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MISSION

To become the universal standard in IoT data transmission and storage.

WHAT WE DO

AtomBeam shrinks, secures, and speeds data.

AtomBeam's AI software streams highly-compacted data for IoT. The AtomBeam Instant-On™ technology governs how IoT's small data units are encoded and begin streaming with near zero latency. Using cutting edge AI/machine learning and encoding techniques, AtomBeam is a 21st-century replacement for legacy compression algorithms.

KEY ADVANTAGES

AtomBeam Instant-On™

AI/encoding process streams reduced data instantly.

- 50–80% data compaction
- Real-time data streaming
- 100% lossless
- Powerful applications for IoT, telemetry, and satellites

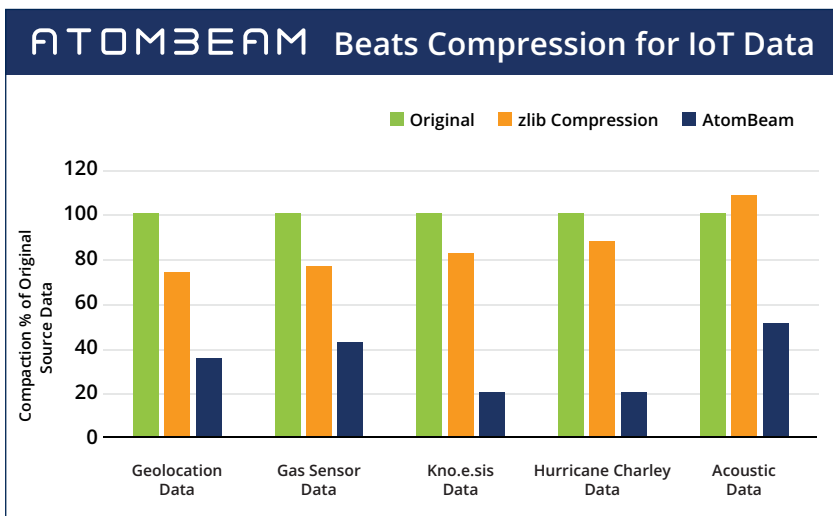
CATEGORIES

- Data compaction
- Added security
- Battery-life extension
- 2x sensor/node distance
- Network acceleration
- Data transmission and storage

THE SOLUTION

Built and optimized for IoT and telemetry, AtomBeam's patented AI handles any size of data and excels at processing small IoT data packets as small as 30 bits. AtomBeam's patented technology reduces the amount of data to be transmitted by IoT by 3–5 times. No other technology can do this.

AtomBeam's light (50k), fast code can be embedded in virtually any network-connected IoT device, including those using bandwidth- and power-constrained low-power wide-area networks (LPWANs). AtomBeam can also be integrated into IoT sensors, gateways, servers, and storage, as well as in vehicles, cell phones, and virtually anything else that sends data. AtomBeam is the future of data transmission and storage, especially for IoT data.



THE PROBLEM

Exponential Growth of the Datasphere

According to IDC Research, IoT will constitute 90 zettabytes, or 51%, of all data generated in 2025. For small IoT messages, compression is ineffective. Thanks to its AI/ machine learning module, AtomBeam excels at shrinking, securing, and speeding IoT data packets. AtomBeam will radically reduce the strain on networks and storage.

Security

Today, nearly 91.5% of data transactions handled by IoT devices in corporate networks are unencrypted, according to a new survey.* AtomBeam provides an additional layer of security since the original data is never transmitted, only the Codewords, which if hacked are meaningless without the associated proprietary Codebook. Future releases of AtomBeam will incorporate sandwiched encryption to further strengthen security.

*<http://bit.ly/AtomBeamtech>

Latency

The rapid growth of data is also driving added latency. Experts agree that the best way to fight latency is to send less data. Compression is ineffective on small IoT data units, but AtomBeam identifies and indexes patterns in training data in advance, and so live data is encoded and sent with virtually no added latency.

BENEFITS

Built and optimized for the IoT market, AtomBeam overcomes bandwidth, security, and latency challenges in IoT and delivers savings on hardware, software, and network costs.

The Benefits of AtomBeam's Radically Efficient Data:

- AtomBeam Instant-On™
- Added security layer
- 100% lossless
- 2x transmission range
- Minimal added latency
- Minimal error sensitivity
- Random access
- Compacts small data units (70–80% for IoT)
- Increases available bandwidth by 3–5x
- Decreases transmission costs by up to 50%
- Extends battery life by 25–35%
- Reduces cloud service costs by up to 75%
- Light code that fits in sensors
- Handles any data type

ATOMBEAM'S GO-TO-MARKET APPROACH

AtomBeam licenses its software to makers of IoT devices, IoT gateways, edge platforms, data center servers, and storage systems. Telcos, satellite companies, and other providers are partnering with AtomBeam to specify the inclusion of AtomBeam in devices and servers connected to their networks.

THE TECHNOLOGY

AtomBeam works by using its AI/machine learning module to identify patterns, called *Sourceblocks*, in advance. Sourceblocks and their associated, smaller indexes, or *Codewords*, are then stored in a *Codebook* that is replicated on both the sending and receiving computers, IoT endpoints, and data centers. When live data needs to be transmitted, only Codewords are sent, dramatically reducing the data flow.

More detail available at <https://atombeamtech.com/technology>.

New Features Coming Soon

Important new improvements to AtomBeam are coming in planned 2019 releases.

- **Dynamic Codebooks.** AtomBeam will add the ability to dynamically update Codebooks as data patterns change.
- **Random Access.** Anyone who has had to retrieve stored data for analysis knows that it is a time-consuming process. With AtomBeam's upcoming release, a user will be able to discretely decode a single IoT message from many terabytes of stored data, a major advantage over traditional methods.

USE CASES

- Internet of Things (IoT) Devices
- Edge Computing
- Cloud and Data Storage
- Satellite & Telemetry
- Factory Automation & Industrial IoT
- Wearables & Health Monitoring
- Remote Sensors & LPWAN
- Connected Cars/Autonomous Vehicles
- And more

ABOUT ATOMBEAM

AtomBeam is a data compaction software company positioned to become a universal standard for IoT data transmission. AtomBeam's 21st-century data compaction reduces IoT data by 70%–80%. Thanks to AI/machine learning and encoding processes, the technology is effective with any size data and adds virtually no latency. Using AtomBeam, end users will gain the benefits of significantly compacted data, reduction in bandwidth, extremely low latency, reduced storage cost, and extended battery life. The software also provides a built-in security layer for IoT companies (with encryption on the road map for a later release).

AtomBeam licenses its software to manufacturers of IoT devices and gateways, edge and data center servers, and cloud storage systems, as well as to networks such as satellites, LPWANs, and telcos. With a fast, light code, AtomBeam can be embedded in virtually any network, firmware, CPU, or connected IoT device. It delivers game-changing results especially for IoT companies using bandwidth and power constraining, low power wide area networks (LPWANs) and meets the high-bandwidth requirements of autonomous vehicles.

Companies may contact the sales team for a demonstration of how AtomBeam can compact the data for your company and deliver radical efficiencies and lower costs. AtomBeam has been operating since 2017 and is a private company based in Moraga, California. For more information, visit <https://atombeamtech.com>.