

Vibration and Shock performance

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Application Note

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Abstract

This document contains information about vibration and shock resistance in MaxStream radio modules.

Field Testing

MaxStream customers have used the radio modules in diverse applications subjecting it to varying conditions. MaxStream has not performed any formal testing for vibration and shock resistance. Any information regarding this subject has been passed from our customers' experiences with the products.

We have reports of the modules performing well in several harsh vibration environments including:

- Fork lift shock monitoring systems
- Automobile race cock pits.
- High altitude rocketry systems
- Fleet monitoring systems
- Mining equipment monitoring
- Unmanned airplane control systems
- Horizontal drilling machines
- Agriculture equipment monitoring
- Helicopter operator console

Customer quote

This customer has deployed MaxStream radio modules in a high altitude rocket system. He had this to say about the performance:

"I was actually impressed by 4.7mi range in downtown Seattle as I have not gotten that range with other devices. I was also under the apparently incorrect assumption that over water as a good thing. I also do not think 4.7mi is as far as it will go -- it is just as far as I could get two radios from each other with LOS. Our normal usage will be straight up.

The devices seem to be pretty darn rock solid. As far as some other testing data just FYI:

1. Performed well in 20g environment with a jerk of -50g - probably out of your spec, but wanted to test it in extreme cases. The boards need to be secured by more than just the socket, but they are light.
2. Performed at over Mach 1.3 speed of light being much faster, you'd expect that, but cool nonetheless"