

Application: Cleaning Electronic Assemblies		Date: 5/20/2026	
Serial number:	T034-1225	Machine model:	NU/CLEAN 824-FB
Type:	Inline Aqueous cleaning		Industry: Electronics and Electrical

Customer summary:	Manufacturer of high-density electronic assemblies requiring precision inline PCB cleaning and drying.
Item to clean:	High-density printed circuit board assemblies with low standoff electronic components.
Contamination:	Flux residues, chemistry dragout, and process contaminants trapped beneath and between electronic components.
Cleanliness requirement:	Reliable penetration and removal of contaminants from beneath low standoff and densely populated PCB components.
Dryness requirement:	Boards must exit the system clean and dry with minimized residual moisture retention.
Production rate:	Continuous inline processing for high-volume electronics manufacturing environments.
Process parameters:	Inline aqueous spray and Flood Box immersion cleaning, heated wash and rinse stages, anti-dragout air knives, and multi-stage heated drying with IR thermal assistance.

Customer background:

Manufacturer required an advanced inline aqueous cleaning system for printed circuit boards with complex, high-density components and low standoff areas. Needed reliable cleaning performance, extended wash dwell time, and efficient drying to support continuous electronics production.

Challenge:

Traditional spray cleaning methods can struggle to penetrate beneath low standoff components and between densely populated PCB assemblies. Manufacturer required reduced chemistry loss, precise process monitoring, and consistent drying performance for sensitive electronic assemblies.

Solution:

Alliance Manufacturing supplied a Nu/Clean 824 XLR-FB inline aqueous cleaning system with patented Flood Box™ technology. The system combined spray-in-air cleaning, full PCB submersion, heated wash and rinse stages, air knife drying, and IR thermal drying to improve cleaning penetration, process control, and drying efficiency for complex electronic assemblies.

Cleaning Method:

The system utilized inline aqueous spray cleaning combined with Flood Box immersion cleaning, recirculating heated wash and rinse stages, anti-drag out air knives, and multi-stage heated drying. High-pressure spray bars, barrier water knives, and IR-assisted drying were used to clean and dry densely populated circuit boards while minimizing chemistry loss and moisture retention.



Caption A



Caption B



Caption C