

The U.S. Department of Defense has numerous and well documented RFID use cases. Some of these are commercial in nature including extensive supply chain management across numerous branches of the organization.

The Problem...

- Improve delivery of supplies to multiple worldwide “front lines” or rapidly moving end-points
- Reduce backlog cost and lost orders
- Improve delivery time
- Reduce miss-delivery or shrinkage (weapons missing in transit or delivered to the incorrect team are a major problem)
- Improve “trust” in the supply chain and the chain of command



How Does Alien Technology Solve the Problem?

Alien Technology Class 1 Gen 2 UHF tags are optimized for use in warehouse and supply chain applications. What is it about Alien Technology that addresses the problems above?

Alien Technology	Description	Benefit
IC and Tag Read and Write Sensitivity and Selectivity	Best industry cost performance combination. Higgs™4 IC provides industry top-tier read and write sensitivity when used in challenging or harsh conditions.	Enables high accuracy, fast inventory and long read distance critical to supply-chain applications.
Purpose Designed RFID Inlays in a Variety of Form-Factors	Enables supply-chains to tag a large variety of product or components in a variety of environmental conditions.	Enables optimal tracking of objects through the complete supply chain regardless of form-factor needs.
Unique Non-Chipset based Fixed Reader Platform	ALR-9900+ is a “discrete” design using Alien intellectual property not shared with any other reader on the market.	Highest tier of performance, robustness and fast data read-rates.
Autonomous Reader Operation	Alien Readers can process more locally and burden the network and compute infrastructure around them less.	Meaningful data from the supply-chain can be quickly and inexpensively processed despite existing in a “living and growing” supply chain. Does all this with minimal field infrastructure.
Dynamic Authentication™	An anti-cloning and anti-counterfeit technology. An example of how the unique knowledge of both chip and reader can produce unique IP and value.	Avoid counterfeit components sneaking into the supply chain protection. Reduced shrinkage.
BlastWrite™ and QuickWrite™	Technology for writing to large memory blocks to multiple tags simultaneously	Low tag setup cost and minimal set-up time (critical when delivery time is important)



What is the Financial Benefit of the Technology?

Specific measured results include:

- Improved traceability: 355 shipments worth \$12.6M correctly recorded where prior proof was never confirmed
- Reduction in front-line inventory from \$127M to \$70M
- Reduced wait time from 28 days to 16 days
- Increased fill-rate from 77% to 89%
- Reduction in backlog from 92,000 to 11,000 orders
- Up to 75% reduction in time required to conduct inventory
- Real-time precision and accounting: 100% accuracy (in this application) compared to 68% using other AIT methods.
- Maintain more accurate physical inventories with less manual labor (labor savings can be reduced by 75-90%)
- The Pentagon estimates it will spend nearly \$500 million on RFID technology, but it expects net savings of over \$1.7 billion by reducing accidental re-orders and misdirected shipments over the first seven years of its implementation
- Positive ROI by year 3.
- Result: Greater trust in the supply chain and command infrastructure

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HANDLING PRECAUTIONS Observe standard handling practices to minimize ESD.

DISCLAIMER Application recommendations are guidelines only - actual results may vary and should be confirmed. This is a general purpose product not designed or intended for any specific application.

IC products are covered by one or more of the following U.S. patents: 7967204, 7931063, 7868766, 7737825, 7716208, 7716160, 7688206, 7671720, 7659822, 7619531, 7615479, 7598867, 7580378, 7576656, 7562083, 7561221, 7559486, 7559131, 7554451, 7551141, 7542301, 7542008, 7522055, 7500610, 7489248, 7453705, 7452748, 7425467, 7417306, 7411503, 7385284, 7377445, 7364084, 7353598, 7342490, 7324061, 7321159, 7301458, 7295114, 7288432, 7265675, 7262686, 7193504, 7173528, 7172910, 7141176, 7113250, 7080444, 7070851, 7068224, 7046328, 6998644, 6988667, 6985361, 6980184, 6970219, 6952157, 6942155, 6933848. Other patents pending.

Tag products are covered by one or more of the following U.S. patents: 7967204, 7931063, 7868766, 7737825, 7716208, 7716160, 7688206, 7659822, 7619531, 7615479, 7598867, 7580378, 7576656, 7562083, 7561221, 7559486, 7559131, 7554451, 7551141, 7542301, 7542008, 7531218, 7522055, 7500610, 7489248, 7453705, 7425467, 7417306, 7411503, 7385284, 7377445, 7364084, 7353598, 7342490, 7324061, 7321159, 7301458, 7295114, 7288432, 7265675, 7262686, 7260882, 7253735, 7244326, 7218527, 7214569, 7199527, 7193504, 7173528, 7172910, 7172789, 7141176, 7113250, 7101502, 7080444, 7070851, 7068224, 7046328, 6998644, 6988667, 6985361, 6980184, 6970219, 6952157, 6942155, 6933848, 6927085, 6816380, 6780696, 6731353, 6693384, 6683663, 6665044, 6657289, 6623579, 6606247, 6600079, 6590346, 6586338, 6566744, 6555408, 6527964, 6479395, 6468638, 6420266, 6316278, 6291896, 6281038. Other patents pending.

Reader products are covered by one or more of the following U.S. patents: 7716208, 7716160, 7688206, 7671720, 7659822, 7619531, 7615479, 7598867, 7580378, 7576656, 7562083, 7561221, 7559486, 7559131, 7554451, 7411503, 7385284, 7377445, 7364084, 7353598, 7342490, 7324061, 7321159, 7301458, 7295114, 7288432, 7265675, 7262686, 7215249, 7214569, 7199527, 7193504, 7173528, 7172910, 7172789, 7141176, 7113250, 7101502, 7080444, 7070851, 7068224, 7046328, 6998644, 6988667, 6985361, 6980184, 6970219, 6952157. Other patents pending.



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