Top 5 supercomputers

1. Frontier

Size: Frontier is expected to have over 100,000 nodes, each equipped with multiple processors.
Location: Oak Ridge National Laboratory (ORNL) in Tennessee, USA.
What it's for: Frontier is designed for various scientific applications such as climate modeling, materials science, and energy research.
Who's working on it: Frontier is developed by Cray Inc., a part of Hewlett Packard Enterprise.
Cost: Estimated to be around $600 million.
Status: Became operational in 2022. Peak Performance 1.5 exaflops.

2. Fugaku

Size: Fugaku has over 7.3 million processor cores.
Location: RIKEN Center for Computational Science in Kobe, Japan.
What it's for: Fugaku is used for applications like drug discovery, weather forecasting, and scientific simulations.
Who's working on it: Jointly developed by RIKEN and Fujitsu.
Cost: Estimated to be around $1 billion.
Status: Became operational in 2021. Peak Performance 442 petaflops.

3. Lumi

Size: Lumi is expected to have tens of thousands of nodes with multiple processors.
Location: CSC - IT Center for Science in Kajaani, Finland.
What it's for: Used for addressing scientific and industrial challenges such as climate modeling and drug discovery.
Who's working on it: Developed by a consortium led by the Finnish IT Center for Science.
Cost: Estimated to be around €200 million.
Status: Became operational in 2022. Peak Performance 309 petaflops.

4. Leonardo

Size: Leonardo is expected to have several thousand nodes with multiple processors.
Location: Italian supercomputing center CINECA in Bologna, Italy.
What it's for: Supporting research in fields like astrophysics and computational biology.
Who's working on it: Developed by CINECA.
Cost: Estimated to be around €120 million.
Status: Became operational in 2023. Peak Performance 174 petaflops.

5. Summit

Size: Summit has over 2.4 million processor cores.
Location: Oak Ridge National Laboratory (ORNL) in Tennessee, USA.
What it's for: Used for scientific research including climate modeling and materials science.
Who's working on it: Developed by IBM, in partnership with NVIDIA, Mellanox, and others.
Cost: Estimated to be around $200 million.
Status: Became operational in 2018. Peak Performance 148.8 petaflops