Weathering the Storm

How distributors help customers navigate rough seas

Top 25 North American Electronic Component Distributors

Distributor services help keep customers afloat

Rising above the tide

Including: The Top 25 Electronics Distributors List
It’s tempting to compare the current economic crisis with the most recent and still-memorable downturn of 2001. The reality is the two are nothing alike. As one executive puts it: “In 2001, at least it felt like we had some control over the situation. The problem was largely of our own making, and we knew what we had to do. It wasn’t pretty—but we did it.”

The current downturn is clearly deeper and more widespread than past recessions. The “whys” have been analyzed to death, and the best economic minds in the world still can’t answer “what’s next?” The only thing distributors know for sure is that their future will be tied to their customers. Customers aren’t turning to their authorized distributors for a silver bullet or a new business model; they are looking for more of the same services they already rely on. At the top of the list: inventory management. Nobody—supplier or OEM—wants to be holding parts right now. The channel’s ability to hold and manage inventory is enabling customers to put off purchases until the last minute. Reasonable fluctuations in these orders can be buffered by distributors. The channel breaks down bulk inventory to get customer orders as precise as possible. Authorized distributors manage returns of unused products, and the channel’s credit services allow customers to pay for inventory over time.

Suppliers continue to leverage the channel’s reach into a broad customer base. As suppliers cut back on sales and engineering staff, they turn to the channel to support sales efforts and advise customers on the best combination of parts for a particular solution. Component makers also rely on the channel for demand information as signals from the end-market continue to be unclear. “We need to plan for our production capacity,” says one supplier executive. “That’s tough to do when orders are pushed out or cancellations start to build up.”

During this period of cataclysmic change, consistency has become reassuring to many in the industry. The make-up of the Top 25 Distributors hasn’t changed dramatically in a number of years. The channel will continue to evolve, but it’s the fundamentals that will help the supply chain weather the economic storm.

 Freelance writer Barbara Jorgensen has been covering the electronics distribution industry for nearly 20 years, most recently as a Senior Editor at Electronic Business magazine.
Any part. Any place. Any time.
Order the parts you need right up till midnight.

**Future Electronics** makes online component selection easier than ever, empowering you with expert information and advice, combined with vivid imagery and an extensive library of reference material. Accelerate your online experience with the most intuitive navigation engine built on top of the richest, most relevant product information in the industry today.

**And remember, if you want it tomorrow morning, you have until midnight tonight to order!**

## TOP 25 North American Electronic Component Distributors

Distributors are ranked by calendar year 2008 North American revenue.  
N/A = Not available  
Revenue figures are gathered from financial filings, company-provided information, and Reed Business Information estimates.

### CALENDAR YEAR 2008

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company name</th>
<th>North American revenue (millions $)</th>
<th>Total revenue (millions $)</th>
<th>Total revenue change 2007-2008</th>
<th>5-year compound annual growth</th>
<th>Public/private</th>
<th>Authorized/independent</th>
<th>North America</th>
<th>Europe</th>
<th>China</th>
<th>India</th>
<th>Japan</th>
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<tbody>
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<td>Avnet</td>
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<td>17,860.0</td>
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<td>P</td>
<td>A</td>
<td>47.0%</td>
<td>34.0%</td>
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<td>A</td>
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<td>A</td>
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<td>A</td>
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<td>I</td>
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<td>98.0%</td>
<td>0.4%</td>
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</table>

**Special Section:**

- North America revenues are across the United States, Canada, and Mexico.
- Europe does not include Morocco, Portugal, and Spain.
- China, India, and Japan figures may include overseas revenue.
- Other regions include the Rest of World.
- Manufacturing Services revenue is not included in the Total Revenue.
Distributors

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company name</th>
<th>2007-2008 revenue change (%)</th>
<th>Total (millions of $) 2007</th>
<th>Total (millions of $) 2008</th>
<th>Revenue per employee (millions of $) 2008</th>
<th>VA services 2008</th>
<th>Active components 2008 (%)</th>
<th>Passive, electromechanical, interconnect 2008 (%)</th>
<th>Computer products/systems 2008 (%)</th>
<th>Contract manufacturing 2008 (%)</th>
<th>Services 2008 (%)</th>
<th>Other 2008 (%)</th>
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<td>23%</td>
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<td>N/A</td>
<td>3%</td>
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<td>0%</td>
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NEDA Member

1 Revenue figures and percentages are Reed Business Information estimates.
2 Revenue figures are Reed Business Information estimates.
3 Newark is parent company Premier Farnell’s (West Yorkshire, England) main North American presence in electronic component distribution.
4 Carlton-Bates is a subsidiary of WESCO Distribution.
5 Allied is a subsidiary of Electrocomponents plc.
6 North America revenue percentages are Reed Business Information estimates.
Unlike 2001, however, the current economic crisis is not self-inflicted. This downturn is so widespread that all industries and markets are affected. That’s cold comfort to electronics distributors, who have spent the last eight years getting their warehouses in order.

“These are very unusual times,” says Eric Sussman, director of Americas distribution for connector supplier Molex Inc., Lisle, Ill. “No one seems to know where the bottom is.”

Nevertheless, the electronics distribution channel has some unique opportunities in this environment. Distribution services considered standard operating procedure (SOP)—credit, inventory management and design assistance—help suppliers and customers stretch increasingly limited human and financial resources. Highly leveraged or struggling competitors provide strategic acquisition opportunities for distributors. Finally, as suppliers get bogged down by uncertain demand from their direct customers, they are transitioning more of these accounts into the distribution channel. “During the last downturn, suppliers rushed to add distributors to their channel over concerns about sales coverage and inventory,” says Faris Aruri, vice president of corporate marketing for Sager Electronics, a privately held distributor based in Middleborough, Mass. “Today, manufacturers have been moving toward rationalizing their channel to a smaller, higher-quality group. It’s affording [suppliers] the ability to get out of the customer service and logistics business on a broad base and focus their expertise on new product development.”

Authorized distributors willing to assist their partners through these tough times stand to benefit in the long run. “These are the times that distributors develop relationships with customers that endure just beyond the short term,” says Sussman. “If distributors can make the investment now, they can tie up a [relationship with a] customer with a strong set of services for a long time. It’s a good time to place some bets and to lock up business.”

Where credit is due

The extension of credit toward customer purchases has been a longtime practice in the channel. Many distributors bank on the possibility that today’s start-up will be tomorrow’s Apple or Sun Microsystems. Credit practices in the channel haven’t changed in spite of the current economic crisis, according to both distributors and suppliers. “Our distributors’ ability to extend credit has worked well, and, frankly, they are in that position to act as a buffer between supplier and customer,” says Sussman.

Distributors are particularly willing to accommodate strategic accounts and longtime customers. “We know our customers and their character, and we have a reputation for dealing with folks that we have a good relationship with,” says Sager’s Aruri. In general, distributors say, customers are facing a number of difficulties: they can’t pay their distributors on time, they can’t take delivery of inventory that was ordered months ago, they are having cash-flow problems or they are waiting for funding. Authorized distributors are easing
Mouser Electronics is one of the fastest growing global catalog and web-based distributors in the electronics industry. Mouser is dedicated to supplying design engineers with the most rapid introduction of the newest products, leading-edge technologies, and world class customer service. Focused on design engineers and buyers demanding small to medium quantities of the latest products, Mouser provides customer-focused distribution.

Rapid New Product Introduction
Mouser delivers a time-to-market advantage to customers with the industry’s only NEW 2,100+ page print catalog published every 90 days, featuring the newest products and technologies. Continuous updates are made to ensure the newest products are added and end-of-life products are removed from the catalog, providing customers with easy access to the newest products and technologies.

E-Commerce

Mouser.com is updated daily with new products and technologies available for customers to browse and buy online. The company’s website features OVER A MILLION SEARCHABLE PRODUCTS, more than 900,000 downloadable data sheets, 375+ supplier catalogs, and 1.5+ million cross-referenced parts. The constant refinement to the site includes technical design information, as well as numerous user-friendly tools such as Project Manager with automatic reorder, BOM import capabilities, automatic order confirmation, and live chat in several languages.

Broad Product Line

Mouser is the design engineer’s one-stop shop for all the board-level components and associated development tools necessary for total project design. The company’s broad-based linecard consists of components across the board from more than 390 industry-leading manufacturers of semiconductors, optoelectronics, embedded modules, as well as passives, interconnects, electromechanical, circuit protection devices, enclosures, thermal management, and wire/cable products.

www.mouser.com  (800) 346-6873

State-of-the-Art Warehouse Operations
Mouser’s global corporate headquarters facility is based in Texas, USA, and totals 432,000 sq. ft. encompassing offices, call and data centers, as well as its state-of-the-art warehouse. The wireless warehouse management system is streamlined to nearly perfect pick-and-ship operations. These high-tech capabilities and the efficient order fulfillment processes allow for fast delivery with same-day shipping on most orders received by 8 p.m. CST.

The 3,400 sq. ft. data center features a pre-action fire suppression system, connections to multiple power sources, and a dedicated fiber communications ring to ensure uninterrupted internet operations – a core component of Mouser’s global sales operations.

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Mouser is dedicated to providing superior service and support to customers worldwide. In addition to the United States locations, Mouser has sales offices around the world, including Singapore, China, and Hong Kong, as well as Israel and Germany.

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these pressures by extending payment terms, marketing inventory to other customers or returning inventory to suppliers. “Customers that are facing slowdowns or even shutdowns—we want them back when things get better,” says Aruri.

Distributors’ willingness to extend credit could become increasingly important to the design community as the economic crisis lingers on. Production orders—typically high volume, high mix and high cost—are the first casualties of a slowdown as OEMs cut back on manufacturing and distributors worry about the inventory liability of cancelled orders. However, design and prototype purchases—low-volume and low-dollar-value orders—will be the last to go. Suppliers and distributors are less concerned about the default or nonpayment of a $500 order than they are about a $50,000 purchase.

This is good news for small and/or design-oriented businesses. For distributors, credit decisions hinge more on a customer’s ability to pay than on the overall size of the company. “Customers with strong balance sheets come in all shapes and sizes,” says Craig Conrad, senior vice president at specialty distributor TTI Inc., Fort Worth, Texas.

Taking inventory

Another ubiquitous channel service—inventory management—will play a huge role in the supply chain as the economy continues to flounder. OEMs do not want to be caught holding inventory if their production orders slow or grind to a halt. Instead, OEMs are taking inventory shipments at the last possible moment. “I think one of the benefits that our company brings into the third- and fourth-tier production market is the ability to get inventory off the shelf almost immediately,” says Mark Larson, president of catalog distributor Digi-Key Corp., Thief River Falls, Minn. “It allows customers to have a shorter planning cycle and avoid inventory risk.”

The channel’s inventory skills also work for suppliers. When customers delay orders, component suppliers have less visibility into actual—as opposed to forecast—end-market demand. Suppliers require several weeks of lead time to ramp up manufacturing and are loath to commit capacity to demand that may or may not materialize. Any uptick in demand could push lead times out or even prompt shortages. Distributors’ on-hand inventory provides a safety net for suppliers: if vendors are unable to meet demand, customers can turn to the channel for components. “What we are seeing is reluctance in all elements of the supply chain to hold any inventory,” says Harley Feldberg, president for Electronics Marketing Global at broadline distributor Avnet Inc., Phoenix. “Some people predict even the slightest upturn will cause some shortages.”

Based on experience—electronics distributors have been in business since the 1940s—channel executives believe the industry will rebound. “One of the downstream things we will see is, at some point in time, these markets will come back,” says Michael Knight, vice president of product management and supplier marketing for TTI. “There has been so much downsizing in the supply base and so much capacity taken offline that when we do see a resurgence, things will get interesting.”

Thanks to the downturn of 2001, the channel has paid special attention to managing inventory. When demand dropped off in 2001, suppliers, distributors and customers were caught with excess inventory that quickly lost its value and was written off by the supply chain. Distributors have since developed or invested in sophisticated MRP systems, gained more visibility into end-market demand and are “reality checking” orders against historic buying patterns. These efforts have helped distributors get a better handle on inventory, and supply chain executives say inventory levels in the channel are currently in good shape relative to forecasts. “We are continuing to monitor the quality and mix of our inventory,” says Avnet’s Feldberg. “We do not believe our role in this market is to have no inventory on hand. In down markets, companies that have the ability to keep inventory will accelerate more [in an upturn] than those who are reducing inventory.”

Channel players are also helping customers avoid the excess inventory that often accompanies volume purchases. “If our customer needs 499 devices that are sold in lots of 500, we will adjust our shipment to the customer’s requirements,” says Digi-Key’s Larson. “Customers don’t have to deal with any excess.” This also pre-empts a customer’s need to dispose of excess inventory through the gray market or other unauthorized channels.

A number of industry observers say that electronics manufacturing services (EMS) providers—companies that generally avoid distribution because of perceived higher costs—are also using the channel to manage inventory. “EMS companies don’t want to be caught with inventory, and the pricing issues have become less of a factor as companies are willing to pay more as long as they don’t have to hold inventory,” Molex’s Sussman says.

Inventory also plays a role in extending the lifespan of customers’ equipment. Distributors in the maintenance repair and operations (MRO) market are proactively anticipating customers’ service requirements. As more businesses defer investments in IT, manufacturing or other types of equipment, their focus shifts to keeping existing systems in tip-top shape.
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MRO distributors are helping their customers plan an upgrade or repair.

“I think one of the areas a company with an extensive line card and engineering services can play a role in is maintenance,” says DeWight Wallace, president of catalog distributor Newark, Chicago. Newark uses information from suppliers and field salespeople to anticipate customer MRO needs. “I think customers are clearly investing in more maintenance and repair as everybody who is dealing with the economic challenge is pushing capital spending decisions forward,” Wallace says.

Designing for the times

Although distributors are typically associated with back-end (order fulfillment) services, the channel is expanding its role in front-end services such as design. “There is definitely a domino effect with the economy,” says Wallace. “People are looking for alternative resources to fill in the gaps. Clearly, design is part of the entire value proposition distributors can offer.” Although distributors can’t tie increased design activity directly to the downturn, the channel continues to invest in engineering expertise. Overall, Premier Farnell—Newark’s parent company—grew from 70 to 190 engineers globally in the last two years. “What our design support group is seeing in terms of activity they are not attributing to the downturn at this point, but these are still early days,” says Digi-Key’s Larson. “What we do see is, customers appear to be buying design tools, and that is a good sign.”

Broadline distributors echo that sentiment. “What is encouraging is the interest and support we are seeing in what we call our design chain services,” says Avnet’s Feldberg. “These services revolve around the concept that one technology is connected to another. It’s not just the DSP you buy—it’s the interconnectivity of all parts that matters.”

Avnet is demonstrating the value of such connectivity by designing reference boards that optimize component performance in a specific solution. These boards mix and match parts from suppliers that normally are considered competitors. Suppliers aren’t complaining. In a typical purchase, customers might buy one chip or another but not necessarily tie the two together. In this scenario, both suppliers make a sale. “We are the matchmaker,” says Feldberg. “I’d say this is an arena where we see significant interest accelerated by market conditions.”

A buyer’s market

Although financing for activities such as acquisition is hard to come by, companies with strong balance sheets are not ruling out the possibility. In fact, companies that have not historically been acquisitive are looking for strategic opportunities. “In Asia, we see the market losing a lot of [connector] competitors through attrition—these are tough times and many of these suppliers are small and under-capitalized,” says Molex’s Sussman. “Among those suppliers, companies that specialize in technologies we are interested in would be attractive to us.”

“Acquisitions are always a possibility,” says Newark’s Wallace. “Premier Farnell has always invested in expanding internationally, and our growth will focus on new geographies.” Channel executives point to Brazil, India and China as promising markets.

Globalization will continue to be a driver for highly acquisitive companies such as Avnet. “More and more of our customers are becoming global,” Feldberg says. Distributors that are largely regional may be considering partnerships that will help them expand their reach.

Re-connecting the supply chain

In general, supply chain executives say the authorized channel can become more important to both suppliers and customers during the economic crisis. If supplier cutbacks include salespeople, the channel will play a larger role as a cost-effective way to reach multiple customers. If OEMs lay off engineers, distributor design services are poised to take up the slack. And, if inventory levels continue to be in balance, distributors will have the flexibility to respond to any upsise (or downside) ordering trends.

Several channel executives note that continuity is becoming a significant factor in supply chain relationships as companies deal with layoffs. “Some of the larger suppliers are laying off salespeople, and there is a lack of continuity on both [supplier and customer] sides,” says TTI’s Knight. “It’s not efficient for suppliers to train new salespeople, and, in some cases, small customers aren’t getting a new salesperson assigned to them. This is an opportunity for distributors—one thing we are known for is our sales teams.”

“Points of contact have definitely been affected,” says Digi-Key’s Larson. “Not only are customers feeling the impact, but suppliers are looking for ways to leverage distribution more.”

Even though the channel has been through tough times before, the current environment will force the supply chain to become even more efficient. Distributors that provide valuable solutions to their partners now can cement those relationships for the long run. “There are going to be decisions made that will affect distributors in a positive way,” Larson says. “Even though this is not the way we’d go about it, everyone will come out stronger.”
SUDDENLY, HANDLING THIS ECONOMY DOESN’T SEEM SO INTIMIDATING.

Tame these uncertain times by partnering with TTI and get enormous inventory, expert customer service and reliable financial stability backed by Berkshire Hathaway.
Many of the markets we are pursuing are the same—we have been targeting these markets for some time,” says Eric Sussman, director, Americas distribution, for connector maker Molex Inc., Lisle, Ill. “Transportation—non-automotive—military and medical tend to stay in this country and are more untapped [by distribution] than other industries.”

These markets aren’t necessarily new; they just haven’t been as affected by the credit meltdown, the housing slump or lackluster consumer spending as other industries. “First and foremost, our military market is holding up extremely well,” says Michael Knight, vice president of product management and supplier marketing for specialty distributor TTI Inc., Fort Worth, Texas. “Historically, since our foundation, we have been a big player in the military market. As support of the war effort advances, electronics [equipment] is so hot and heavy, military is starting to come back into play.”

Authorized distribution plays a number of roles in the military supply chain. Military electronics used to be highly proprietary—products were designed for military use and military use only—and were therefore sold directly to military contractors. However, as off-the-shelf commercial electronics have improved in quality, the military has adopted these commercial parts in its systems. This is a win-win for component makers and military contractors; unlike proprietary products, commercial parts can be marketed across a broad range of customers and therefore are less prone to extreme ups and downs in military spending. If military contractors cancel an order, off-the-shelf parts can be sold into the commercial arena. The use of commercial components also ensures that military contractors have multiple sources of supply. Competition among these suppliers, in turn, drives costs down.

As an extension of their suppliers’ sales force, authorized distributors play the same role in the military market as they do in other segments: inventory management, product flow and value-added services. The channel also provides a vital service in managing end-of-life (EOL) products. Military equipment has a very long lifespan, which means components may be discontinued by suppliers during the equipment’s useful life. Distributors frequently buy the remaining inventory of such components from suppliers and hold them on behalf of military customers.

An adjunct to military is aerospace, which distributors are not as bullish about. “Aerospace has softened a bit,” says TTI’s Knight. “I think some of the reasons behind this are the Boeing strike and slower production of commercial jets.” The International Association of Machinists went on strike against Boeing last fall and stayed off the job for eight weeks. The strike slowed down production and cost Boeing an estimated $2 billion in profits.

One of the most promising markets for the authorized distribution industry is medical equipment. There are a number of reasons the channel expects to see growth. First, manufacturers of medical equipment have historically built products in-house because of the stringent quality and performance requirements of medical products. Manufacturing is beginning to move into the outsourcing environment as more electronics manufacturing services (EMS) providers become qualified to build medical equipment. Although EMS has traditionally not been a big user of distribution, “someone out there is buying a lot of products from us,” says Ed Smith, president,
“NEDA promotes the interests of authorized distribution better than anyone could on their own.”

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“We are seeing a combination of demand-driven and outsourcing-driven growth in medical,” adds Smith. “EMS is getting more into the medical market because of start-ups, which tend to use Tier 2 and Tier 3 manufacturers. More of these are getting ISO certified and becoming more capable of handling the start-up medical companies. You still see a lot of the big [medical] companies doing well, but start-ups are doing great.”

A second trend in medical equipment that favors the channel is the sheer size of and complexity of most products. Much of this equipment is designed and built in the Americas. Even with low-cost labor overseas, the time it takes to assemble a large product and to ship it from overseas any cost effectiveness of labor. These products are also complex to build—they require small volumes of lots of different electronics parts (low-volume, high mix). If an engineering change order (ECO) has to be made on the manufacturing line, it takes a long time to execute the ECO if the factory and design engineer are half a world apart.

Finally, the aging population is driving investment in and sales of medical equipment. “The medical market grew for us the last few months [of 2008] even though growth contracted by about 4 percent or 5 percent,” says Smith. “People will continue to age.”

Medical equipment is being paired up with another technology that should fare well during the recession. “We are seeing strong prototyping and design activity in the wireless and medical areas,” says Mark Larson, president of catalog distributor Digi-Key Corp., Thief River Falls, Minn. “It’s still too early to get a reading on the impact of the downturn on the production side, but we are bullish based on the design. It may take a few months to see this play out.”

Light-emitting diodes (LEDs) are being cited as a dependable and emerging market. LEDs have been used in the industrial channel—distribution’s sweet spot—for decades. LEDs have mostly been relegated to on/off lights in computers, equipment, battery chargers and other low-volume applications. But as the technology has improved—colors are getting brighter and clusters of bulbs are being used in large-scale applications—LEDs are expanding into new markets.

It isn’t a huge market yet. “When you look at growth in terms of the percentage of growth, the numbers are there,” says Smith. Distributors can take advantage of breadth of product—the electronics used to drive LED products—and offer a system approach. “If you can sell the whole solution—a lot of it is mechanical work, the metal frames that hold the lights and other components—there’s opportunity,” he says. “The nice thing for distribution is there is a new customer base [for LEDs],” Smith adds. “These include sign vendors and flashlight makers. We see double-digit growth in that market and we expect that will continue for awhile.”

Wireless—a term that encompasses a broad range of technologies and products—is also expected to grow at a steady pace in the near-term. Wireless has become prevalent in many end products, including PDAs, handheld computers and devices, wireless notebooks, tablet PCs, wearable computing devices, pen-based computing, infrared and wireless distribution systems, laptop computers, wireless protocol solution, healthcare applications, network storage management, security, wireless or mobile solutions software and wireless networking devices.

**GLOBAL MOBILE INTERNET DEVICE MARKETS**

Class device forecast with smart phones, 2007–2012

(Thousands of Units)

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Source: iSuppli Corp., March 2009

Wireless technology—including mobile Internet devices and smart phones—will continue to drive electronics market growth through 2012.

“Even in the gloom and doom of the economic malaise, people will not stop talking or accessing the Internet,” according to the online newsletter RCR Wireless News. “Wireless technology will continue to be a force-multiplier, not just in terms of enabling people and machines to talk with each other, but also with respect to advancing goals in education, health care, homeland security and governing itself.”

The recession will test the mettle of many markets—not just electronics. But many see the prevalence of electronics in the home, business, military and transportation industries as evidence there will be some areas of growth. The channel aims to help its customers and suppliers capitalize on these areas—and maybe develop the next recession-proof product.
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