

Q&A with a BGA/Electronics Assembler

Lightspeed Manufacturing in Methuen, Mass., opened in 2003, surviving the thin years in electronics manufacturing by relying on BGA services to attract packaging customers



Rich Breault, Lightspeed

as well. As EMS in the U.S. grows healthier, Lightspeed has been able to expand both its SMT and BGA services and capacity. *SMT* spoke with president and founder Rich Breault about the EMS niche developing in the U.S., lead-free and its effect on BGA and electronics assembly business, and how boards will look in the near future.

SMT: How many SMT lines do you run, and were these augmented by your expansion?

Breault: We run three SMT lines now, after the expansion. Half of our business is assembly, and half is BGA rework. Our market is focused — low-volume prototype assembly and high-end rework. We have 20 employees serving these ends in the facility and in our mobile rework service.

SMT: What was your priority during the expansion, and why?

Breault: We needed more pick-and-place capacity, primarily. We now have three Assembléon pick-and-place systems, and will add a fourth soon. We also needed more soldering capacity, adding a Conceptronics reflow oven. We have a



Vitronics-Soltec selective soldering unit as well, and do some wave soldering. Our strategy for the expansion was cost-effective — we paid cash or bought used equipment to keep the bottom line low.



SMT: How is the mobile aspect of your services different than assembly done at the facility?

Breault: The mobile offering is rework only; we cannot do assembly with the portable equipment. These customers usually need complex board rework with quick turnaround.

By the time you have boards packaged to ship to a rework facility, we can be there and perform the tasks on-site.

SMT: What percent of your business does lead-free comprise? How has lead-free affected how you solder components?

Breault: Lead-free makes up about 30% of our total business, and is a growing area. A niche business — reballing BGAs — has become successful. We take off lead-free and put tin-lead solder balls back onto components for military, telecom, and automotive customers. It's a great business segment and many larger, tier-one EMS providers won't offer it. Lead-free also poses challenges, particularly with components. How do you know if a device's leads are leaded or lead-free sometimes? Several problems then can result with mixed (tin/lead and lead-free on the same PCB) assembly.

SMT: How do you see soldering changing in the near future?

Breault: I think we'll see tighter process controls in assembly and reflow. Smaller passives, higher-pin-count BGAs, fine-pitch components, and no-lead devices like QFNs will all challenge the accuracy and consistency of equipment. These factors could have a stronger impact on rework.

SMT



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