Tracewell Rugged Blade Systems

High-performance blade technology for military and aerospace deployments.

Tracewell Rugged Blade Systems (RBS) are the ideal choice for demanding US Department of Defense class, military and aerospace applications that can benefit from the advanced data processing capabilities of IBM blade server technology. Our solutions are specifically engineered for customers who want to take advantage of the cost and performance benefits of COTS blade technology, but must meet specific size, weight, power and environmental requirements for air, land and sea deployments. Tracewell Systems, based on IBM blade technology, can dramatically reduce costs and significantly increase performance over competing MIL-spec computing products.
Tracewell Rugged Blade Systems
Overview

**Blade Technology Highlights**

**High-performance**
Based on IBM Blade technology, delivers best-in-class processing capability

**Flexibility**
A variety of blades installed in a single chassis can run multiple operating systems and provide flexibility to mix, match and integrate specialty blades

**Efficiency**
Smaller footprint, less cabling and lower power usage in the field

**Long-term optimization**
Expand capabilities as new high-performance IBM blade servers become available

**Superior switch flexibility**
Supports a wide selection of integrated standard and high-speed switching components from industry leaders including Cisco, Nortel, Brocade, QLogic, McDATA, Voltaire and IBM/BNT

**Simple, efficient upgrades**
Turns rip-and-replace into plug-and-play, allowing swift integration of new blade servers and modules

Rugged solutions for advanced application and system requirements

Tracewell Rugged Blade Systems are designed to support high-performance application requirements such as signal intelligence, radar, geospatial intelligence, cloud, data mining & analytics, real-time mission support, as well as battlefield surveillance and mission coordination, on some of the most advanced system architectures.

---

**Blade-to-Blade Systems**
For high-performance interconnectivity between processors.

**Blade-to-Network Systems**
For high-performance output across wide networks.

**Heterogeneous Systems**
For heavy signal processing in architectures with multiple processor units (e.g., x86, Power PC and FPGA).

**Multi-Server Virtualized Environments**
For virtualized networks and cloud computing—with wide network, cross application sharing among diverse systems and data formats.

---

*The only field-tested rugged blade system that delivers high-performance computing in the harshest forward-deployed environments.*

**Ruggedization for the computing power you need, where you need it**

Tracewell Rugged Blade Systems are engineered to meet the strict size, weight and power requirements of air, sea and ground vehicles. Our systems can significantly reduce IT footprint and cabling requirements, while delivering the highest performance-to-size ratio. That means more computing power at a lower cost, with less hardware and less cable to manage in the field. Based on IBM blade technology, Tracewell Rugged Blade Systems achieve the highest levels of availability and reliability. Common management infrastructure and integrated management tools such as IBM Director, Open Fabric Manager and Active Energy Manager ensure optimal resiliency and a more cost-effective IT infrastructure. Tracewell systems offer three exacting levels of ruggedization, available in three-slot or five-slot configurations with standard and high speed switches.

<table>
<thead>
<tr>
<th></th>
<th>L1</th>
<th>L2</th>
<th>L3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Cost-Effective MIL-Spec Entry-Level Solution</strong></td>
<td>![L1 Image]</td>
<td>![L2 Image]</td>
<td>![L3 Image]</td>
</tr>
<tr>
<td>For environments where size, weight and power are the overriding considerations, such as aircraft and shipboard installations, as well as shielded transit case systems</td>
<td>For environments that require the added protection of EMI shielding and air filtration</td>
<td>Engineered to meet shock and vibration requirements of forward-deployed environments</td>
<td></td>
</tr>
<tr>
<td>Ideal for development and co-location with other commercial equipment</td>
<td>The same high-performance standard COTS IBM blades and chassis construction of L1, plus:</td>
<td>Ideal for ground vehicles and airborne environments</td>
<td></td>
</tr>
<tr>
<td>High-performance standard COTS IBM blades</td>
<td>- Advanced EMI shielding</td>
<td>Fully ruggedized IBM components, switches and management modules</td>
<td></td>
</tr>
<tr>
<td>Bonded aluminum low mass chassis</td>
<td>- All networking, KVM I/O and power connections rear accessible, MIL 38999 circular connectors</td>
<td>Machined aluminum chassis</td>
<td></td>
</tr>
<tr>
<td>All I/O and power connections front accessible</td>
<td>- Media tray USB ports front accessible</td>
<td>Advanced EMI shielding</td>
<td></td>
</tr>
<tr>
<td>Multiple power supplies: 90–264 VAC, 47–440 Hz input</td>
<td>- Multiple power supplies: 90–264 VAC, 47–440 Hz input</td>
<td>All networking, KVM I/O and power connections rear accessible, MIL 38999 circular connectors</td>
<td></td>
</tr>
<tr>
<td><strong>The Next Level of Ruggedization</strong></td>
<td></td>
<td>Media tray USB ports front accessible</td>
<td></td>
</tr>
<tr>
<td><strong>The Most Rugged Solution Available</strong></td>
<td></td>
<td>Multiple power supplies: 90–264 VAC, 47–440 Hz input</td>
<td></td>
</tr>
</tbody>
</table>

**Better**
- IBM blade technology ensures best-in-class performance, availability, redundancy and reliability

**Faster**
- Significantly faster than competing MIL-spec computing products

**Cost-Effective**
- Can reduce technology refresh costs up to 75%, with the highest performance-to-cost ratio

**Rugged**
- The most rugged, high-performance standard COTS computing solutions available today
About Tracewell Systems

Tracewell Systems offers Advanced Form Factor Engineering™ services so organizations can deploy high-performance computing hardware in harsh environmental conditions.

Since 1973, Tracewell Systems has provided innovative design, engineering and manufacturing to some of the nation’s largest military, aerospace, and commercial organizations. By applying industry expertise and patented technologies, we create ruggedized systems from commercially available hardware to tailor custom solutions for specific objectives and missions.

For more information on Tracewell Rugged Blade Systems, visit http://www.tracewell-rbs.com/

© Copyright Tracewell Systems, Inc. 2011
Tracewell Systems, Inc.
567 Enterprise Drive Westerville, OH 43081
1.800.848.4525 | phone 614.846.6175 | fax 614.846.4450

Tracewell Systems, Inc. reserves the right to make changes without notice. All brand or product names may be trademarks or registered trademarks of their respective holders.

IBM and BladeCenter are trademarks of International Business Machines Corporation, registered in many jurisdictions worldwide. The IBM Peel-Back logo is owned by International Business Machines and is used under license from IBM.