

Plasma Jet Conformal Printer



PRODUCT NUMBER:

PJP CP26

PRODUCT CATEGORY:

Conformal Printer

PRODUCT OVERVIEW

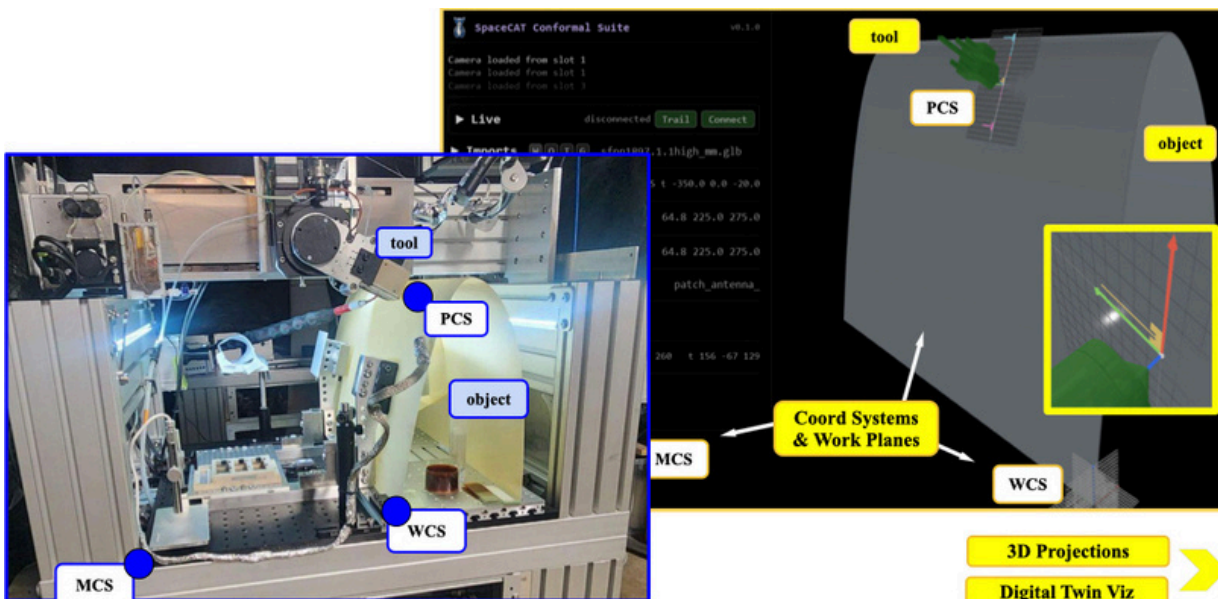
Single-Step Conformal Printing Platform

A solution for single-step conformal printing via Space Foundry's plasma jet printing technology integrated with a 4 DOF arm. Plasma jet printing offers single-step printing of conductors and dielectrics, eliminating the need for any pre- or post-treatment. The Robotic Arm and the Plasma Jet Printing system is controlled by a single PLC platform including Industrial Safety logic, offering a turn-key solution ready to deploy with minimal setup. Includes hardware, software, and installation services.



SPACE CAT CONFORMAL STUDIO

Bridges CAD & 2D pattern engineering with conformal plasma jet printing

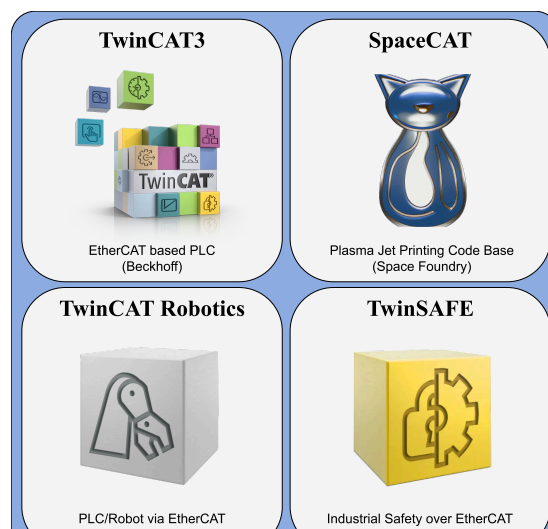


INTEGRATED SOLUTION

The PLC code base is developed in TWINCAT* (Beckhoff) based on the EtherCAT fieldbus, offering a tightly integrated solution for both Plasma Jet Printing and kinematic motion.

Space Foundry's SpaceCAT code base offers full automation of the Plasma Jet Printing, and TwinCAT3 Robotics allows for PLC and robotics to be executed from the same runtime, enabling programming from a single system without having to know a special robot programming language.

Safety is implemented in the TwinSAFE* environment, offering SIL3-PLC industrial safety logic over the EtherCAT fieldbus, including plasma and motion interlock features.



Product Characteristics	Description	Specifications
4 Degrees of Freedom (DOF)	Print on wing or dome shaped platform	High res rotational stage
Conformal Studio Software	Enables print directly using CAD file	PLC Code base, custom kinematic transformation, 3D conformal planner and Digital Twin
Plasma Jet Printhead	High & low volumetric flow print heads	75um line width
HMI	HTML5-based User Interface	HMI or Automation (G-code/M-code)
Print Characteristics	High conductivity, excellent adhesion and reliable thickness control	No curing required
Gas	Argon or Helium	For Conductors 5% H2/Argon
Ink	Both off the shelf nanoparticle inks & salt based solution	Any aerosolizable ink
Multi-material printing	Allows printing of range of materials including metals, dielectrics, organics	

INDUSTRIAL SAFETY

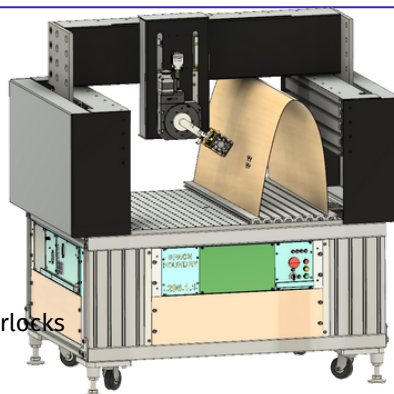
✓ IEC Safety Standard

✓ Electrical Interlock

E-stop, Key (0->1), Plasma Current interlocks

✓ Chemical Interlock

HEPA filter, Ozone detector



INSTALLATION AND TRAINING

This is a Turn-Key Solution that is ready to deploy with minimal setup after installation. System purchase includes hardware, software, installation services and training.

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