LABORATORY: CNR ISTI

NAME OF THE INSTRUMENT

UltiMaker S5

GENERAL DESCRIPTION:
The Ultimaker S5 is a professional 3D printer that offers advanced performance and good print quality. This desktop printer utilizes FFF or FDM (Fused Filament Fabrication or Fused Deposition Modeling) printing technology. It is ideal for low-cost printing (PLA has an average cost of 25€/kg). The Ultimaker S5 supports a wide range of materials, including PLA, ABS, PETG, nylon, and many others, providing great flexibility in material selection.
One feature of the Ultimaker S5 is its dual-nozzle extrusion system, which allows for printing with two different materials simultaneously, enabling the production of dual-color models with ease.
Its generous print area allows for the creation of sizable models, with a maximum print size of 330 x 240 x 300 mm.

TECHNICAL DESCRIPTION:
The generous print area of the Ultimaker S5 allows for printing large-sized objects or creating multiple parts in a single print.
The dual-nozzle extrusion system enables not only printing with multiple materials simultaneously but also using a nozzle with a different aperture size to achieve a balance between print speed and detail. This versatility allows for easy production of complex and multicolor models.
The printer is equipped with a 4.7-inch color touchscreen that simplifies navigation through the menu and the setup of print parameters. Additionally, the Ultimaker S5 offers Wi-Fi and Ethernet connectivity, allowing for sending print files directly to the machine remotely. It is also possible to monitor the print status in real-time through the Ultimaker application.
To ensure precise and repeatable print results, the Ultimaker S5 features an automatic bed leveling system and a filament detection sensor. This sensor pauses the print in case of filament depletion or any interruptions, reducing waste and improving the overall reliability of the printing process.

Figure: UltiMaker S5

FURTHER INFORMATION:
- UltiMaker website (main features, technical details, user guides and supported materials): https://ultimaker.com/3d-printers/s-series/ultimaker-s5/

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