Requirements:

* **400m without line of sight**
* **Will transmit the compiled sensor data to the receiver module**
* **Will receive data to transmit via I2c**
* **Will utilize LoRa to transmit wirelessly to the receiver**
* **Will work in a mesh, being able to forward packets intended for another node**
* **Packet formation will follow the Mdot protocol**

Website Data:

* **1-3 miles / 2 km into buildings\*\***
* **With the 1.0.8 firmware mDot to mDot communication is now a feature. It allows a channel to be setup between mDot configured with the same LoRaWAN settings.**
* **Datasheet**
* **Datasheet**
* **With the 1.0.8 firmware mDot to mDot communication is now a feature. It allows a channel to be setup between mDot configured with the same LoRaWAN settings.**
* **Datasheet**

Email:

Hello,

I am a student at Oregon State University studying Electrical and Computer Engineering. For my senior project, we are working with a farm in Thailand to develop a wireless sensing array.

These sensors must:

* Communicate 400m without line of sight, AND 2km line of sight.
* Transmit the compiled sensor data to a receiver module, which should not use different hardware than the transmitter.
* Work in a mesh, being able to forward packets intended for another node.

After many days of research, I have found that your MTDOT Series seems to fit the bill well. However, I wanted to confirm a few things before I purchase them:

* Your estimate of 1-3 miles / 2 km into buildings\*\* not line of sight states that “Actual performance speeds may be affected by a variety of attributes such as distance from gateway, data loads, packet sizes, etc.” Does this estimate hold if we are using two mDots, as opposed to a Gateway, for the transmission and reception?
* This forum (<https://os.mbed.com/questions/61840/does-mDot-can-talk-to-another-mDot-by-di/>) states that mDot to mDot communication is now a feature, is that still true? Is this available in the pre-configuration, or, will we need to program it to do such?
* Lastly, the datasheet is somewhat confusing. If I wanted to be able to program the Mdot, would I need to purchase MTDOT-923-JP1-X1P-SMA-1, and then MTMDK-ST-MDOT, or just MTDOT-923-JP1-X1P-SMA-1?

Thank you for your help,

Caleb