

Innovation for a Competitive Edge

FTG (Firan Technology Group) is one of the first PCB manufacturing companies to adopt the breakthrough Averatek Semi-Additive Process: A-SAP™. This technology provides FTG with capability to fabricate 25 micron space/trace feature sizes for their customers. **Our discussion with Lance Riley, General Manager FTG Fredericksburg, centers on market leadership: using innovation to gain a competitive edge**

Tara Dunn, Averatek Vice President of Business Development

Lance, we have known each other a while now, but for those that haven't met you, can you give a brief introduction to yourself and FTG?

Hi Tara, thanks for taking the time to talk with me - and in our interconnected journey (pun intended) we have indeed shared some experiences. I started in the industry in 1984 as a photo technician, and have since held roles like Sr. Principal Engineer, Director of Advanced Technology, V.P. Product Development, and President/COO. FTG is a world leader / innovator in providing solutions to the electronic industry, with a focus in the Mil-Aero and Space / Defense markets - and is highly motivated to remain uniquely qualified.

When you were first introduced to A-SAP™, what was your initial reaction?

Genuine excitement - as there has been a significant need and demand for this enabling technology that allows our customers to achieve a *cost vs performance* relationship on order of magnitude, which has not been seen in the PCB industry since HDI and thin film embedded passives were introduced.

FTG has been a long-time leader in this market sector - what factored into your decision to keep pushing the envelope?

FTG is considered by our customers as an extension of their organizations' engineering and design groups: as we listened to the voice of the customer regarding immediate and future SWaP requirements, our decision reinforces FTG's commitment to being a technology - driven solution provider.



LANCE RILEY

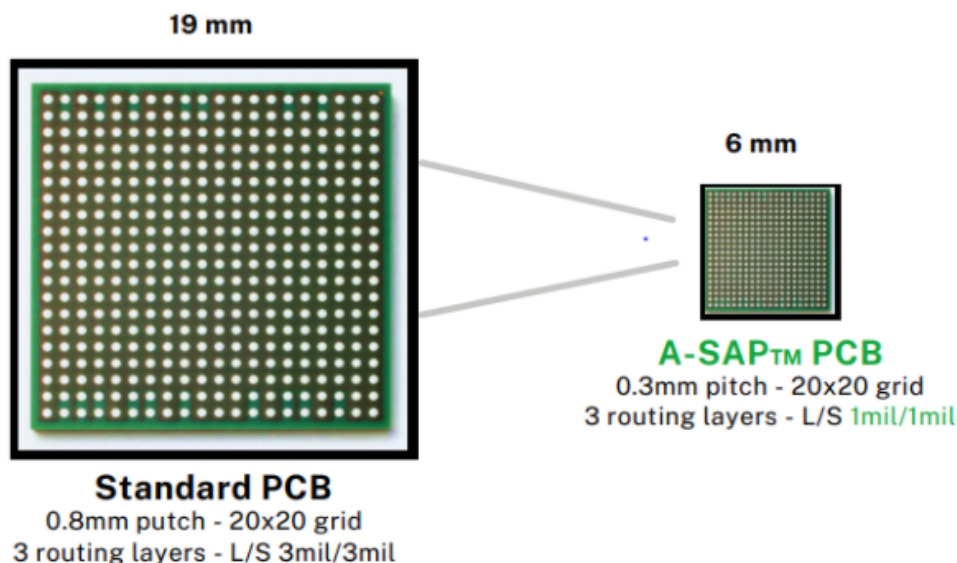
**FTG General Manager -
Fredericksburg**

Why be first to market by partnering with Averatek - why not a "wait and see" approach?

FTG has been looking for a viable SAP process for the last 4 years, mainly for two reasons: to support our customer's future needs and to make PCB manufacturing processing more environmentally friendly. With that objective, FTG did engage with another solution provider 4 years back, unfortunately it did not come to fruition. As we learned about Averatek, we saw a unique opportunity to leverage their innovation culture, technological strength, and ability to support the process and product deployment into FTG's existing technology portfolio.

As you talk with your customers about the possibilities with A-SAP™, how are they reacting to the concept of utilizing a brand-new process? Do they see the potential for realizing next-generation designs today?

Many customers have knowledge and/or experience with packages predominately out of Asia. However, in Asia mSAP is being used: the process has performance / density limitations, and it is not environmentally friendly. There is real excitement for the potential to utilize the A-SAP™ technology for SLPCB, as the electronics industry community at large has been anxiously waiting for this solution to emerge, especially in North America. This will enable system level performance and integration on an order of magnitude.



Transformative technology requires increased collaboration between Designer and Fabricator. How are you facilitating this communication and working with your customers so they can realize all the advantages of A-SAP™ ?

FTG has always worked closely with clients on designs, to ensure the best product as it related to performance and reliability; whether utilizing Averatek A-SAP™ or more traditional, standard processes. The collaboration is more critical now with Averatek A-SAP™: the experience level of the designers along with the continuation of improvements in the A-SAP™ process makes this essential. One of the advantages of the pandemic is that everyone is up to speed utilizing virtual meetings, and this makes collaboration on the design with different disciplines in an organization much easier.

FTG's management style has been described as "practical" and "common-sense" with a focus on operational excellence ... how does adopting new technology align with your vision for FTG?

You are indeed correct in that FTG's commitment to operational excellence is driven by a methodical, practical process and procedures, while utilizing common sense - and not a "one size fits all" approach. FTG has and will continuously evaluate and engage in new technologies that can enhance and enable a client's position in their respective markets, which is a true win-win for the mutual benefit of our firms in providing a positive return to our stakeholders.



TARA DUNN

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Would you like to share other technical or organizational innovations that are in the process now at FTG?

Given FTG's dynamic global footprint there are activities that are centric to the various sites; however, given the nature of the development activities, I am not at liberty to divulge at this time ... stay tuned as FTG continues to invest in intangible assets, coupled with strategic out year CapEx planning.

Lance, what is the best way for people to get in touch with you regarding your capabilities to form very fine feature sizes, or FTG capabilities in general?

My email is:

LanceRiley@ftgcorp.com

My direct line:

540-752-5511 ext. 110

Thanks again, it has been my pleasure speaking with you Tara!