Parker Hannifin Adopts OATSystems Software

Parker Hannifin, an $11-billion manufacturer, supplying motion and control technologies and systems to leading commercial aerospace OEMs and defense contractors, recently decided to use **OATSystems'** ATA Spec2000 solution as a starting point for its adoption of RFID. OATSystems is a division of **Checkpoint Systems** and is a well-known provider of enabling software for the RFID sector.

According to Alan Sherman, OATSystems director of marketing, Parker Hannifin is tagging and tracking component parts to be installed in the **Airbus** A350 XWB aircraft at the point of manufacture in accordance with ATA Spec2000. OATSystems provided Parker Hannifin with the complete solution (hardware, software, training and support) to generate a unique birth record for each part, and to capture the part manufacturing details and ongoing history on a high-memory RFID tag, which will be attached to the part throughout its useful life.

Sherman told *SCAN/DCR*, "These are exciting times. Our ATA Spec2000 solution is a key component in helping suppliers comply

Alan Sherman, director of marketing, OATSystems.

Ask And You Shall Receive

As leading retailers continue their drive to adopt item-level RFID, Impinj tries to ease the process with a new technology offering.

The movement of major retailers toward item-level RFID adoption has been well-documented in the pages of *SCAN/DCR*. Last year, sales of EPC RFID tags grew 30-35%—mostly in the retail sector, according to **Venture Development Corp.** (**VDC**) Director of Research Operations, Andrew Nathanson. Nathanson predicts that retail growth numbers will triple in 2011. The **VICS/GS1** *Item-Level RFID Initiative* is in full swing and helping to show consumer goods suppliers why they should adopt source tagging. With all this in mind, **Impinj** has developed a brand new product offering targeted specifically toward retail item-level RFID applications.

Larry Arnstein, director of business development, Impinj, Inc.

On April 5, Impinj announced the launch of two critical components for implementing item-level RFID across retail markets and supply chains. Impinj's Monza® 5 tag chip and STP™ source tagging platform will enable widespread scaling of RFID retail inventory management solutions, driven by the Item-Level RFID Initiative announced last November by leading retailers, suppliers, and industry organizations.

Larry Arnstein, Impinj director of business development, told *SCAN/DCR*, "We didn't have to use a lot of imagination to come up with this area of development. The customer asked us for it. That said, we did see a looming scalability problem and realized there would be a need for a way to encode both individual and large numbers of tags. Scalability and source tagging are still the main issues to be solved before item-level RFID can really take off. We find where our customers' fears are and then

go about eliminating them. Our integrators can handle orders of any magnitude."

> **"Building on Impinj's industry leadership in RFID technology, Monza 5 tag chips will become the industry standard for item-level tagging. We believe Monza 5 and STP bring to market exactly what retailers, suppliers, and tag manufacturers need for item-level tagging to go mainstream."**
>
> **William Colleran Ph.D.,
> Impinj president and CEO.**

Designed for serializing items such as apparel, electronics, cosmetics, jewelry, and pharmaceuticals, the Impinj Monza 5 chip breaks new ground in item-level tag performance. Monza 5 chips are optimized for single-use tag applications that demand the highest read reliability and lowest applied tag cost. In addition, Monza 5 tag chips deliver value on multiple fronts for item-level tagging: the design satisfies supplier and brand owner cost/performance requirements, maximizes RFID business results for retailers, and streamlines high volume inlay manufacturing.

The STP source tagging platform is a UHF RFID reader system with hardware and software optimized to streamline high-speed commissioning during item-level tagging. Utilizing Impinj Monza-based tags, STP is capable of encoding up to 1,750 tags per minute, thus enabling large-scale deployments. STP simplifies source tagging by supporting both inline and bulk encoding solutions.

"Building on Impinj's industry leadership in RFID technology, Monza 5 tag chips will become the industry standard for item-level tagging," said William Colleran Ph.D., Impinj president and CEO. "We believe Monza 5 and STP bring to market exactly what retailers, suppliers, and tag manufacturers need for item-level tagging to go mainstream."

"Write performance is extremely important," Arnstein added. "By offering both inline and bulk encoding, users can do mass encoding or set up smaller encoding systems at multiple sites. This is important to global CPG manufacturers who may operate in multiple facilities. Our latest offerings will enable new business processes."

Taking it to the streets

Impinj is currently having its customers evaluate the item-level package. "We haven't been touting this to end users yet. Instead, we are working with our solutions providers to see if any changes need to be made and to determine how well the offering performs. In essence, we designed the solution from end user information, but we haven't told them this is the answer."

To spread the word about the new item-level technology, Impinj is offering white papers, hosting seminars, heading out to trade shows… As Arnstein stated, "We are throwing everything we've got at this. Our message is: 'You have new options. Evaluate the options and find what is best.' I think they will find that encoding presents more challenges than reading. That's why we have worked so hard on the new encoding options."

System costs

Arnstein said Impinj is also trying to reduce hardware/software costs while increasing performance. "This is simply one more way we are pushing adoption," Arnstein told us. "Monza 5 is EPC-compliant, so it enables us to produce economies of scale; EPC is the leading global standard, so it has more users. With respect to licensing, we offer our firmware for free to customers who are using Monza 5 chips. But, Monza 5 goes beyond EPC compliance. It has been optimized for high performance. This enables us to sell more chips because there are so many more applications where Monza 5 can solve business problems. It is a platform to build upon."

Monza 5—the lowest applied tag cost in item-level apps

For suppliers, brand owners and their service bureau partners, Monza 5 tag chips deliver the industry's lowest applied tag cost by offering increased write reliability and encoding speed. According to Impinj, during writing, Monza 5 tags are four to six times more sensitive than competing chips, enabling greater reliability and significantly faster encode and lock rates. Monza 5 tag chips also include Impinj's patented SafeWrite™ mechanism that ensures accurate and reliable operation when writing data into the tag. Without this capability other tags may initiate write operations which fail, thereby stalling assembly and packing lines. Only Impinj's Monza 4 family of tag chips matches these capabilities.

For retailers investing in RFID for item-level inventory accuracy, Impinj says its Monza 5 tag chips provide the industry's highest single-antenna sensitivity, ensuring significantly improved read reliability over competing tags, particularly in more challenging conditions. Only Impinj's Monza 4 tag chips with True3D™ dual-antenna technology can achieve higher sensitivity. In addition, Monza tag chips support two unique, patent-pending features designed to boost inventory performance for traditional EPC and TID-based applications: TagFocus™ mode minimizes redundant reads of strong tag signals, allowing the reader to focus on harder-to-find tags with weaker signals. FastID™

mode makes applications based on tag ID (TID), such as authentication, practical for the first time by boosting TID-based inventory speeds by 2-3 times. These fundamental advantages deliver more effective RFID system performance and more profitable business results for retailers.

For inlay vendors and tag manufacturers, Monza 5 tag chips provide features that enable better yields and higher quality. A patent-pending "repassivation" spacing layer makes inlay manufacture less sensitive to die-attach pressure during production, resulting in less variance and more predictable performance in the final inlay product.

Many of the world's leading RFID inlay manufacturers, including **Avery Dennison**, **Invengo**, **LSIS**, and **UPM Raflatac** are currently developing inlays with Monza 5 chips.

STP Source Tagging Platform Proves Value

The STP source tagging platform enables and simplifies item-level source tagging deployments and leverages Monza chip capabilities to sustain production line throughput up to 1,750 tags per minute. More importantly, STP allows suppliers to implement either bulk encoding or in-line encoding solutions.

Impinj in-line encoder. *Impinj bulk encoder.*

A bulk encoding system, which writes data to potentially hundreds of tags en masse, generally with the tags attached to items in cases, gives brand owners new flexibility in how and where they manage RFID data. An inline encoding system, which writes data to tags individually, at high speed, before the tags' application to products, mirrors existing print-oriented processes for handling variable product data. STP allows users to implement either method of encoding or a hybrid approach.

Built on Impinj's Speedway® Revolution reader with Autopilot technology, the STP platform includes high-level software API's for easy application development and application-specific antennas and

operating modes tuned for inline encoding or bulk encoding. STP is a foundation for source tagging solutions that meets commercial manufacturing throughput and flexibility requirements. Many companies are evaluating or developing solutions based on the STP source tagging platform, including **Argo Wireless**, **Avery Dennison RBIS**, **Challenge Printing**, **Checkpoint Systems**, **Cybra**, **Lab ID**, **LS Industrial Systems**, **Mid-South Marking Systems**, **Pittsfield ID**, **r-pac**, **Telectronica**, **USA ID**, and **WS Packaging**.

Who will be first?

When asked who would likely be first to adopt Impinj's new retail offering, Arnstein answered, "Large suppliers, most likely. STP, because of its increased encoding abilities, will appeal to suppliers, converters, and service bureaus."

We wondered if some of what Impinj is offering might compete with other RFID vendors' products/services…some who may be Impinj customers. "We really believe our products are complementary, not competitive," said Arnstein. "By working together, it can only help drive adoption more quickly."

The big question

The big question on most of our readers' minds is: "How fast will adoption occur?" Arnstein stated, "We don't worry ourselves over questions like that. Instead, we concentrate on removing barriers to adoption. We focus on showing how our technology can solve business problems.

"We know…and the user community knows that RFID technology works," he continued. "And, we all know that prices are coming down. Users now want to know what benefits come from RFID adoption. They want to know where to use it in their operations. I was in an IT staff meeting at **NRF** this year, and 100% of the people in the room said they believe RFID will be a big help to them in their businesses. Our new item-level package is all about getting rid of barriers."

Closing

Arnstein wouldn't speculate on how VICS/GS1 would react to the announcement. He simply stated that each member of the Item-Level RFID Initiative would draw its own conclusions.

With regard to CPG suppliers, Arnstein told us, "We used to figure that, once a company hit the 30% mark for tagging goods at the source instead of at distribution centers, it would make sense to tag everything for all retailers. Our latest announcement drives that threshold down to 20%. We see only good things ahead for the RFID industry."

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IUID—State Of The Industry Report [Part 2]

ID Integration CEO/President Gary Moe continues his assessment of the U.S. Government's IUID program.

In our last issue, we had just finished discussing some of the positives affecting IUID (item unique identification). Continuing, Moe told us that the use of National Stock Numbers along with a scanning system is a very efficient way to track items. Obviously, scanning saves a huge amount of time over manual typing. He added that this can be used in our daily lives, as well as in government applications.

In 2010, a study titled: *Implementation of Item Unique Identification in **DoD** Logistics Processes*, was released by the Government's Logistics Item Unique Identification Task Force. The study concluded that targeting IUID to items that provide greatest benefit:

■ reduces IUID-managed population (from 325 million to 60 million items),
■ reduces implementation costs (from $12.4 billion to $7 billion),
■ reduces implementation time (from 15 years to 10 years),
■ optimizes benefits (payback reduced from 15–17 years to 5–8 years, including implementation time), and
■ supports the achievement of a clean DoD audit.

IUID Task Force Recommendations for the Joint Logistics Board were as follows:

■ Approve the task force approach.
■ Endorse revised policy recommendations to incorporate IUID across the item lifecycle.
■ Encourage budget priority for logistics IUID effort.
■ Support continuation of implementation working groups.

The entire document, which totaled 25 pages, was a resounding endorsement of IUID. In nearly every category, the Task Force showed how IUID provides value. Some of the major categories were property accountability, intensive item management, product lifecycle management, acquisition logistics planning,

acquisition suppliers, distribution centers, transportation, forward supply operations, depot maintenance activities, field maintenance activities, field unit operations, in-service engineering & logistics analysis, disposal, and logistics requirements.

The Task Force evaluated three value chains and 10 logistics nodes to determine and validate IUID requirements and apply a set of assumptions and ground rules to estimate the costs and benefits of implementing IUID. The result of this effort was a set of policy recommendations and follow-on work requirements.

In general, the Task Force found that IUID implementation will enhance and simplify serial item management (SIM) applications by standardizing previously disparate serial number schemas into a globally unique identification program and using a standard machine-readable mark for all IUID-eligible items procured by the **DoD**. Unique item identifiers (UII), when correctly assigned and maintained, provide the granularity of item information necessary to manage this population of items correctly. [*For a pdf copy of the entire report, email rickm@scandcr.com.*]

Gary Moe, CEO/president, ID Integration.

A big challenge

In past discussions with Moe, he noted that it can take a lot of time to implement direct part marking in suppliers' facilities. In addition to purchasing the proper marking hardware and chemicals, every drawing/blueprint/routing card must be updated with the new marking spec. With this in mind, we asked Moe who has the biggest challenges ahead— the government or its suppliers.

Although he doesn't deny that suppliers have some serious work to do to get IUID rolling, he still believes it is the government that has the most challenges. First, and not the least, is funding for the program. Anyone who reads the news knows that Congress is making huge budget cuts to reduce the deficit. In addition, the 2015 date for complete implementation seems aggressive to Moe. There are potentially 325 million parts in the field that may need direct part markings applied. Even if the government focuses only on high-value items, there would still be 65million and that's a sizeable number.

"Most likely, the DoD will take an 'opportunistic' path in marking parts in the field," Moe explained. "This means they will mark parts when they are removed for servicing. This will apply particularly to

anything that flies. But, it is imperative that labels don't fall off and get sucked into an engine or jam an actuator and down a helicopter.

"There are many things to look at when considering direct part marking," he continued. "How do you mark the part? Where do you mark the part? What type on marking method do you use? All are important. New markings on legacy parts help clean databases."

Penalties?

In some of the recent retail RFID initiatives, suppliers could face penalties for non-compliance. Moe said the same might hold true in IUID. "Poor markings could fall back on the suppliers," he told *SCAN/DCR*. "In retail, fines are levied for goods that come in with unreadable bar codes. It wouldn't surprise me to see the DoD issue similar policies."

Closing

Looking ahead, Moe believes AIDC vendors who do the proper legwork will see big benefits. "It's not a question of if it's coming," said Moe. "It's a question of when. Our business is steady, and new customers are always popping up. As an industry, we need to keep educating our government leaders if we want to see IUID ramp up more quickly."

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with the aerospace industry's RFID tagging mandates. Major players, such as **Boeing** and Airbus, are demanding seamless integration by all parties in their global supply chain. The solution calls for high-memory read/write tags, so information can be read, reviewed, and updated. Examples are who manufactured the part, when it was manufactured, when was the part installed on the plane/engine, what work was done, where, and by whom. It's a cradle-to-grave traceability system."

Anurag Naglal, OATSystems director of pre-sales, added, "Grease, dust, and chemicals can make bar code use less than ideal. Plus, bar codes don't allow for updates and for reading without a line of sight. RFID is much more useful and fits well in today's cloud computing technologies."

A time for early adopters

Much like recent movement in retail item-level tagging, the aerospace industry's initiative is still in the early adoption stage. In many ways, it

corresponds to work going on in the U.S. government's IUID program [*see separate story in this issue*]. The major difference is the aerospace plan centers more on RFID.

According to Sherman, Parker Hannifin's use of the OATSystems package is a starting point. Hopefully, the giant supplier will see the value of RFID and make its use ubiquitous throughout its operations.

"Grease, dust, and chemicals can make bar code use less than ideal. Plus, bar codes don't allow for updates and for reading without a line of sight. RFID is much more useful and fits well in today's cloud computing technologies."
Anurag Naglal,
OATSystems director of pre-sales.

When asked why Parker Hannifin chose the OATSystems offering, Everett DeGraaf, technology team leader, Parker Hannifin, stated, "We selected OATSystems because of the breadth and depth of its experience in providing solutions for a number of leading aerospace and defense manufacturers. OAT stands out for its experience in component tracking, work-in-process, and part marking in A&D, along with the integration expertise needed to enrich enterprise systems with real-time data. We're very confident in the OAT solution's ability to meet our needs both for ATA 2000 and in streamlining our internal operations."

Speeding adoption
Because of OATSystems' relationship with Checkpoint, Sherman is intimately aware of the current work being done by the **VICS/GS1** Item-Level RFID Initiative. He told us the aerospace industry could benefit from mirroring the retail program.

"Sharing information is always helpful in driving adoption of emerging technologies," Sherman told *SCAN/DCR*. "Quicker adoption speeds can lead to decreased installation costs. If every supplier must comply with the ATA Spec2000 RFID rollout, why not share information, so that the group, as a whole, doesn't keep making the same mistakes. Bring everyone to the table and have them share their experiences. All will benefit from this type of sharing.

"Aerospace traceability is going to be a huge application and will offer big opportunities to vendors who target this market," Sherman

continued. "RFID is a real money saver, and everyone will benefit from cooperation in the supply chain. Supply chain visibility is a must in today's business world. We already are seeing regular EPC Gen 2 passive tags on lower-value items. Now, we have the ability to offer high-memory tags for high-value items."

About the solution
Checkpoint/OATSystems doesn't make the tags. Rather, it recommends selected tag suppliers. It's the software and readers that come from the Checkpoint portfolio. Sherman said there are several tag/chip suppliers with strong credentials.

Spreading the word
We asked Sherman what the company is doing to get its message out to the thousands of aerospace suppliers around the globe. "We are reaching out to all potential customers," he answered. "Not all items on a plane are tagged with high-memory RFID. We determine which suppliers are likely candidates and then try to contact them. In many cases, these suppliers are contacting us."

"People trust us," Naglal added. "Checkpoint has always been involved in RF (radio frequency), so we are very well-positioned. The OATSystems acquisition was a strong purchase. It really gives Checkpoint a path into many new areas…many new RFID applications. OATSystems has a wide focus and a very interesting portfolio of solutions. Our customers can be found in supply chain, industrial, and manufacturing verticals. In the past four years, Checkpoint has transformed from strictly loss prevention to visibility on retail shelves and in the supply chain. It's going to be interesting to watch Parker Hannifin and see how far they go with RFID adoption."

Closing
The final words came from OATSystems General Manager Prasad Putta. He stated, "We are proud to welcome Parker Hannifin to our growing list of customers that have turned to us for our ATA Spec 2000-compliant solution as the starting point in their RFID adoption. This is a time of rapid change in the aerospace industry, leading to dramatic improvements in operating efficiency, cost reduction and safety. We look forward to working closely with Parker Hannifin and our other A&D customers to help them deploy RFID solutions to gain visibility into their assets, enhance traceability, and streamline operations."

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New Alliance Combines Strategic Marking Strengths

On March 29, **Spectrum Marketing and Communications** and **Mark Nelson Communications** announced a strategic partnership to provide B2B marketing and communications services to suppliers of AIDC technologies and solutions. Combining their knowledge of bar code, sensor, and other wireless information systems, the new partnership will enable clients across the entire spectrum of AIDC technologies to strategically raise the visibility, reputation, and value of their brands with an extended portfolio of high-impact, marketing, public relations, and communications services.

In a conference call with Bob Basmadjian, founder/president of **Spectrum Marketing & Communications** and Mark Nelson, founder/president of **Mark Nelson Communications**, the two men shared their thoughts on the new alliance. Basmadjian told *SCAN/DCR*, "Because of our past experiences in the AIDC industry, we are in a position to bring great value to the table when working with our clients. Users are looking for suppliers who can offer complete integrated solutions to their problems. Mark and I know all the major players in AIDC; we can help them reach out to each other and to combine their individual strengths.

"We also have worked with the leading standards bodies and educational organizations, such as **AIM**, **GS1**, and **Dash7**," he continued. "We know how their organizations operate and their individual missions. AIM is currently in a rebuilding mode. I believe the new Expo developed last year will be a major help to the organization and the industry. Technologies are converging, and we need a show that demonstrates to attendees how to combine and manage all AIDC offerings, not just RFID."

Nelson couldn't agree more. "We're going through a new era," he told us. "No single technology will solve all the needs of the government and commercial sectors. An ideal tracking solution will undoubtedly be a combination of bar code, wireless, RFID, and sensor technologies. Within the RFID arena, there are many frequency choices—each of which offers benefits for specific application needs. The market, today, is really growing. Our industry

Bob Basmadjian, founder/president, Spectrum Marketing & Communications.

Mark Nelson, founder/president, Mark Nelson Communications.

must be prepared to offer our technical expertise to potential customers. Bob and I can definitely help in this area."

The partnership leverages more than 25 years of proven successes in promoting businesses engaged in the AIDC marketplace. Since 1993, Spectrum has provided marketing and communications services to a wide variety of AIDC companies including AIM Global, **Checkpoint Systems**, GS1 US, **Matrics** (now **Motorola**), **RFID Journal**, **SATO America** and **TAGSYS RFID**. Nelson recently established his business after heading public relations and communications for a decade at **Savi Technology**, a **Lockheed Martin** company. Savi has a long history of taking the best technology the industry has to offer and combining it to make a better package for its customers.

Ann Grackin, CEO of **ChainLink Research**, commented, "At a time when all types of wireless-based solutions are growing at a healthy pace in a variety of vertical markets worldwide, this new alliance comes at an opportune moment for emerging and established companies to raise their visibility, grow market share, and enhance brand reputation. I've known Mark and Bob for years, and both bring trusted relationships and exceptional capabilities to their new partnership."

The two men intend to offer a well-rounded portfolio of services, including marketing kits, public relations, press release generation, white papers, media and analyst relations, and branding. "We can help our customers differentiate themselves from their competitors," said Basmadjian. "We understand the various vertical markets, and can match the marketing materials of our clients to the needs of each sector."

Nelson added, "We are also very up to date on the new forms of mass media and social networking, such as **YouTube**, **Facebook**, **Twitter**, etc."

For more information: **Mark Nelson Communications,** Palo Alto, CA, PH 650-537-373, Email: info@marknelsoncommunications.com, Web site: www.marknelsoncommunications.com; **Spectrum Marketing & Communications**, Whitehouse Station, NJ, PH (908) 823-9400, Email: spectrum_marketing@earthlink.net, Web site: www.spectrum-marketing.net. *SCAN*

SCAN/DCR MARKETWATCH
For April 15, 2011

AIDC Public Company Names	Phone	Exchange	Symbol	Close Price	52-Week Low	52-Week High	Dividend Yield	P/E Ratio	Last 12 Months
Astro Med	(401) 828-4000	NASDAQ	ALOT	7.75	6.54	8.30	3.60	27.68	0.28
Avnet Convergent Technologies	(480) 643-7291	NYSE	AVT	34.26	22.39	37.16	N/A	9.85	3.48
AXCESS Inc.	(972) 407-6080	NASDAQ	AXSI.OB	0.06	0.04	0.60	N/A	N/A	-0.09
Brady Corporation	(414) 438-6880	NYSE	BRC	37.01	24.22	37.38	2.00	20.45	1.81
Checkpoint	(800) 257-5540	NYSE	CKP	20.73	16.07	23.92	N/A	39.49	0.68
Cisco Systems, Inc.	(408) 526-8890	NASDAQ	CSCO	17.65	16.97	27.74	1.30	13.35	1.32
Cognex Corp.	(580) 650-3353	NASDAQNM	CGNX	28.80	16.76	34.97	1.10	18.95	1.52
CSP Inc.	(508) 663-7598	NASDAQ	CSPI	4.63	3.32	5.25	N/A	8.17	0.57
Danaher Corporation	(202) 828-0850	NYSE	DHR	51.55	35.24	53.01	0.20	19.53	2.64
Datalogic (Euros)	39 051 3147011	MILAN	DAL.MI	5.89	2.94	6.70	N/A	17.89	0.33
Dover Corporation	(212) 922-1640	NYSE	DOV	65.09	40.50	68.07	1.70	17.60	3.70
EMS Technologies, Inc.	(770) 729-6510	NASDAQ	ELMG	20.90	13.78	21.83	N/A	22.72	0.92
Honeywell	(973) 455-2000	NYSE	HON	58.30	37.89	60.02	2.30	22.51	2.59
Intermec Inc.	(425) 348-2600	NYSE	IN	10.55	9.51	14.25	N/A	N/A	-0.09
Itron	(509) 924-9900	NASDAQ	ITRI	54.50	50.76	81.95	N/A	21.29	2.56
ITW	(586) 752-5553	NYSE	ITW	80.50	40.33	56.36	2.50	18.42	3.03
Lockheed Martin Corporation	(607) 751-2690	NYSE	LMT	81.69	67.68	87.06	3.70	10.13	7.94
Motorola Solutions Inc.	(800) 262-8509	NYSE	MSI	43.86	36.52	64.61	N/A	23.44	1.87
NCR Corporation	(937) 445-5905	NYSE	NCR	19.05	11.30	20.62	N/A	22.87	0.83
Psion Teklogix (UK P)	(905) 813-9900	LONDON	PON.L	101.50	71.50	102.75	4.16	10.55	0.02
ScanSource	(864) 288-2432	NASDAQ	SCSC	36.21	22.98	39.93	NA	15.40	2.35
Unitech Electronics Co., Ltd.	886-2-89121122	GTSMCT	3652.TWO	34.50TWD	33.60	50.00	N/A	N/A	N/A
Zebra Technologies	(847) 793-6735	NASDAQ	ZBRA	38.42	24.14	41.46	N/A	21.71	1.77
Zetes Industries (Currency-Euro)	32(0)2 728 37 11	EURONEXT	ZTS.BR	18.35	14.60	18.65	N/A	N/A	N/A

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