



## Accelerating Simplicity

At ID Technologies we have a clear mission – to make it simpler for our customers to buy and use IT that’s fit for their purpose. We don’t say that IT projects are ever easy – IT is hard to do well, the stakes are often high and technology is evolving rapidly. But there is much we can do to ease our customers’ experience and minimize time-to-value. We call our process “Accelerating Simplicity.”

## Our Guiding Principles

### Differentiation

We work with proven capabilities we know will outperform the market and at lower cost.

### Time-to-Value

We make the value of IT spend more quickly accessible to the customer.

### Customer Relevance

We work only with partners whose products and approach align with the unique contexts and goals of our customers.

## Archon Proxima

***Rapid analytics at the tactical edge—even when servers, data stores, and operators are separated by thousands of miles***

Imagine a tactical team identifying targets from full-motion drone video using gait analysis and facial recognition. Every second of delay increases the risk that targets will be gone before their identify is confirmed. When analytics servers or data are thousands of miles away, WAN latency is too high for time-sensitive analytics.

### Existing workarounds fall short for the mission:

- Transporting a 50 tactical appliance to the edge and finding a 200-watt power source often is not feasible.
- WAN acceleration techniques like compression and de-duplication aren’t advisable for sensitive and encryption data because of potential corruption or data loss, leading to risks such as garbled coordinates for a hostage rescue operation.
- Triage, or asking field teams to select a subset of data to transmit to the data center, takes time and introduces the risk of operator error, especially in high-stress conditions.

### Solution: Archon Proxima, for optimized analytics and network backup

Archon Proxima is an enterprise-class networking solution that makes the WAN perform like a global LAN. One device is deployed at the edge, another in the data center (figure 1). Depending on the mission, the edge device can be a small-form-factor PC running a lightweight virtual machine, a powerful laptop running multiple virtual machines, or a small appliance for a vehicle or command post.

Working together, the edge and data center devices create a globally distributed, scale-out file system. For users at either end of the connection, the experience rivals the one they’d have if resources at the other end were nearby. That is, field personnel can perform analytics in the data center as if the servers were local, and headquarters personnel can view edge data—say, video or sensor streams—almost immediately after it’s produced. Increased situational awareness for both teams enables faster, data-driven decisions.

### Rapid analytics at the tactical edge: how it works

- The Archon Proxima edge device ingests data from local sources, which can include video surveillance cameras; Positioning, Navigation and Timing (PNT) sensors; Internet of Things (IoT) sensors, and more.
- The edge device sends a low-overhead stream to the Archon Proxima data center device using Remote Direct Memory Access (RDMA) technology. RDMA eliminates the overhead of a traditional TCP/IP stack running over WAN edge servers.
- The edge and data center devices directly access each other’s memory over the WAN—with no involvement by the processor or operating system. This technique, called zero-copy networking, frees up CPU cycles and memory, accelerating analytics.
- Archon Proxima complies with Commercial Solutions for Classified (CSfC) Program security requirements for line-rate encryption technology. It applies a different set of keys for each multiplex data transfer and a separate key for each transfer session.

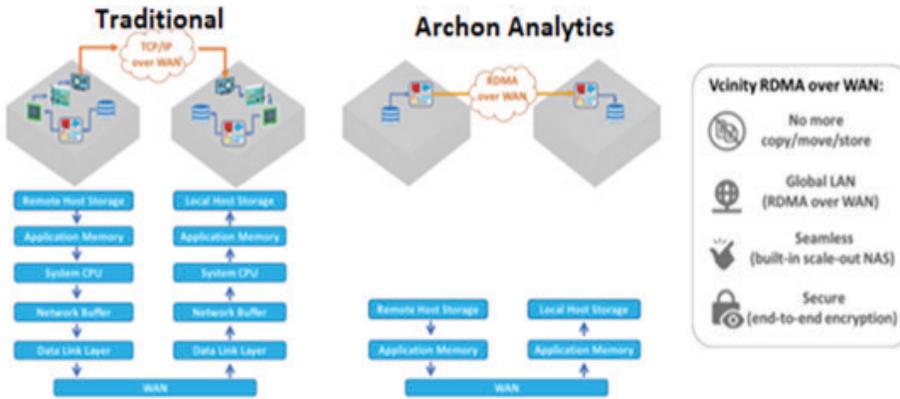
sales@idtec.com

idtec.com

+1 (703) 554-1600

+1 (800) 929-8331

**Figure 1 Less WAN overhead accelerates analytics performance**



### Rapid backups and access to backed up data

By increasing WAN utilization, Archon Proxima also enables rapid backups from the edge to the data center. And if local storage goes down, personnel can access the backed-up data over the WAN while waiting for local data to be restored. In our tests, Archon Proxima:

- Transferred one petabyte over a 3,000-mile, 100Gbps fiber link in less than 24 hours
- Sustained performance when WAN latency increased 15ms to 40ms, transferring just 1% less data per hour. With TCP, in contrast, the same increase in WAN latency decreased data volume transferred by 61%.

#### The Archon Proxima difference

- **Rapid analytics on large data sets.** Data, servers, and operators can be thousands of miles apart.
- **Commercial Solutions for Classified (CSfC) Program compliance.** Archon Proxima devices can be configured to meet requirements for transporting sensitive or classified data over untrusted communications links.
- **Suited for sensitive or encrypted data.** The Archon Proxima solution does not alter or manipulate data.
- **Fast stand up.** For plug-and-play deployment, we can preconfigure the edge device. Alternatively, non-technology specialists can configure the device in the field, in minutes.
- **Scalable in the field.** Operators can scale the edge device to collect and transmit larger data sets in minutes by spinning up additional virtual machines.

### Use cases: operators, analytics servers, and data stores can be anywhere

#### Data at the edge, compute in the data center

*Example:* A Special Forces operator analyzes sensor data to decide whether to launch a missile. Analytics servers are 2,000 miles away. With Archon Proxima, the operator can analyze data as if the server were local.

#### Local compute, remote data

*Example:* A disease researcher works at a facility that has analytics servers but not the petabytes of super-fast storage needed to hold a National Institutes of Health (NIH) dataset. With Archon Proxima, the researcher can analyze the NIH dataset without moving it, at near local speed.

#### Remote compute, remote data

*Example:* A federal government scientist works in a facility that has no IT infrastructure. With Archon Proxima, the scientist can use cloud resources for analytics and storage, analyzing research results as rapidly as if the infrastructure were local. Not having to invest millions of dollars in infrastructure frees up grant money for a larger team or expanded study.

#### Schedule a demonstration

Contact your ID Technologies account manager. We welcome the opportunity to discuss the art of the possible for your mission.