

MT 8020 Simulator

High-end Performance

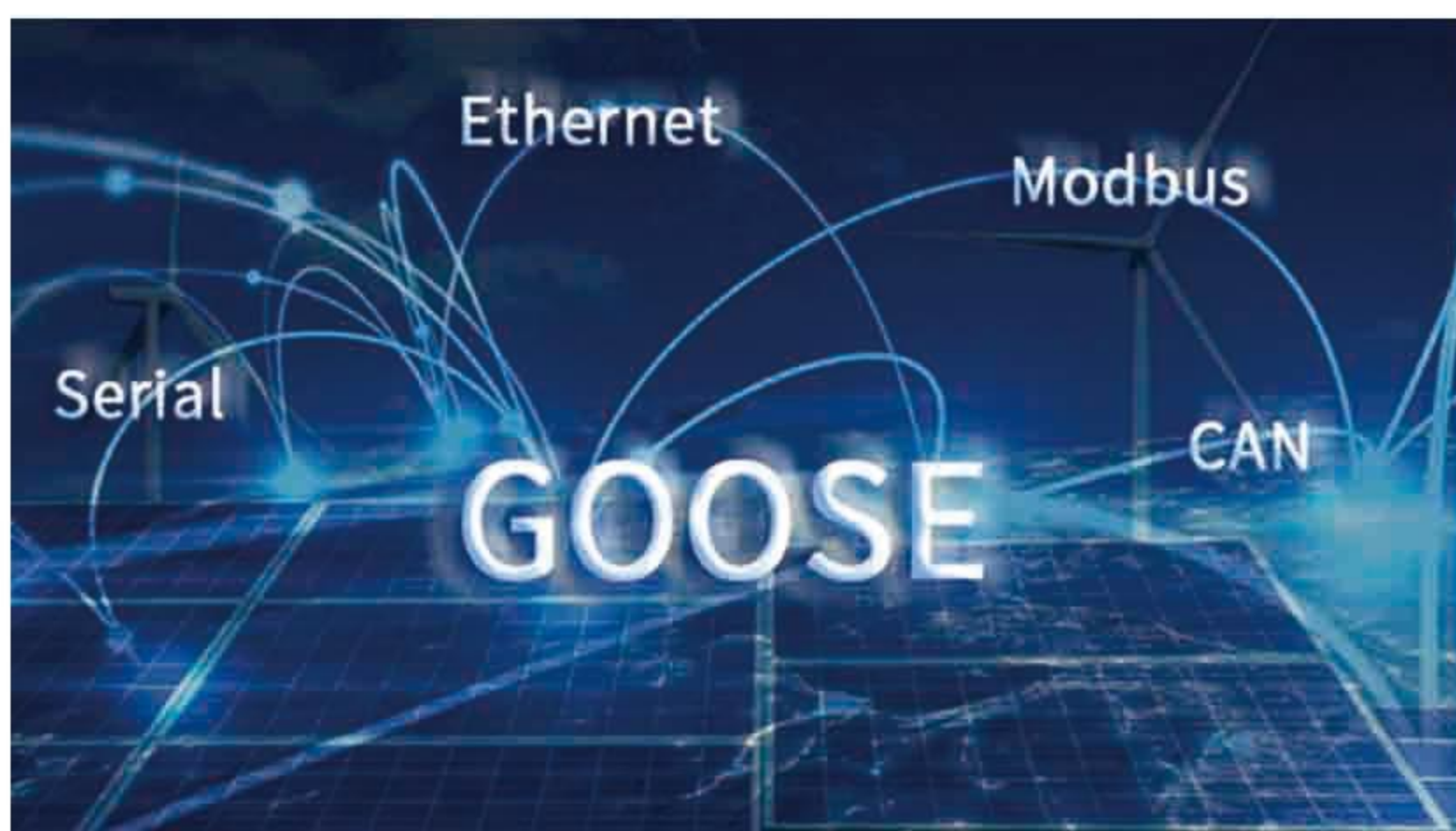
NEW

ModelingTech
远 宽 能 源



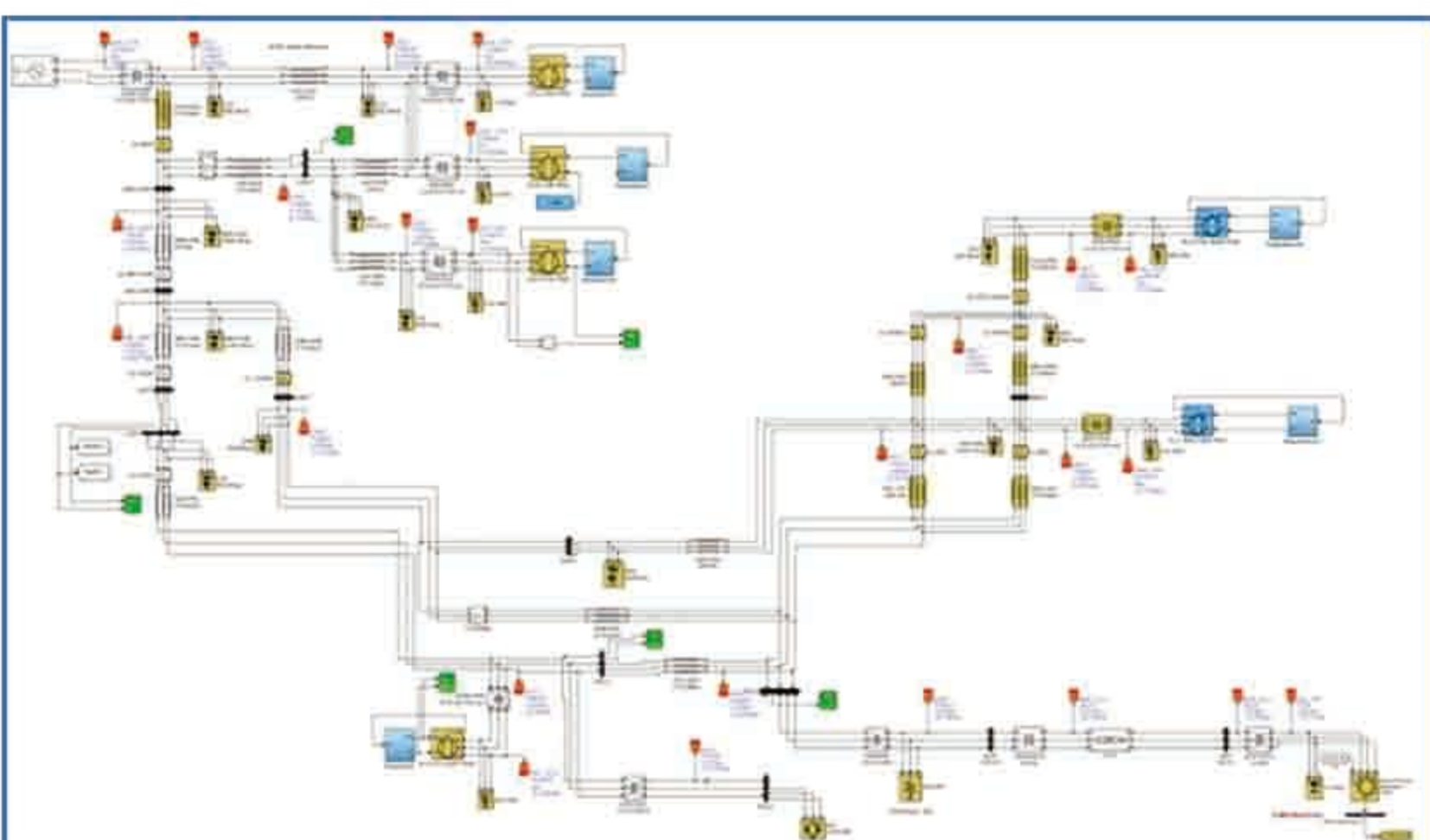
MT 8020 Simulator is a high-end performance platform developed by ModelingTech, based on Intel Xeon CPU and Xilinx UltraScale FPGA, which assists the simulation and testing of renewable energy inverters, multi-level converters, motor drive systems, microgrids and other power and power electronic systems.

Detailed Highlights



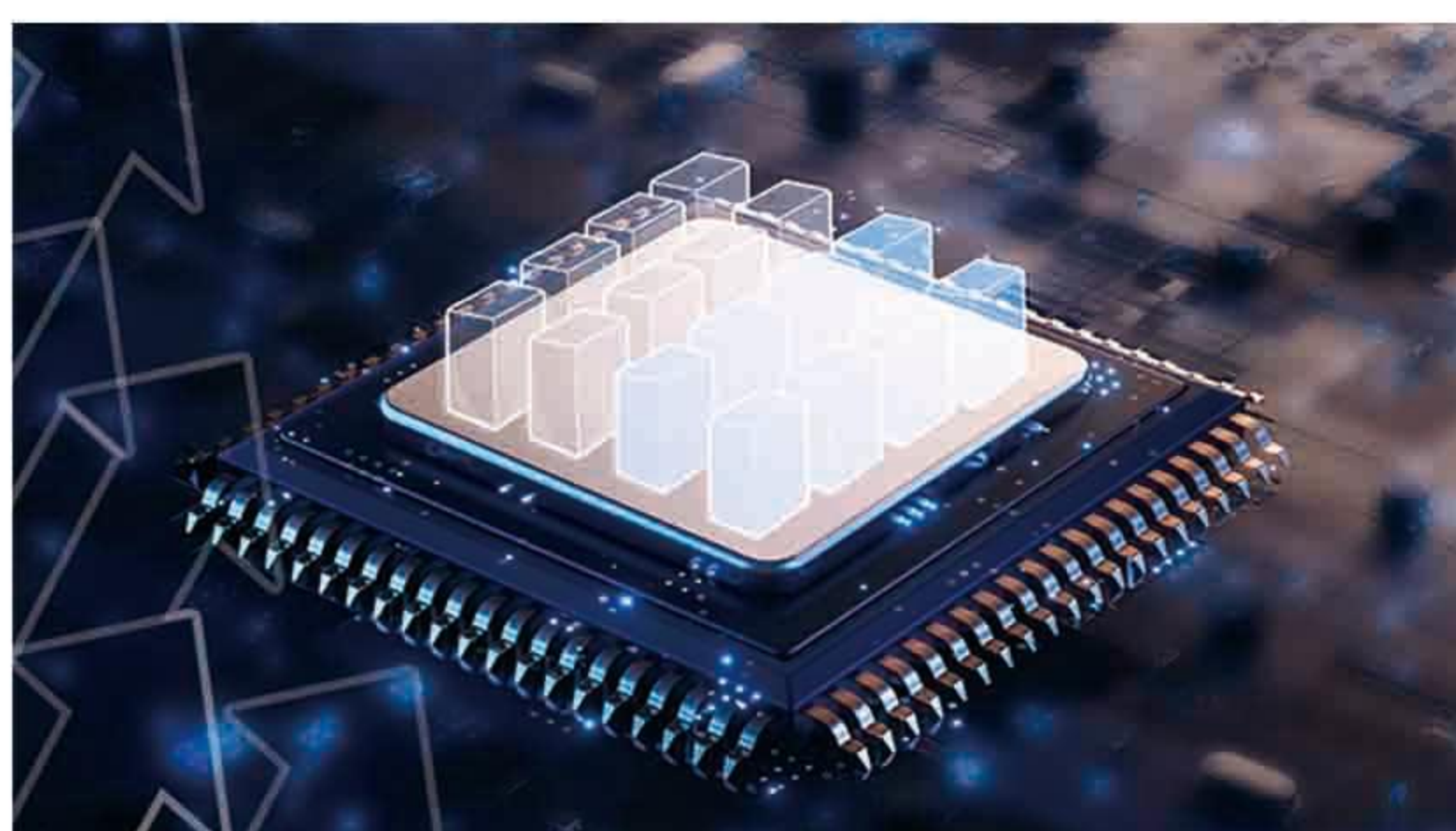
1. Support GOOSE and other industrial communication protocols

It supports Modbus TCP/RTU, CAN, Ethernet TCP/UDP, GOOSE, serial port and other general industrial protocols, which provides the necessary communication for renewable energy farm control applications such as PV array ring network, and energy storage system testing applications such as primary FM.



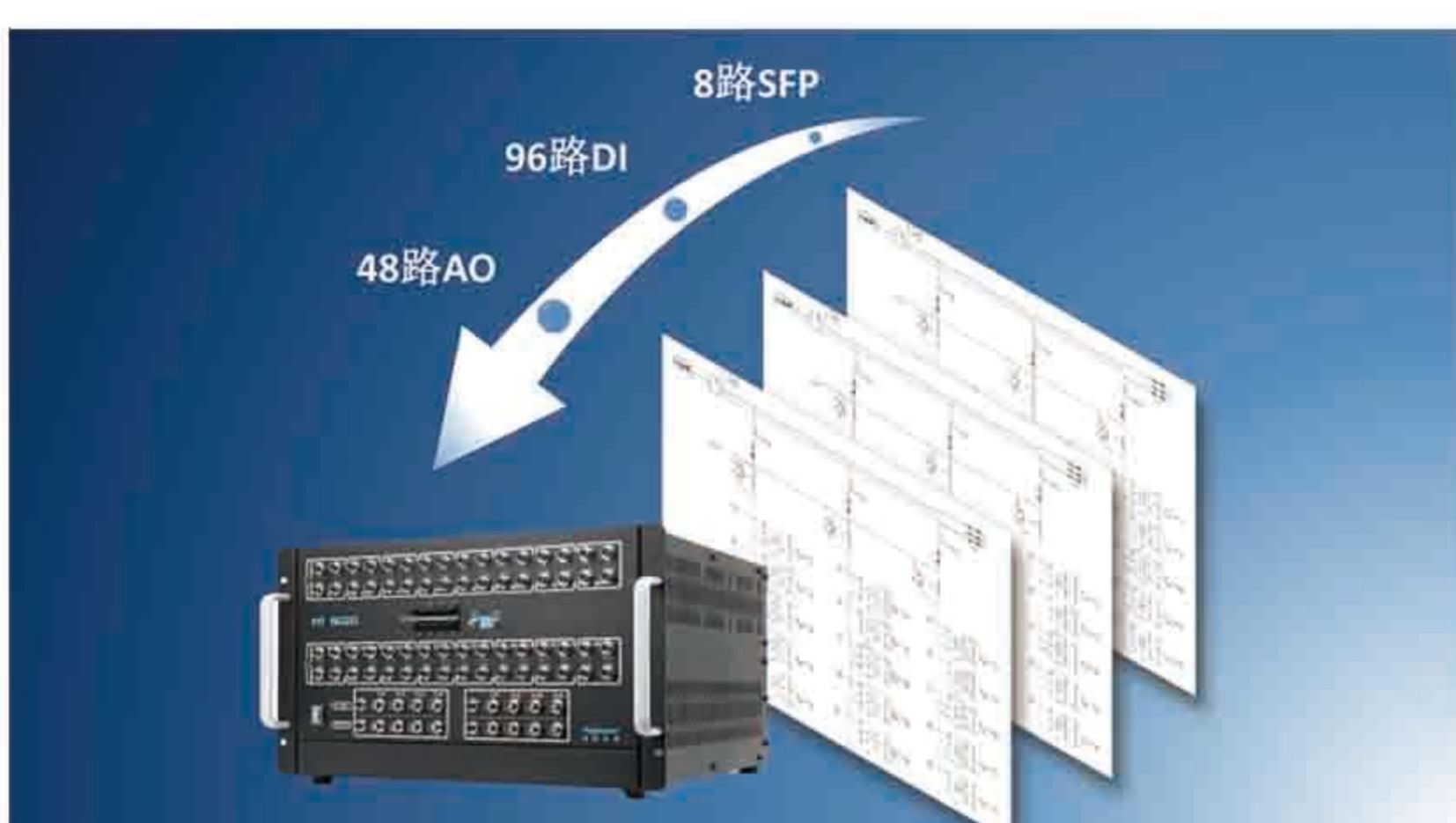
2. Superb Single CPU-Core Computing Capability

Equipped with an 8-Core 3.8 GHz super CPU processor, it can support IEEE 39-bus standard system simulation with a processing time of 22us. (the system consists of 35 three-phase nodes, 7 three-phase motors and 17 distributed parameter lines.)



3. Multiple CPU cores parallel simulation capability

Optional Equipped with 16 cores of 3.6GHz CPU, It can supports 15 CPU Cores for real-time computing and running in different timesteps, which can meet the applications of flexible DC transmission simulation, regional power grid simulation and so on.



4. Rich and configurable IO interfaces

A single device can support 96DI and 48AO, and the number of IO can be configured by the user; thus assisting users in completing the simulation of large-scale power electronic system testing with a single device.

MT 8020 Simulator

System Schemes



Technical Parameters

Model	MT 8020
Processor	8-Core Intel Xeon, 3.8GHz / 16-Core Intel Xeon, 3.6GHz
Memory	32GB DDR4 SDRAM
FPGA	1,451K System Logic Cells, 75.9Mb Block RAM, 5,520 DSP Slices
Analog Output	Up to 48 channels, 16bit, 1MSPS, $\pm 10V$
Analog Input	16 channels, 16bit, 1MSPS, $\pm 10V$
Digital Input	Up to 96 channels, Wide Range of Voltages
Digital Output	32 channels
Communication	Modbus TCP/RTU, CAN, Ethernet TCP/UDP, GOOSE, Serial, 8 SFP+
Dimension	480mm*533mm*279mm (L*W*H)

Application Scenarios



Renewable Energy

Wind Power Converter Testing
PV Inverter Testing
Multiple PCS Testing



Power System & Micro-grid

Microgrid Research
Green Hydrogen Microgrid Simulation
Renewable Energy Farm Simulation
Power Hardware in the Loop Testing



Multi-level System

Modular Multi-level Converter (MMC)
High Voltage Converter (HVC)
Static Var Generation (SVG)



Electrified Transportation

Electric Motor Drive Controller Testing
Traction Motor Testing

