

CREATING AN INTRINSIC AND IMMUTABLE LINK BETWEEN A PRODUCT AND ITS DATA TO ASSURE TRACEABILITY, SECURITY AND AUTHENTICITY






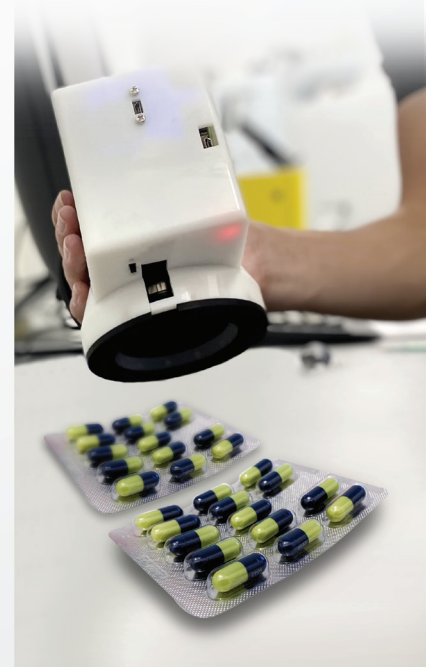
HANDHELD

A handheld vTag® device is ideally suited for low-volume point-of-sales and point-of-inspection applications. The version shown is fully integrated with secure web communications via wifi or cellular with remote cloud based server for full item-level traceability. Integrated with other visible tags like barcodes and RFID.

Keeping our nation safe by securing supply chains. Protecting global compliance for pharmaceutical and medical industries. Aiding brands in the prevention of product tampering for optimum brand traceability, security and authenticity.

Our Proven vTag® technology addresses key supply chain challenges without introducing any additive markings or modifications to the item, or its packaging. Aiding in traceability, security and authenticity.

 TRACEABILITY	 SECURITY	 AUTHENTICITY
<ul style="list-style-type: none"> • Do you implement brand traceability? • Where do your items come from? • Where have your items been? • How, when, where and by whom were your items processed? 	<ul style="list-style-type: none"> • Have your items been tampered with? • Have your items been counterfeited? • Has your brand been compromised? 	<ul style="list-style-type: none"> • Has your brands production process been questioned? • Have consumers requested evidence of product originality? • Is your brands legitimacy reputation at risk?



ADDRESSING THE NEED FOR ITEM-LEVEL PRODUCT TRACEABILITY

- Imminent New Regulations on a Global Basis
- Rapidly Increasing Demand for Industry 4.0 (IoT, AI, ML)
- Growing Counterfeit Crisis
- Inadequate Current Solutions
- Compliance with Food and Drug Administration mandates for medical device traceability. FDA UDI 21 CFR 801
- Enables application of Drug Supply Chain Security Act at the pill level. DSCSA 2023

vTAG® From COVISUS

WHAT IS A TAG?

A *tag* is any label attached, printed or fixed to an item that allows it to be tracked. Examples of visible tags include barcodes, QR codes, Direct Part Marketing (DPM) and RFID. These labels are added to the part and are considered *extrinsic*. They come in a variety of forms, including stickers and markings printed directly on an item. The fact that these tags are visual disables them from being a form of an anti counterfeiting solution.

HOW IS vTAG® DIFFERENT?

A vTag® is a *virtual tag*. It functions like a tag but without any modifications to the part. Like a human fingerprint or iris scan, a vTag® uses intrinsic surface features of an item to uniquely identify it from all other items of its kind. The intrinsic features of an item are micro-scale roughness, formed randomly during the fabrication of the item. They are well known in the scientific literature to be completely unique and impossible to replicate. Due to this intrinsic feature the vTag® is a product anti counterfeiting solution because it offers supply chain traceability and authentication.

HOW ROBUST IS A vTAG®?

WILL IT CHANGE OVER TIME? IS IT AFFECTED BY ENVIRONMENTAL EFFECTS AND/OR USE?

A vTag® is intrinsic to the surface of an item and will always work as long as the surface is not modified. The algorithms that generate a vTag® are extremely robust and have been proven to not be affected by environmental factors to which the item is qualified, such as MIL-STD-883E and JEDEC Standard for Mark permanency. vTags® work in routine indoor operational environments and are impervious to dust and fingerprints. However, we recommend that an item with a vTag® be kept clean and dry with non-abrasive cleaners. Please contact us with your specific work environment so that we can provide you with more details.

WHAT KIND OF ITEMS AND MATERIAL WILL A vTAG® WORK ON?

A vTag® will work with any rigid item of any size or shape made from any material as long as its surface is not modified between enrollment and authentication. Examples include items made from metals, plastic, rubber and wood that are fabricated through any existing processes (including additive manufacturing) and have a durable finish (including paints).



TAGLESS PART-LEVEL IDENTIFICATION

- Optical scan is tagless - avoids handling and warranty issues
- No changes to the article or its packaging
- Enrollment and verification of an article can be done anywhere (factory, retail, point-of-sale, distribution).
- Easy to operate - requires minimal training
- Digital thread available at the part level
- Secure complete part history and digital travelers

APPLICATIONS AND CONFIGURATIONS

The core vTag® software has been deployed into multiple configurations to successfully track, trace, secure, and authenticate items. Examples of our generic handheld, portable and high-throughput automated systems are shown. Other custom configurations are possible.

ENABLES SECURITY FOR:

- Part Traceability
- Chain of Custody
- Counterfeit Mitigation
- Secure RMA Process
- Source of Origin
- Covert, Unambiguous, Unforgable