Innovation at Abaco

At Abaco, “We innovate. We deliver. You succeed.” But: what does “We innovate” mean?

Abaco has five Innovation Centers: Engineering Innovation (Huntsville, Ala); RFSoC/DSP (Austin, TX); Networking (Edinburgh, UK); Avionics (Goleta, CA); and High Performance Embedded Computing (Boston, MA). Each center is home to teams of talented engineers. Innovation is at the heart of what we do. But innovation doesn’t just happen.

FIRST: it demands a close relationship with our customers and the warfighter, along with a deep understanding of the problems they’re trying to solve. That’s something we’ve gained over the past three decades. We’ve become a valued partner to many of the industry’s highest profile companies.

SECOND: the ability to innovate requires knowledge, not just of today’s technologies, but tomorrow’s. By working with our technology partners to understand their roadmaps, we can identify where those intersect with our customers’ challenges – and get ahead of the curve.

THIRD: innovation means thinking differently – looking at those customer requirements with a fresh perspective. That can mean challenging our customers’ approach, suggesting alternatives based on different experiences and knowledge that add real value to the partnership.

FOURTH: for innovation to thrive, it needs a collaborative, creative environment – one in which individuals and departments can freely exchange experiences, knowledge and ideas. Our Innovation Centers put our subject matter experts together to facilitate that.

FIFTH: a management culture needs to be in place that unlocks engineers’ natural curiosity and problem-solving skills, encourages free thinking, sees potential barriers and dismantles them, empowers teams – and that embraces risk and accepts failure.

At Abaco, all of those are in place.

More than just Innovation Centers

Our Innovation Centers are also centers of excellence, providing the in-depth technical support our customers sometimes require – all the way from design through development through optimization through deployment.

abaco.com
INNOVATION AT ABACO

We challenge our engineers every day and provide a collaborative, energetic working environment along with all the tools they need to be creative and productive.

David Tetley,
HPEC Center of Excellence

We are always on the lookout for what comes next in technologies, cooling, standards and interfaces that might benefit our customers.

Pedja Mitrovic,
RFSoC/DSP Center of Excellence

Our close working relationship with Xilinx gave us an early opportunity to see the potential of its ZU27DR RF system-on-chip technology – and meant that Abaco's VP430 3U VPX RFSoC board was first to market.

Close knowledge of our customers' applications meant we could quickly see the problems caused by the obsolescence of PCMCIA and ExpressCard. We moved fast to implement Intel's Thunderbolt-3 interface on our avionics products.

Typically, processors throttle back at high temperatures, reducing performance. The SBC3511 has an innovative cooling architecture that enables it to maintain 100% of its rated performance even at 75°C.

We developed an API – known as Takyon - that significantly simplifies and speeds the development of High Performance Embedded Computing systems. It is now being considered by the Khronos Group for adoption as an industry standard.

Some innovations respond to unique customer requirements. We've redesigned our network switches on several occasions – notably, for the International Space Station. Sometimes, those requirements turn out not to be so unique...

Designed to maximize system reliability and success in mission critical environments, Abaco’s Health Toolkit works with multi-vendor systems. It's such a good idea, it's surprising no-one else has thought of it.

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