



REDEFINE QUALITY • DRIVE PRODUCTIVITY

CONFIDENCE IN EVERY SAMPLE

Bluechiip understands that every sample is critical, our objective is to manage each one with optimal quality in the most efficient way.

Bluechiip's advanced sample management solution is the only system providing sample temperature with ID in cryogenic environments. **Bluechiip delivers confidence in every sample.**



Bluechiip – advancing sample management

Bluechiip's unique and patented technology is designed to operate across a wide temperature range from -196°C to over $+100^{\circ}\text{C}$, creating the perfect system for managing sensitive samples. Bluechiip Enabled Sample Storage, Readers and Software combine to provide an unparalleled ability to track and store sample level data, including temperature across the cold chain process.

Drive Productivity

- Reduce manual processes and eliminate double witnessing
- Identify multiple samples instantly through frost
- Simplify inventory management for faster processing
- Enhance efficiency at every step of the workflow

Redefine Quality

- Capture sample level ID and temperature for cold chain integrity
- Minimize the risk of cryogenic temperatures moving outside prescribed levels
- Provide key workflow information to drive continuous improvement
- Eliminate errors through advanced location control
- Support compliance to industry standards and quality procedures



**CONFIDENCE IN
EVERY SAMPLE**

Bluechiip Enabled Solution

- ✓ **Bluechiip enabled sample storage**
The cryo-safe, tamper-proof chip is embedded into vials, boxes or attached to storage equipment
- ✓ **Multiple reader formats**
Available in mobile, benchtop, single and multi-vial for bulk reading
- ✓ **Easy to use Sample Management Software**
Bluechiip® Stream Sample Manager™ keeps sample data accessible in one location via a web interface
- ✓ **Superior Service and Support** across sample containers, readers, and software



Bluechiip Enabled Workflow

Streamlined collection and handling

- Streamlined batch receiving with multivial readers and intuitive software compatible with barcodes
- Sample certainty provided with every unique hard-coded Bluechiip® ID
- Automatically record temperature when receiving and handling samples
- Multi-site capable solution for enhanced traceability



Simplified cryostorage

- Optimize freezer capacity using Bluechiip Guided Storage™ to automatically identify free space and consolidate samples
- Eliminate errors by utilizing Bluechiip readers to update inventory automatically
- With every read, Sample ID is linked with temperature, time, user and storage location
- Designed to operate in cryogenic conditions down to -196°C



Advanced retrieval and handling

- Eliminate paper picklists and double witnessing with Bluechiip Guided Retrieval™
- Identify and retrieve samples in bulk without defrosting
- Reduce temperature excursions by locating and identifying samples while remaining in the cold
- Confirm sample integrity during handling outside of storage by monitoring temperature and ID



Unparalleled quality assurance

- Complete the Audit Trail by adding sample level temperature to chain of custody and identity
- Standardize and de-risk sample handling and cryopreservation processes
- Support compliance to quality procedures and industry standards including CFR21, ISO20387, CAP, GMP, and GTP
- Bluechiip Cryovials are CE-IVD certified and FDA registered. Bluechiip Ltd is ISO9001 certified





- › Unique ID
- › Temperature
- › User
- › Time
- › Location



Bluechiip Enabled technology

Bluechiip's unique patented chip is a Micro Electro-Mechanical System (MEMS) with ID and temperature sensing capabilities. It is a passive mechanical device not affected by frost or cryo temperatures unlike other identification technologies.

Bluechiip's tags are specifically designed to

-  Perform in cryogenic environments at -196°C
-  Have a unique, hard-coded, and tamper proof ID
-  Sense and record temperature
-  Survive ionizing radiation and autoclaves



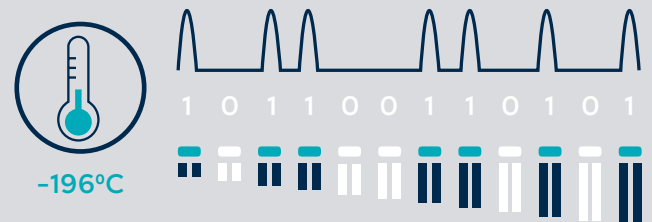
Resonating Micro Beams Shifting with Temperature

Each chip is a unique micro electro mechanical system (MEMS) containing multiple beams. Bluechiip tests every chip in LN2 during the manufacturing process.



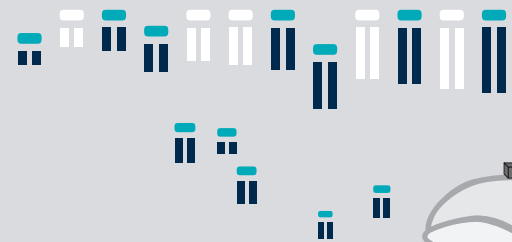
Miniature Chip

The beams resonate at different frequencies which are translated to an ID. The frequency of the beams is directly related to the temperature



Billions of ID Combinations

Billions of unique ID combinations can be captured in this miniaturised chip



Partnership Opportunities

Bluechiip technology can be configured for a variety of applications including integration into partner's products. Contact us for more information.

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Customer Service and Sales
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