



April 2011 Sneak Peek...Datron Guardian II P25 Radios!



• Product Design

• Design Research

• Engineering

• Prototyping

Introducing Datron's family of Guardian II P25 radios...



For over 30 years, **Datron World Communications** has excelled as one of the premier manufacturers of tactical military and public safety radio equipment. Datron's extensive line of communications equipment includes a complete line of APCO Project 25 compliant radios for the public safety market. When Datron asked Helix to design the next generation version of one of their Guardian handheld products, we welcomed the opportunity to develop a new P25 radio that needed to look and feel great while meeting rigorous drop and ingress protection requirements.

Datron provided Helix with baseline hardware & PCB designs for the Tri-Band Guardian II radio, and our team generated a range of arresting industrial design directions focusing on a refined look and feel and exceptional ergonomic comfort. The volumetric foam models we augmented our sketches with proved crucial as the mock-ups—which incorporated appropriate wall thicknesses around supplied PCB outlines—demonstrated the need to shrink the hardware envelope even further to meet ergonomic and marketing goals. After choosing an aggressive, new primary industrial design direction, Datron asked Helix to expand the scope of the project to include development of the Single-Band versions of the Guardian II, extending the new look and feel across a larger family of products.

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...and making waves in the tactical and first responder communications space.



- Limited Key, No Key, and Full Key bezels to manage user access
- Tri-Band and Single-Band versatility
- Color options



Developing both Single-Band and Tri-Band radios concurrently allowed us to execute designs that shared many of the same features and components. This approach reduced inventory requirements for Datron; developing submersible radios that could be assembled with one of three unique keypad assemblies also meant that our sealing solutions needed to be reliable, backwards-serviceable, and durable. We printed radio assemblies on our Objet Eden350V Polyjet machine throughout development to judge the merits of our sealing approaches. Our ability to fabricate functional appearance prototypes as development progressed allowed Datron to “whet the appetites” of their customers for new radios at important industry trade shows. Now that the Guardian II radios are in production and nearing official release, the Helix Design team has stayed involved to execute first article reviews and remediate minor production issues.

Helix Design has a passionate team of seasoned industrial designers and mechanical engineers who develop products for a wide variety of markets, industries, and applications. We offer full-service product development services and excel at providing profits, peace of mind, and competitive advantage. Call the Helix Design sales team @ 603.644.1408 when you next find yourself yearning to revitalize your company’s products.

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