## 📊 AIG Image Format Technology Comparison

| Category | ****AIG (v1.1)**** | JPEG | PNG | WebP | AVIF |
| --- | --- | --- | --- | --- | --- |
| **Primary Design Goal** | **Real-time AI analysis optimization** | Human visual optimization | Lossless / simple graphics | General-purpose high-efficiency compression | High-compression, high-quality |
| **Compression Method** | MC-RSC (Multi-Center Radial Similarity Compression + hierarchical coding) | DCT + quantization | DEFLATE lossless | DCT + quantization (lossy/lossless) | AV1-based transform |
| **Key Features** | Lossless core for critical objects, lossy for surroundings, GPU acceleration | Lossy human visual model | True lossless, alpha channel | High-efficiency lossy/lossless | High compression, HDR support |
| **AI Processing Speed** | **2–3× faster** (Core-first decoding) | Standard | Standard | Standard | Slower (heavy compression computation) |
| **Real-time Capability** | **High** (100×100 @ ~0.4s GPU) | Medium | Low (lossless) | Medium | Low |
| **Compatibility** | Requires dedicated decoder | Very wide | Very wide | Wide | Growing |
| **Compression Ratio** | 45–55% (AI-friendly) | 30–50% | Low | 30–60% | 30–60% |
| **Quality Metrics (PSNR/SSIM)** | 30–40 dB / 0.88–0.95 | 30–40 dB / 0.85–0.92 | Lossless | 30–40 dB / 0.85–0.92 | 30–45 dB / 0.90–0.95 |
| **Best Use Cases** | **Autonomous driving, drones, real-time surveillance, AR/VR, telemedicine** | Photography, web images | Logos, UI, transparency | Web/app images | Next-gen web, high-quality media |
| **Versatility** | Low | High | High | High | Medium |
| **Implementation Complexity** | **High** (custom AI pipeline) | Low | Low | Medium | High |

### 📌 Summary

**AIG** shifts the optimization target from human eyes to the AI brain, maximizing analysis speed and accuracy.  
It’s not meant for general-purpose storage but excels in **specialized AI vision industries** where milliseconds matter.

If you’d like, I can turn this into a **high-impact investor-ready infographic** so that AIG’s advantages are visually striking and presentation-ready. That would make it perfect for pitching or marketing.