Pulse Electronics

FluidWRITER II

High Volume True 3D & 2D Print System

High volume printed electronics on 3D surfaces is finally here……

FluidWRITER

The FluidWRITER II is Pulse's second generation 3D conductive ink delivery platform, engineered to create printed electronics on full 3D surfaces using a modern fully software controlled high volume production process.

FluidWRITER II has two independently working robots, each equipped with two-rotation axis for product fixtures. Two simultaneously working print heads can print on multiple sides of complex three-dimensional components ensuring high production output. Print work is designed with Pulse's proprietary FluidPATH 3D design software and custom-made fixtures for drawing printed circuitry and patterns.

The platform fundamentally changes how conductive traces are delivered onto 3D components.

FluidANT

Pulse has developed FluidANT, a novel printed 3D antenna technology based on the FluidWRITER print system. FluidANT is an entirely new approach to antenna technology combining modern 3D design, advanced production automation and state-of-the-art print technology. It enables new design and material options with simple operational logistics resulting in value added highly competitive solutions.

FluidANT is compatible with all Pulse innovative antenna RF concepts.

Primary applications include creation of 3D antenna patterns and conductive traces for:

- Mechanically and Electro-mechanically integrated antenna solutions.
- Antenna/sensor/audio modules.
- Standalone antennas.

Significant broad benefits across the customer organization...

Industrial Design

- Greater industrial design freedom, wider range of material choices and new structure options including covers and chassis

Development

- Creates true full 3D high accuracy patterns
- Significant reduction in prototyping and versioning time
- New integrations with active circuits & other components.
- Complete characterized and tested design rules available
- Smooth transfer to production, no process changes

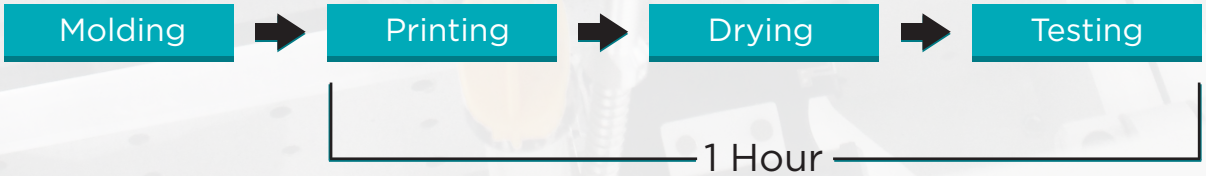
Operations

- Short production process (<1 hour)
- Simplified & shortened logistics & supply chain
- Improved responsiveness to upside product demand mix
- Significant total cost saving potential in working capital
- In production antenna tuning
- Short antenna version change over times (<10 minutes)
- 24/7 operation
- Short maintenance times
- Environmentally friendly process

Quality

- Robust mechanical properties using standard resins.
- Repeatable mass manufacturing process.

FluidANT Printing process



Technical Data Table

FluidWRITER II Technical Specification	
Printing Area	150 x 260mm
Accuracy	tbd*
Number of Heads	2
Print Speed	tbd*
Input data formats	STEP
Software	Pulse FluidPATH Print Controller
Printer Dimensions	2000 x 1500 x 1600mm
Printer Weight	1500Kg
Power Supply	3 x 400 V + N + PE, 50/60 Hz, 16 A plug
Process Requirements	
Air ventilation	50m3/h (ø120mm extraction)
Pneumatic air	6-10bar (½" supply line)
Network	Ethernet LAN (with fixed IP address)
Operating conditions	
Ambient temperature	22° C ± 3° C
Humidity	30 - 50%
Clean Room	< Class 9 (ISO 14644-1) **

Notes:
*Depends on pattern design
** Depends target part's requirement

For More Information

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