




# SWAP-C OPTIMIZED RUGGED DATA SOLUTIONS

CAPTURE | PROCESS | STORE | HOST | SECURE

|  |   |   |   |
|--|---|---|---|
|        |       |      |         |
|  LAND |  SEA |  AIR |  SPACE |

## MISSION

Capture, process, store, host, and secure high-value data for our nation's defense and beyond with the lowest-risk combination of hardware and software solutions that are accompanied with best-in-class, lifecycle management and exceptionally responsive customer support."

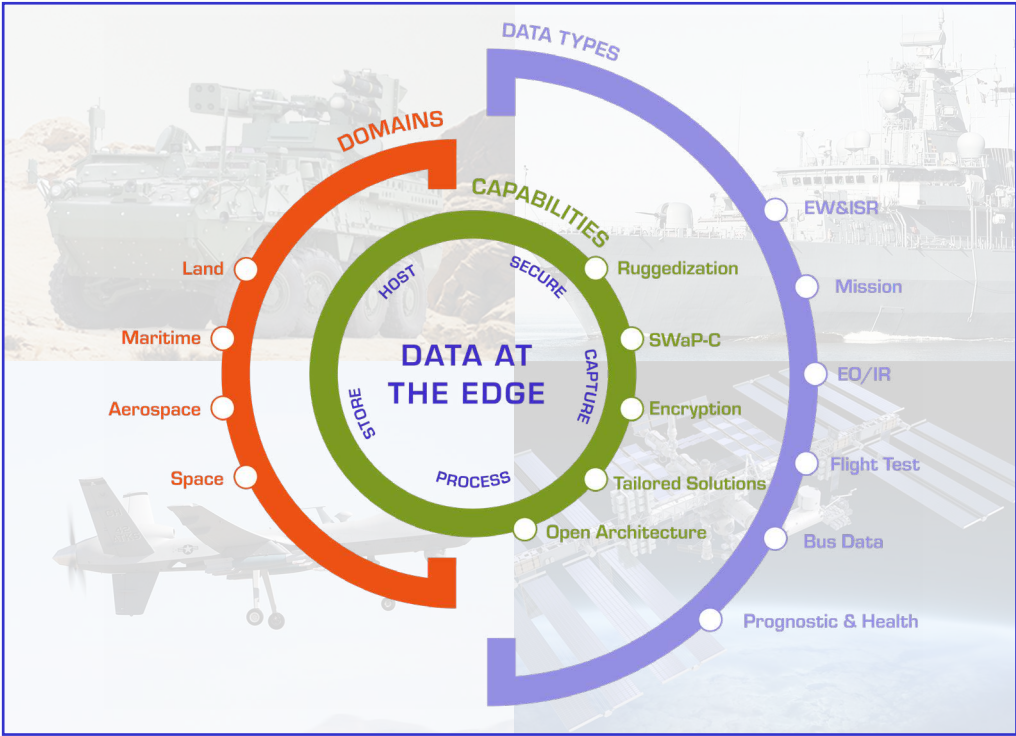


### IMPORTANT AMPEX INFO:

|   |  |                                 |                  |                  |                  |        |
|---|--|---------------------------------|------------------|------------------|------------------|--------|
| AS9100D / ISO9001:2015<br>Certified Small Business<br> Owned & Operated | CAGE Code 0PN68<br>DUNS Code 78-182-6896 | NAICS Codes<br>334111<br>334112 | 334511<br>334513 | 334515<br>511210 | 517030<br>541330 | 541712 |
|---|--|---------------------------------|------------------|------------------|------------------|--------|

# TECH-FOCUSED CAPABILITIES

Across land, sea, air, and space, Ampex is a beacon of ‘excellence at the edge’ in handling diverse data types like EW/ISR, Mission Data, EO/IR, and much more. At our core, we’re driven by the commitment to capture, process, store, host, and secure mission-critical data at the edge. We ensure our solutions are rugged enough to withstand our customer’s environmental challenges. Emphasizing SWaP-C and edge performance, we help customers strike the optimal balance for their system’s success. We offer a suite of encryption options, and our commitment to open architecture ensures flexibility without vendor lock-in.



## RUGGEDIZATION

We ensure that your solution will meet your shock, vibration, EMI, power, and environmental requirements. You can trust us to provide a solution that stands up to the harshest conditions, giving you peace of mind and reliable performance.

## SWaP-C

To succeed in today’s cutting-edge applications, it’s crucial to strike a balance between Size, Weight, Power, and Cost (SWaP-C) optimization for your product. Let us help you achieve the optimal balance for your system’s success.

## EDGE PERFORMANCE

Get state-of-the-art hardware to fulfill your mission requirements. Our hardware can collect data at speeds ranging from hundreds of Mb/s to hundreds of Gb/s and store it in capacities ranging from GB's to hundreds of TB's.

## ENCRYPTION

The security of your data is of the utmost importance to us, and we protect your data by offering robust encryption options. We can provide you with FIPS 197/AES 256-bit, FIPS 140, Commercial Solutions for Classified (CSfC), and NSA Type-1.

## OPEN ARCHITECTURE

You should have full access to your hardware capabilities, which is why we adopt an open architecture approach. By staying non-proprietary, we allow you to save costs and ensure you do not get vendor locked.

## TAILORED SOLUTIONS

Our COTS products were developed to meet previous mission requirements. To save you both time and money, we offer to customize one of our COTS solutions to fit your needs, or we can design you a solution from scratch.

# FAST, SMART, SECURE, & RELIABLE SOLUTIONS

## BASE

Our most economical option. Mission required capabilities.



## PLUS

Most popular solution. The “sweet spot” between cost & capabilities.



## MAX

The fastest thing flying. Fully capable. Completely rugged.



## FLIGHT TEST

Where every pulse, signal, and sensor detail matters.



## RACK MOUNT




Where industry-leading design meets peak operational performance.



# COMBAT-PROVEN SYSTEMS FOR ANY PLATFORM

|      | Product   | Features  | Size/Wt                                 | Speed        | Storage | Interfaces                                    | Security                                 |
|------|---|---|---|--------------|---------|---|--|
| BASE | <br><b>CAR</b>             | Perfect For Attributable Systems, Combining Small Form Factor With High Performance<br>2 TB Fixed Storage Or Up To 512 GB Of Removable CFast Storage<br>Modular Linux Based Open Architecture<br>Standard: 2x 1 GbE<br>GNSS/GPS Receiver (W/ Disable Feature)             | 1.8" H x 4.8" W x 6.8" D<br>2 lbs       | 200 MB/sec   | 2 TB    | 2x GbE<br>Audio<br>GPS                        | Self Encrypting Drive                    |
|      | <br><b>TuffCORD</b>        | Removable Storage Capacity Up To 20 TB<br>Standard Dual 1 GbE Interfaces<br>Greater Than 250 MB/sec Sustained Network Throughput<br>Expandability And Flexibility: Customizable I/O Options<br>Built Rugged, MIL-STD-810 With MIL-STD Connectors                          | 3.6" H x 4.8" W x 6.3" D<br>5.5 lbs     | 250 MB/sec   | 20 TB   | 2x GbE  | AES 256/<br>FIPS 197<br>FIPS 140<br>CSfC |
| PLUS | <br><b>TuffServ 282</b>    | More Than 200 MB/sec Sustained Read Or Write Throughput<br>Six Second Full Load Power Holdup<br>Standard Dual Gigabit Ethernet Interfaces<br>Two Removable Memory Modules<br>Built Rugged, MIL-STD-810 With MIL-STD Connectors  | 9.0" H x 4.8" W x 11.0" D<br>14.6 lbs   | 200 MB/sec   | 16 TB+  | 4x GbE<br>10/100 Fast Ethernet                | AES 256/<br>FIPS 197<br>FIPS 140<br>CSfC |
|      | <br><b>TuffServ 480v2</b> | Removable Storage Capacity 16 TB Or Higher<br>Various Recording Formats Including CH 10 And PCAP<br>Optional Optical 10 GbE Interface<br>Expandability And Flexibility: Customizable I/O Options<br>Built Rugged, MIL-STD-810 With MIL-STD Connectors                     | 5.25" H x 7.25" W x 10.0" D<br>17.5 lbs | 375 MB/sec   | 16 TB+  | 2x Gig-E                                      | AES 256/<br>FIPS 197<br>FIPS 140<br>CSfC |
|      | <br><b>TuffLite</b>      | High-Speed I/O: Equipped With 10 GbE Interface<br>Over 8 TB (Detachable)<br>Capable Of Ingest, Pass Through, And Reproduction Video<br>Specifically Crafted To Meet Stringent Swap Requirements   | 1.28" H x 6.12" W x 6.69" D<br>2.5 lbs  | 1,100 MB/sec | 8 TB    | 10 GbE<br>1 GbE<br>2.5 GbE<br>Video<br>RS 422 | AES 256/<br>FIPS 197<br>FIPS 140<br>CSfC |
| MAX  | <br><b>TuffServ 540</b>  | Removable Storage Capacity Up To 16 TB<br>Small And Lightweight 105 cu. In. And Less Than 10 lbs<br>Optional Optical 10 GbE Interface<br>Expandability And Flexibility: Customizable I/O Options<br>Special Radiant Tolerant Version Suitable For High Altitude And Space | 2.9" H x 4.25" W x 8.5" D<br>10 lbs     | 800 MB/sec   | 16 TB   | 2x GbE<br>10/100 Fast Ethernet                | AES 256/<br>FIPS 197<br>FIPS 140<br>CSfC |
|      | <br><b>TuffServ 640</b>  | Removable Storage Capacity Up To 300 TB<br>Dual 10 GbE Optical Interfaces<br>Suitable For Edge-Operating AI/ML Applications; Tested And Validated<br>Expandability And Flexibility: Customizable I/O Options<br>Built Rugged, MIL-STD-810 With MIL-STD Connectors         | 7.63" H x 4.88" W x 12.63" D<br>30 lbs  | 1,900 MB/sec | 300 TB  | 2x 10 G-SR<br>1 GbE<br>10/100 Fast Ethernet   | AES 256/<br>FIPS 197<br>FIPS 140<br>CSfC |



|             | Product   | Features   | Size/Wt  | Speed            | Storage                     | Interfaces   | Security  |
|-------------|---|--|--|------------------|-----------------------------|--|---|
| FLIGHT TEST |  | IRIG 106 CH 10 File Format<br>Outputs CH 10/11 Data As A CH 7 Serial PCM Stream<br>Totally Flexible & Modular I/O<br>Sustained Data Rates To 1,000 Mb/sec<br>Up To 2 TB Of Removable Storage   | 4.125" H x 3.5" W x 6.82" D<br>4.6 lbs   | 1,000 Mb/sec     | 2 TB                        | 1 GbE<br>10/100 Fast Ethernet<br>RS 232/422<br>"Slice-based" expansion | AES 256/<br>FIPS 197<br>FIPS 140<br>Turnstile<br>CSfC |
|             | miniRv2   |  |  |                  |                             |  |   |
| RACK MOUNT  |  | High Data Rate, Large Capacity Recording<br>Dual 2U Chassis For Maximum Performance<br>Removable Storage Magazines For Secure Data<br>Multiple Expansion Sites For Additional I/O<br>Industry Standard Architecture And Commodity SSDS | 3.5" H x 17.1" W x 18" / 16.2" D<br>44 lbs   | Varies by Config | Varies by Config            | 6x 1 GbE<br>1 GbE (IPMI)   | AES 256/<br>FIPS 197<br>FIPS 140<br>CSfC              |
|             | TRS380  |  |  |                  |                             |  |   |
|             |  | Sustained Data Rate Of 100 Gb/sec<br>Scalable: Virtually Unlimited Storage/ Capacity<br>QSFP Optical Interfaces<br>Multiple Expansion Sites For Additional I/O<br>Industry Standard Architecture And Commodity SSDS                    | 19" W x 3.5" H x 20" D (Chassis)<br>19" W x 1.75" H x 22" D (Removable Storage Tray)<br>40 lbs | 100 Gb/sec       | 187 TB+<br>Varies by Config | 2x 100 GbE<br>2x GbE (1 Shared with IPMI)                              | AES 256/<br>FIPS 197<br>FIPS 140<br>CSfC              |
|             | TRS-X   |  |  |                  |                             |  |   |

## CYBER SECURITY

With over eight decades of innovation, Ampex has redefined data security at the edge. Our advanced solutions deliver unparalleled encryption and cybersecurity, reliably meeting and often surpassing compliance standards to safeguard the most sensitive frontline missions.

**CSfC:** NSA-endorsed encryption scheme for classified data with two COTS layers.

**NSA Type 1:** High assurance encryption for classified government data.

**FIPS 140:** Government approved cryptographic module security.

**AES 256/FIPS 197:** Government validated 256-bit encryption protocol.

**STIG Compliant OS:** Enhances system security & integrity.

**US-Based Supply Chain:** Controlled, Class-A supply chain for hardware security.

**Patented Encryption Methodology:** Ensures robust data protection.

**Open Architecture:** Ensures cybersecurity adaptability & resilience.

**Ampex sets the standard for data security at the edge.**

# THE **AMPEX** DIFFERENCE

Discover what sets us apart by spotlighting our unwavering commitment to innovation, dedicated support, and robust security solutions, all while working together to bring 'excellence to the edge'.

Programs we support are enhanced with dedicated Program Managers and specialized obsolescence management teams.

Customer Support and Sustainment (CuSS) Team comprised of cleared Field Application Engineers and other Senior Engineers, ready to provide demonstrations, training, troubleshooting, integration, and field support.

Over seven decades supporting the DoD, showcasing our long-standing commitment to the warfighter.

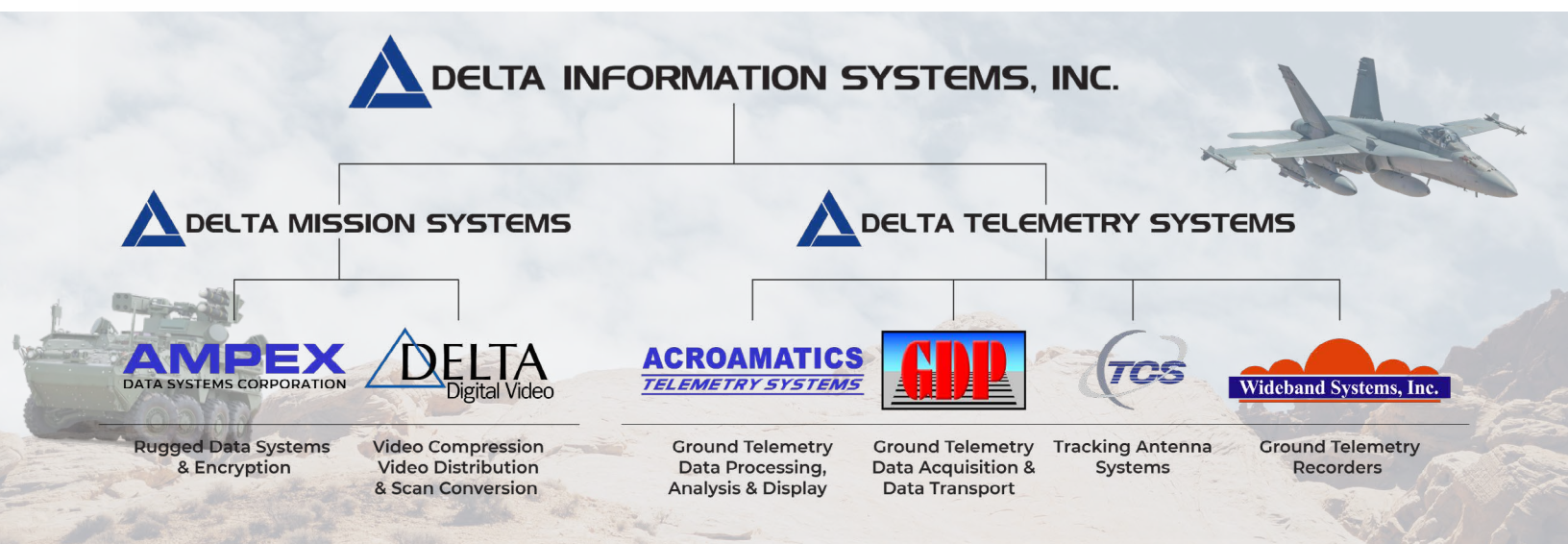
Trustworthy US-based supply chain, continuously vetted for reliability and security.

Uncompressed Video Data Recorder frame grabber, unique in the market for its full-frame rate, bit-for-bit capture, including all associated metadata.

Market leading data rates reaching 100 Gb/s of sustained throughput.

CSfC Trusted Integrator of mature hardware and software encryption layers into a complete Network Attached Storage solution for Data-at-Rest.

Ampex TuffServ Encryption Module (TSEM) is a NIST FIPS 140-3 hardware encryptor providing top-tier military grade data security (currently on Module in Process list)



## LOCAL & GLOBAL

### US OWNED & OPERATED

ISO 9001

EMPLOYEE OWNED SMALL BUSINESS

FULL LIFE-CYCLE SUPPORT

FULL TEST FACILITY

AS9100D



### LOCATIONS

Hayward, CA (HQ)

Las Cruces, NM

Horsham, PA (DIS HQ)

Tokyo, JP