




IEMAI NT-Series Large-Format Industrial 3D Printers – Technical Specifications

	YM-NT-1200	YM-NT-1000	YM-NT-750
			
General / Overview			
Build Volume	1200 × 1200 × 1200 mm	1000 × 1000 × 1000 mm	750 × 750 × 750 mm
Technology	FDM / FFF	FDM / FFF	FDM / FFF
Extruder Max Temperature	300°C	300°C	300°C
Heated Bed Max Temperature	120°C (Vacuum Adsorption + Polymer Membrane)	120°C (Vacuum Adsorption, FR4 / Polymer Membrane)	120°C
Chamber Max Temperature	60°C	60°C	60°C
Filament Box Temperature	Up to 60°C	Up to 60°C	Up to 60°C
Filament Diameter	1.75 mm	1.75 mm (optional 2.85 / 3.0 mm depending on extruder config)	1.75 mm (optional 2.85 / 3.0 mm single-extruder version)
Supported Materials	Engineering Plastics: PC, PA, ASA, ABS, TPU, PETG, PLA; Composites: CF-PC, CF-PA, GF-PA, CF-ABS, CF-ASA, CF-PETG, CF-PLA; Support: E-Water, E-Remove	Engineering Plastics: PC, PA, ASA, ABS, TPU, PETG, PLA; Composites: CF-PC, CF-PA, GF-PA, CF-ABS, CF-ASA, CF-PETG, CF-PLA; Support: E-Water, E-Remove	Engineering Plastics: PC, PA, ASA, ABS, TPU, PETG, PLA; Composites: CF-PC, CF-PA, GF-PA, CF-ABS, CF-ASA, CF-PETG, CF-PLA; Support: E-Water, E-Remove
Extrusion & Print Performance			
Extrusion System	Dual-Nozzle Modular IDEX	Dual-Nozzle Modular IDEX	Dual-Nozzle Modular (optional single extruder for 2.85/3.0mm)
Nozzle Motion Type	Left/Right Individual Motion (IDEX)	Left/Right Independent Motion (IDEX)	Standard Dual-Nozzle / Modular
Nozzle Size	0.6 mm (standard); 0.4 mm optional	0.6 mm (standard); 0.4 mm optional	0.4 mm standard; optional 0.6 / 0.8 / 1.0 mm
Nozzle Material	Copper Alloy (pure materials), Hardened Steel (fiber composites)	Copper Alloy (pure materials), Hardened Steel (fiber composites)	Copper Alloy (pure materials), Hardened Steel (fiber composites)
Max Flow Rate	16.5 mm ³ /s	16.5 mm ³ /s (same high-flow system as NT-1200)	High-flow system (similar class to NT-1000/1200)
Max Printing Speed	150 mm/s	150 mm/s	150 mm/s
Acceleration	1000 mm/s ²	1000 mm/s ²	1000 mm/s ²
Recommended Layer Thickness	0.05 – 0.30 mm	0.05 – 0.30 mm	0.05 – 0.30 mm
Cooling Method	Air Cooling	Air Cooling	Air Cooling
Position Accuracy	X/Y: 5.86 μm, Z: 1.56 μm	X/Y: 5.86 μm, Z: 1.56 μm	X/Y: ~12.5 μm, Z: ~1.25 μm

Temperature & Environmental Control			
Temperature PID Auto Tuning	Yes, ±2°C stability	Yes, ±2°C stability	Yes, ±2°C stability
Build Platform	Vacuum Adsorption Bed + Polymer Membrane	Vacuum Adsorption Bed (FR4 / Polymer Membrane)	Carbon-Fiber Plate, Quick-Detachable Platform
Chamber Heating	Fully Enclosed Heated Chamber	Fully Enclosed Heated Chamber	Fully Enclosed Heated Chamber
Operating Environment	15–30°C, 10–90% RH (no condensation)	15–30°C, 10–90% RH (non-condensing)	15–30°C, 10–90% RH (non-condensing)
Electronics & Control			
Control Board	STM32 ARM Cortex-M4 180 MHz	STM32 ARM Cortex-M4	STM32 ARM Cortex-M4
Logic Processor	RK3588S Octa-Core 64-bit (2.4GHz + 1.8GHz)	RK3588S Octa-Core 64-bit	Industrial Control MCU
Onboard Memory	Flash 4 GB + Internal Storage 16 GB	Flash 4 GB + Internal 16 GB storage	Flash Memory (standard embedded control)
Screen	10.1" Touch Screen, 1280×800 px	Touch Screen (10.1" class)	Touch Screen User Interface
Connectivity	Ethernet (LAN), USB, Wi-Fi	Ethernet (LAN), USB, Wi-Fi	SD Card, Wi-Fi, USB
Supported File Formats	STL, OBJ, 3MF	STL, OBJ, 3MF, GCODE	STL, OBJ, 3MF, GCODE
Supported Slicers	IEMAI 3D Slicer, Cura, Simplify3D, Prusa, OrcaSlicer	IEMAI 3D Slicer, Cura, Simplify3D, Prusa, OrcaSlicer	IEMAI 3D Expert, Cura, Simplify3D
Cloud / Network Control	Cloud Remote Monitoring, OTA Update, Local Network Control	Cloud Remote Monitoring, OTA Update, Local Network Control	Wi-Fi Remote Control Supported
Operating System	Linux-based machine control OS	Linux-based	Embedded Linux / MCU Real-Time System
Power Supply	220V ±10%, 50–60Hz, Max 8400W	220V ±10%, 50–60Hz, Max ~6200W	200–250V, 50–60Hz, Max ~4500W
Energy Consumption Estimate	ABS: ~3.5 kWh/24h; PLA: ~0.5 kWh/24h	Typical 24h energy consumption varies by material	Typical 24h consumption depends on material
Physical / Mechanical			
Machine Size	2090 × 1650 × 1810 mm	1890 × 1450 × 1600 mm	1642 × 1110 × 1320 mm
Package Size	2250 × 1745 × 2000 mm	2050 × 1545 × 1790 mm	1800 × 1300 × 1550 mm
Net Weight	900 kg	700 kg	400 kg
Gross Weight	1000 kg	780 kg	450–480 kg
Accessories / Packing List			
Included Items	Machine, Tool Kits, Startup Material Sets, Spare Parts, Slicing Software (Free)	Machine, Tool Kits, Startup Material Sets, Spare Parts, Slicing Software (Free)	Machine, Tool Kits, Startup Material Sets, Spare Parts, Slicing Software (Free)
System & Material Openness			
Open Filament System	Yes, supports third-party materials	Yes, supports third-party materials	Yes, supports third-party materials
Material Categories	General, Engineering Plastics, Fiber-Reinforced Composites, Water-Soluble Support Materials	General, Engineering Plastics, Fiber-Reinforced Composites, Water-Soluble Support	General, Engineering Plastics, Fiber-Reinforced Composites, Water-Soluble Support
Use Case / Application			
Recommended Applications	Large functional prototypes, batch production, structural parts, tooling, composite reinforcement applications	Large prototypes, structural parts, batch manufacturing, tooling, composite applications	Large prototypes, structural parts, engineering validation, composite applications