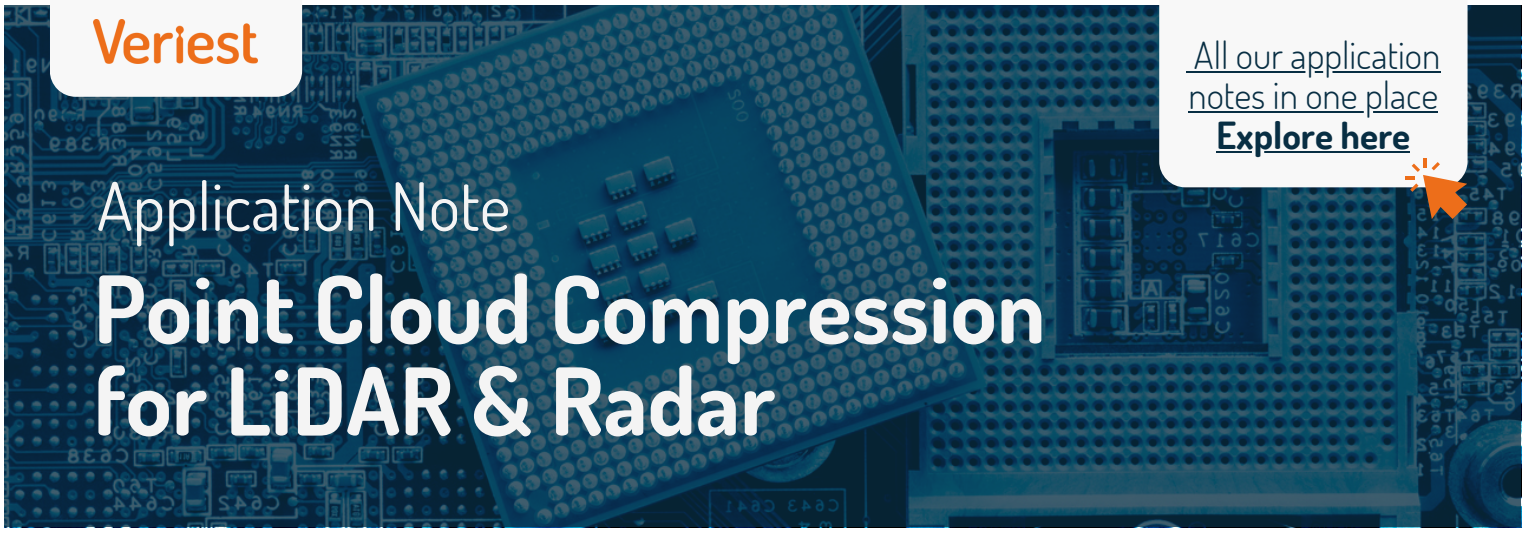
Veriest



All our application notes in one place **Explore here**

Application Note

Point Cloud Compression for LiDAR & Radar

Traditional Challenges

- Terabytes of point cloud data straining storage and bandwidth
- Uncompressed data causing latency in real-time applications
- Expensive hardware needed for raw data storage and transmission
- Embedded systems overwhelmed by computational demands

Key Applications

- **Autonomous vehicles:** efficient perception and navigation
- **Robotics:** real-time object detection and mapping
- **Industrial automation:** sensor data optimization
- **Smart cities:** infrastructure monitoring and traffic management
- **Aerial mapping:** reduced data costs for large-scale applications
- **Security systems:** enhanced real-time threat detection

Veriest Solution

Veriest provides a highly optimized DSP library designed to drastically reduce the size of LiDAR and Radar point cloud data without compromising critical information:

- Proprietary algorithms including adaptive voxelization and octree-based compression
- DSP architecture optimization with SIMD instructions for maximum performance
- Easy integration API and SDK for existing workflows
- Configurable parameters balancing compression ratio with accuracy
- Feature preservation ensuring downstream task accuracy

Key Applications

- Minimized processing delays for faster decision-making
- Reduced storage and cloud expenses
- Lower data transmission costs and improved network efficiency
- Enhanced performance in time-sensitive applications
- Better handling of complex data on embedded systems