BIOS IT

COMPOSABLE PLATFORM
Enabling *truly* disaggregated infrastructure

With BIOS IT's composable infrastructure platform, compute, networking, storage, GPU (or FPGA) and Intel® Optane™ memory devices are interconnected over GigaIO's high performance fabric (FabreX™) to deliver dynamically-configurable bare-metal servers, right-sized for your requirements and featuring the specific physical resources required by each deployed application.

DISAGGREGATED HARDWARE
Pool compute, network, storage and accelerators (GPU/FPGA or future PCIe enabled technologies) and memory in expansion trays for native deployment across GigaIO's intelligent fabric.

INTELLIGENT FABREX™
GigaIO FabreX is a fundamentally new network architecture that integrates computing, storage and other communication I/O into a single-system cluster fabric, using industry standard PCI Express technology. PCIe is used internally to power virtually every server on the market today. GigaIO enables true host-to-host communication across PCIe and makes true cluster scale networking possible, with direct memory access by an individual server to system memories of all other servers in the cluster fabric, for the industry's first in-memory network. This new architecture enables a hyper-performance network with a unified, software-defined, composable infrastructure.

ORCHESTRATION LAYER
With an on-demand management interface, you can dynamically provision physical servers on demand from pools of bare-metal resources.

KEY FEATURES
True disaggregation with dynamic composability

Low latency and high bandwidth

Standard Redfish APIs

Cloud Orchestration

Right-sized resource provisioning

GIGAIO
The Network is *Finally* the Computer

DYNAMIC RESOURCE PROVISIONING

With its exceptional low latency and high bandwidth thanks to GigaIO's FabreX switch, the BIOS IT Composable platform makes the disaggregation of storage and accelerators possible. Featuring standard Redfish APIs, leading third-party orchestration and composition software this truly software defined infrastructure solution can dynamically assign resources to match changing workloads.

CLUSTER MONITORING

The orchestration interface includes advanced cluster, machine, and device statistics and monitoring.

GPU COMPOSABILITY

Deploy multiple GPU elements across GigaIO's composable FabreX™ which are then dynamically allocated to any compute node instantly.

BIOS IT COMPOSABLE PLATFORM	
GIGAIO BUNDLE	1U 24 port PCIe Gen3 switch Leader pack (Composition pack & small cluster module) Leader pack license PCIe Gen3 Adapter cards and cables
NETWORKING	Supermicro 48 x10G port Ethernet ToR switch
COMPUTE	2U Management server with 4 nodes each with: 2x Intel Cascade Lake CPUs 12x 16Gb DIMMs 6x 8TB HDD Cloud Licenses
GigaIO GPU	4U JBOG with up to 10x NVIDIA Tesla V100 GPUs
GigaIO NVMe	2U JBOF with 2x 6.4TB NVMe - 6.4TB Intel DC-p4610

For more information contact BIOS IT.

ABOUT BIOS IT

BIOS IT is a global design house, systems builder and integrated solution provider for enterprise performance computing. We construct bespoke clusters and appliances by hand picking the best components and newest technologies based on specific customer goals. We support well-known organisations at the top of their research fields, across science, engineering, academia and finance disciplines. Our comprehensive range of products and services include: high-performance enterprise servers, storage and networking, on-premise or in the cloud, with associated services, support, hosting and software.