

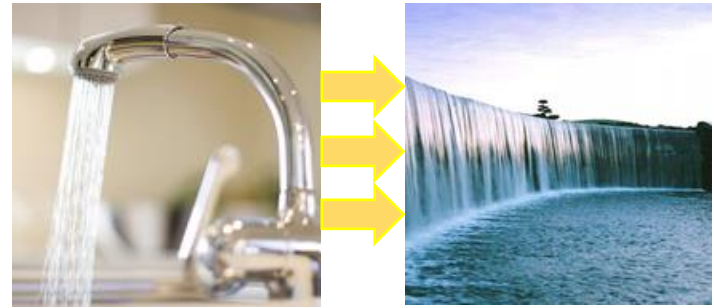
# Shockwave<sub>tm</sub>

Unlocking large instantaneous bandwidth for next generation wireless.  
 Expanding horizons for spectrum collaboration and tech integration.  
 Eliminating bottlenecks for software defined wireless applications.



## Future Capabilities

- Increases Wireless Capacity like Water in a Larger Pipe
- Instantaneous Wireless Bandwidth:  $\leq 6000$  MHz
- Flexible Frequency Range: 2400-9000 MHz
- Low Distortion:  $> 80\%$  Fidelity Factor



Wireless Capacity Increased through New Antenna and RF Front-end

## Applications

All of these and more!



Stealth Comms



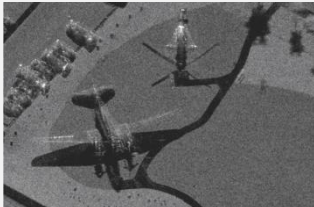
Direction Finding



Satellite Comms



Radars and Emulators



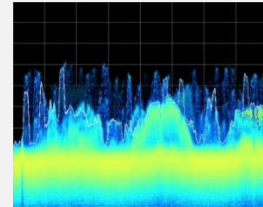
Drone-to-ground Comms



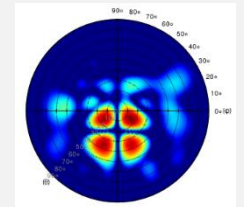
Anti-jam Comms



Force Collaboration



Signals Intelligence



Electronic Warfare

## Progress



Short range wireless testing completed with Xilinx Gen1 Ultrascale+ RFSoc evaluation kit with up to 800 MHz IBW. Bandwidth limited by ADC sampling speed. Up to 6000 MHz IBW is possible.



Flexible demonstration unit developed using the Pentek 5950 Quartz FPGA for smaller size and transportability.



Stealth communications application in development for low data rate transmission of voice, text, machine controls, and small files.

## Next Steps



Develop application specific solutions. Customize wireless interface for application requirements. Adapt hardware, software, and firmware to support application and customized wireless interface.



Manufacture custom solutions at scale to support the customer's need. Deploy field units to customer's environment of interest.



Sustain fielded units with maintenance and upgrades. Continue innovation in customer's application of interest.

Shockwave<sub>tm</sub>: a large instantaneous bandwidth wireless system for many agile solutions

## Advantages

### Intellectual Property

Patent pending radio frequency front-end and antenna hardware to enable large instantaneous bandwidths in one channel with low distortion.

### Massive Light

Founded in 2018 to develop and commercialize new innovations in electromagnetics. Focused on next generation wireless solutions for the United States.

### Our Team

Well-rounded with over 100 years of combined experience spanning tech R&D, start-up growth, military service, and business leadership.