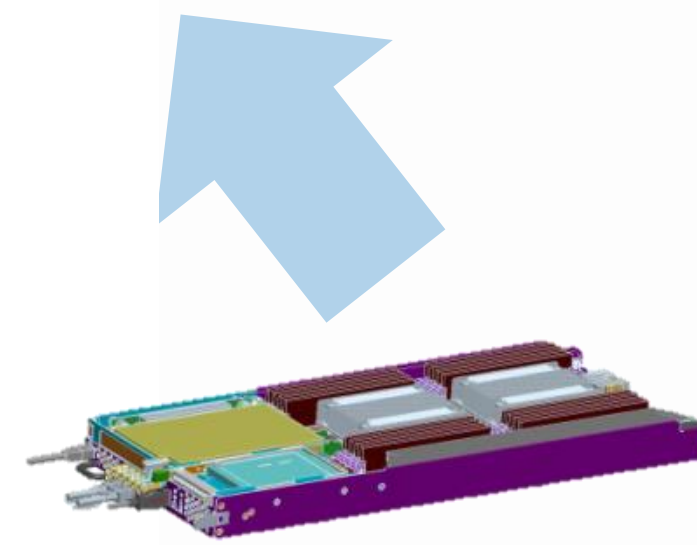
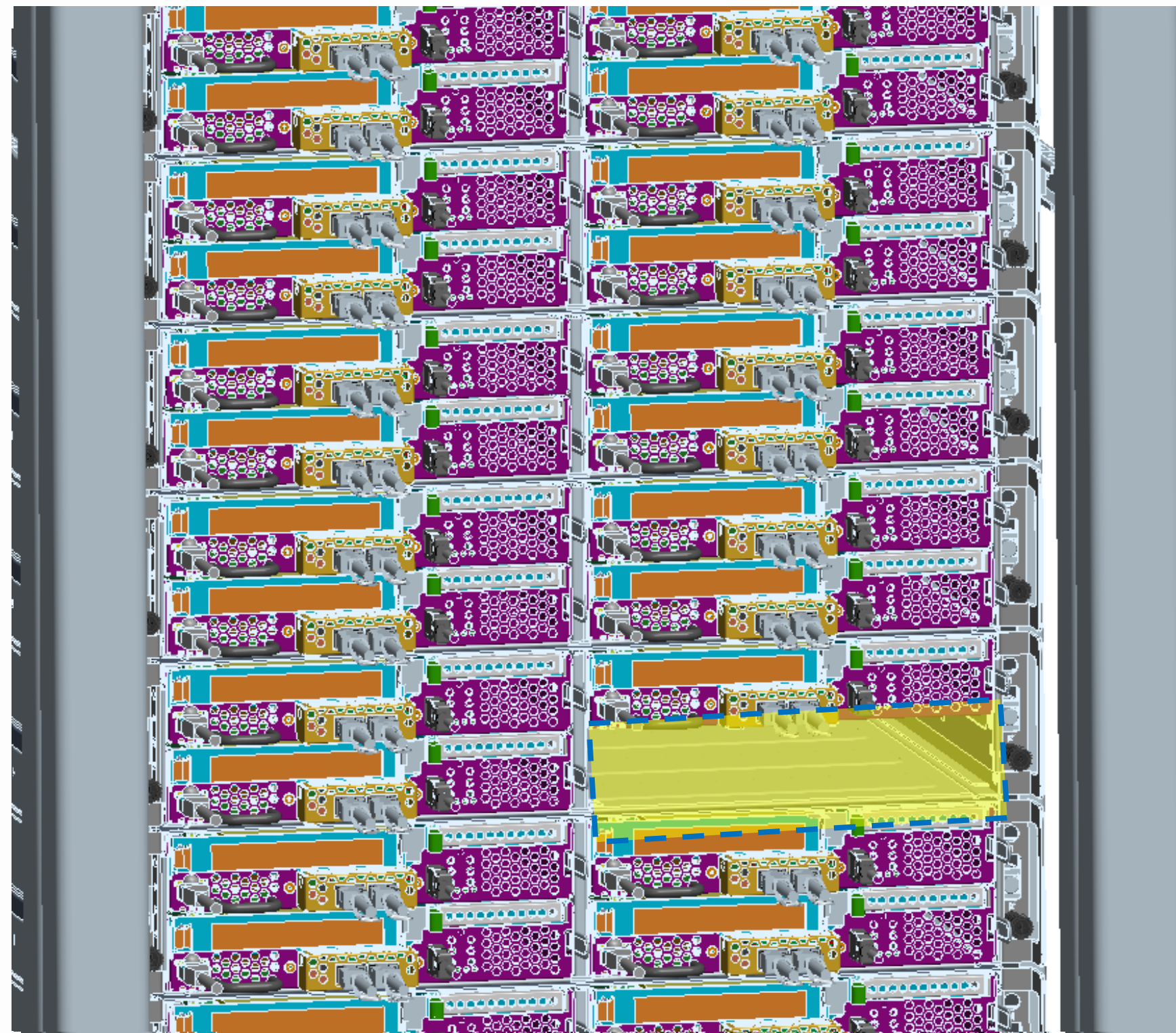
Fans, PSUs, SSDs, Node Sleds

100%

Hot-swappable

wiwynn[®]

Easy Maintenance for Cost Saving



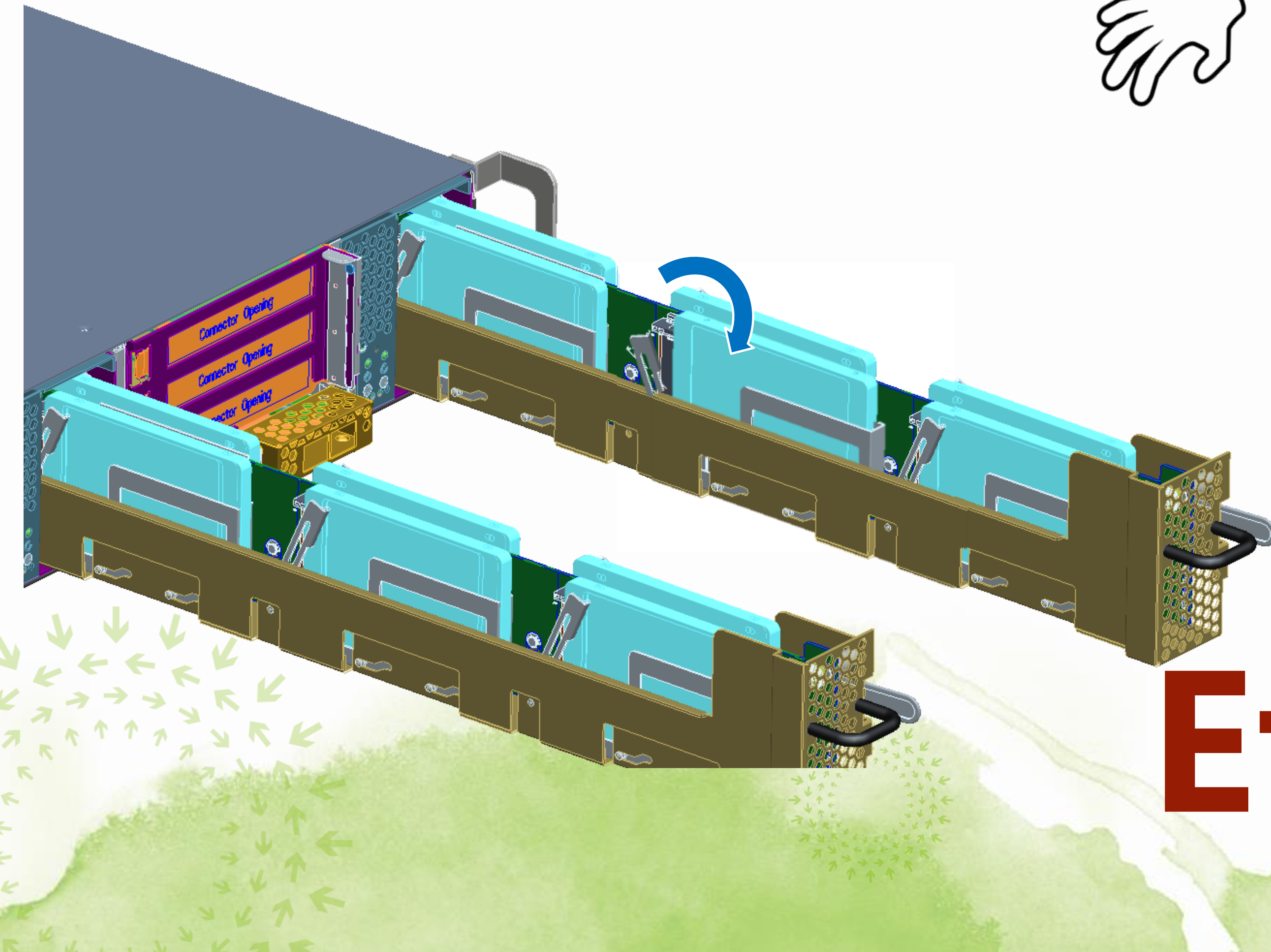
Front
Accessible
& Tool-Less

Easy Maintenance for Cost Saving



SSD serviceability is...

**Facile
&
Effortless**



Carmel – OCP Vanity-Free Designed Server

- **Power and Cooling**

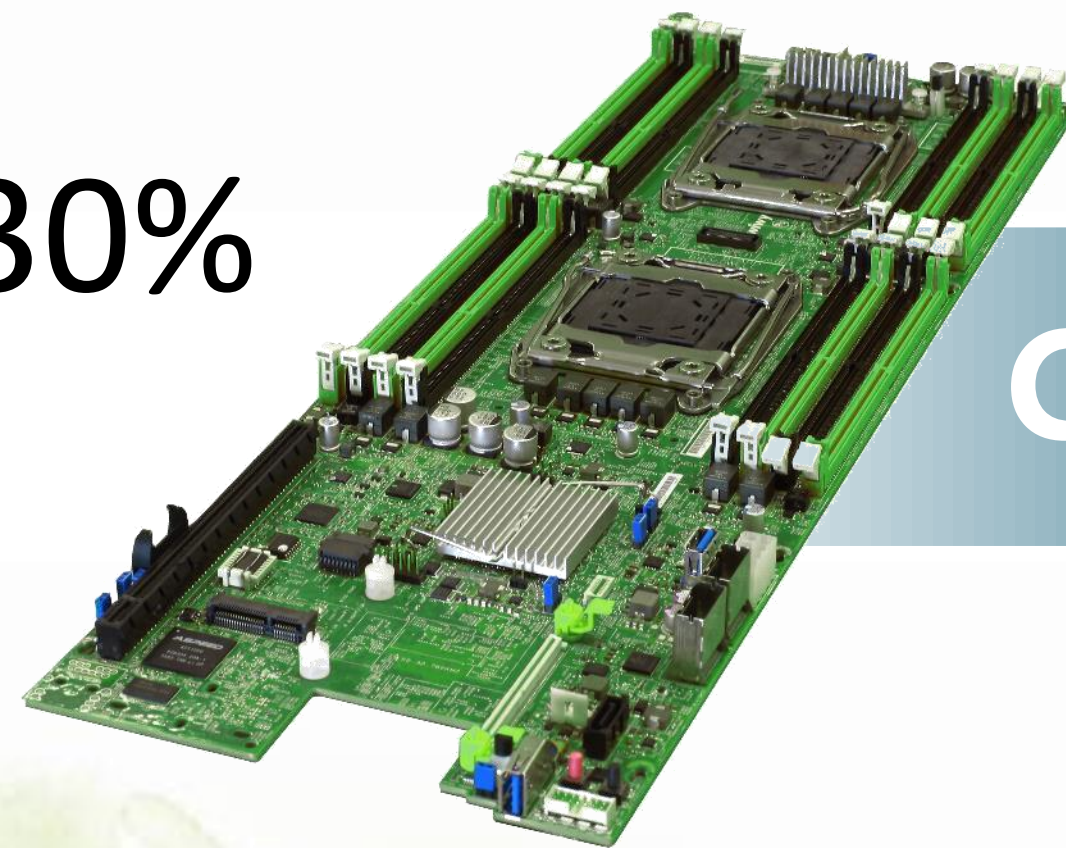
CPU TDP Up to 145W

Cooling Efficiency Up 30%

- **Maintenance**

100% Hot-swappable & Tool-Less

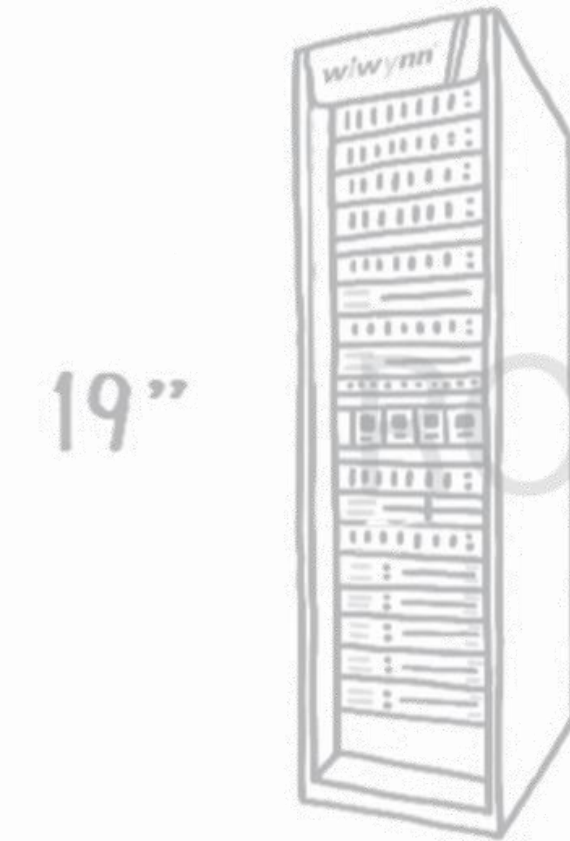
Front Serviceable

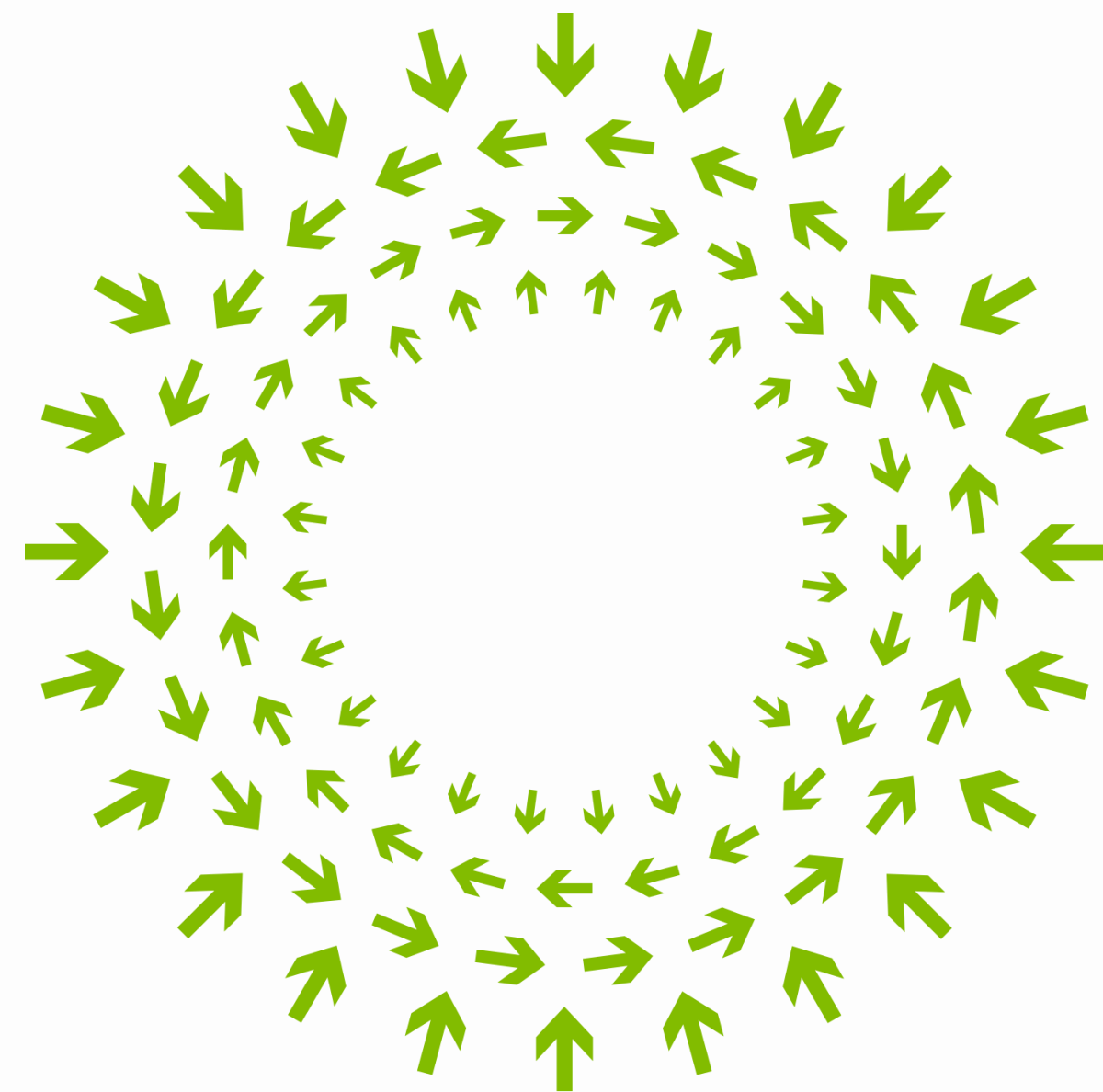


Carmel



Wiyynn SV324





OPEN

Compute Project