

# REAL-TIME MONITORING OF PHARMACEUTICAL SHIPMENTS

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Source: Singota Solutions

*Singota® Solutions is a CDMO located in Bloomington, Indiana, USA that specializes in Parenteral, Early Phase Drug Development and Aseptic Filling projects.*

In today's technologically advanced world, we have grown accustomed to having up to date and accurate information at our finger tips in real-time. We can utilize technology to track the status of online purchases or the current location of our vehicles, smartphones, and even friends and family members. It would make sense then that we would want to take advantage of these same types of technologies as it pertains to the risk mitigation of our sensitive and high value pharmaceutical shipments.

Shipping high value and/or highly sensitive pharmaceutical products successfully requires strict adherence to procedures and policies by all parties involved. Identifying the appropriate shipping solutions, methods of transport, and transportation providers are all key aspects to ensuring that products arrive at destination on time and without degradation. The pharmaceutical supply chain must be considered as one complete entity and not as individual links in the chain. For this reason, supply chain visibility is ever paramount to the success of your shipping program.

Today there are various solution providers offering monitoring devices whose data can be accessed from the provider's software platform in real-time. There are multiple criteria to consider when evaluating these monitoring devices for use:

- Who is going to manage the device?
- How is the device obtained?
- Who will handle the programming of the recording parameters?
- How does the device get returned if offered through a rental or leasing program?
- Does the device come with calibration documentation showing that the readings you receive will be accurate to the anticipated level?
- Is the software platform through which the real-time data is viewed easily accessible and simple to navigate?
- Does the device meet the monitoring requirements of your particular product?
- Does it monitor for light, humidity, shock, pressure, location, geo-fencing, etc., in addition to temperature?
- Is the device technology adequate to ensure that the shipment readings are able to be accessed for the majority of the journey?
- Will the information obtained from the monitoring device be "actionable intelligence" for you?

- If you see a temperature trending toward an out of specification limit or an indication that your package has been opened and exposed to light, are there steps that can be taken to react to this information?
- Can you intervene?

At Singota Solutions we recognize the benefits that can be realized from this type of technology. We also appreciate the value of our customer's time, so we have evaluated the devices currently on the market and have entered into a partnership to provide these on an as needed, per shipment basis. Upon answering the questions outlined above, Singota has identified an offering from FedEx Services, the [SenseAware monitoring device](#), as a great fit for both our internal and external customers.

We identified these key value adding characteristics while evaluating this device for use:

- Ease of scheduling – Singota can order the device online through a single-use rental program and have it overnighted to the shipment origin pre-programmed and fully charged. A pre-paid return label is provided with the device so that the destination site can easily tender it back to the provider. Lead times are short and pre-shipment verification of functionality is a built-in part of the process.
- Upon request, an NIST traceable Certificate of Calibration can be provided for the temperature monitoring equipment of the device.
- At the time of scheduling, an unlimited number of viewers can be provided with login information to the proprietary "SenseAware" platform to monitor in transit shipment data. The site is easy to navigate and provides a variety of data and map views, as well as logging any alarms or in transit changes that might be agreed upon.
- The devices measures and reports on temperature, humidity, pressure, shock, light exposure, current location, and various geo fencing parameters as defined during setup.
- This device is equipped with both GPS (Global Positioning System or satellite) and LBS (Location Based Service or cellular) technologies to ensure the maximum range of coverage while your shipment is in transit. For the time period when the shipment is in flight and may be restricted from transmitting per the FAA, the device will continue to record data and then will backfill the data once back on the ground.

This device, when utilized in the appropriate application, can prove beneficial to both the security and viability of sensitive and high value pharmaceutical shipments. Even in cases where a transportation partner may not have the ability to intervene, the device can still report up-to-date tracking and performance information for your shipments to provide additional piece of mind.

Whether you are concerned about the product being exposed to severe physical stresses such as shock or pressure, or monitoring to see if your package is opened or the delivery vehicle deviates from the planned travel route, this information can be available at your fingertips in real-time. When it comes to staying connected, what more important relationship does a pharmaceutical firm have than that which they share with their precious cargo



**Singota Solutions** is a US based CDMO in Bloomington, Indiana. Singota specializes in formulation development and aseptic fill finish for injectable projects. Once a formulation is established, Singota utilizes state of the art robotic filling technology and focuses on smaller batch size requirements. For more information, visit [Singota.com](http://Singota.com) to explore how Singota has established itself as a one-stop solution for all your developmental needs.

Contact [solutions@singota.com](mailto:solutions@singota.com) to schedule a meeting with our business development team to further discuss your current or future projects.