



## ELECTRONIC MFG. SERVICES (EMS)

# How SAI's Service Package Simplifies Sourcing

By Wally Johnson, Vice President Sales and Marketing, Spectrum Assembly, Inc., Carlsbad, CA

**R**edefining contract manufacturing isn't simply a slogan at Spectrum Assembly, Inc. (SAI), it is a core part of the management culture. Founded in 1993, the electronics manufacturing services (EMS) provider is headquartered in a 40,000-ft.<sup>2</sup> facility in Carlsbad, CA.

As a full service turnkey contract manufacturer, SAI provides manufacturing and test of printed circuit board assemblies, complex box build and cable/harness assemblies. It serves customers in a variety of industries, including medical, defense, agricultural, industrial, audio/visual and lighting. The company is ISO 9001 and ISO 13485 certified, and ITAR-registered. Companies outsource to EMS providers because they want product built better, faster and at a lower cost than they could do it in-house. However, many customers have requirements that go well beyond the basic contract manufacturing business model.

### Packaged need combinations.

The team at SAI realized that most of their customers' requirements clustered around specific combinations of services. In addition, they found that customers new to outsourcing didn't always have a good understanding of the services they needed.

Their solution was to package the most popular support service combinations to make it easier for customers to compare the range of support offered with the other contractors they may be evaluating. The team also wanted to underscore the administrative and engineering support advantages SAI brings to the equation at critical points in the product lifecycle. The five core packages identified were:

**Quickstart**, which streamlines NPI with a robust assessment and qualification process.

**TeamAssist**, which supports customers who are new to sourcing by assigning a Tiger Team to fill gaps in documentation and required processes.

**Active Scheduling**, which supports high mix and/or variable volume projects' schedule flexibility requirements.

**Total Lifecycle Control**, which provides the right mix of support services from product concept through end-of-life.

**Unlimited Systems Solutions**, which utilizes SAI's system assembly expertise and vertically integrated cable manufacturing to provide high quality and cost competitive box build solutions.

Customers can source to SAI in the same way they would in any contract manufacturing relationship. But, the service package approach opens the door to more detailed discussion of specific support processes for customers with specialized requirements. For example, TeamAssist recognizes that companies new to outsourcing may not have documentation that is ready for transfer and

provides a team to evaluate deficiencies and ensure that everything needed for a smooth transfer is in place. Companies avoid outsourcing because they've never made the transformation from a manufacturing process supported by tribal knowledge to one that is self-checking and supported by well thought out and documented steps. Taking the proactive team approach saves time by clearly identifying potential issues before they become production delays.



*SAI's use of Aegis iView software combined with flexible production equipment helps support high mix projects.*

Conversely, SAI Quickstart focuses more heavily on identifying potential manufacturability issues and supporting the qualification process associated with new product.

Underlying the service package approach is a highly automated systems philosophy. Aegis Manufacturing Operations Software is a key component. Its iView module creates a paperless factory floor, making it easy to maintain revision control in documentation, create intelligent visual aids and include multimedia work instructions. In terms of customer benefits, the system makes it easy to upload customer data and then validate the bill of materials against the Gerber and PAD files. It also shortens project launch time as pick-and-place and AOI programming can be driven through the same data import, and makes engineering change order (ECO) implementation faster. SAI has also added LCD monitors at each workstation to support the conversion to a paperless environment. In addition to enhancing documentation control, it also speeds line changeover between products, since work instructions can be changed in seconds. These capabilities strongly support customers with SAI Quickstart and SAI Active Scheduling requirements.

Many of the company's projects also involve highly regulated products. Two additional Aegis modules, iTrac and iQ, are being deployed to enhance production status tracking, traceability and quality data collection. This supports both device

history record keeping for product requiring that level of traceability, and addresses requirements commonly found in SAI Total Lifecycle Control and SAI Unlimited System Solutions projects.

The company has also taken a proactive approach to ensuring material integrity. In addition, to good supply chain management practices, humidity-controlled towers are used to store components as part of line-side stocking programs. The towers serve two functions. First, they help ensure that components in open packages are not exposed to moisture. This can be particularly important for SAI ActiveScheduling projects, which may have high-mix, low-volume production supported by partial reels of components.

Second, the towers are linked to the MRP system and material is bar-coded. Production operators load SMT placement machines based on computerized work orders which the tower "kits."

When the job is finished, materials are scanned and placed back in the tower. SAI's redefinition of contract manufacturing focuses on making it easier for customers to define what they want in terms of services quickly and eliminating common inefficiencies through a strong systems approach.

*Contact:* Spectrum Assembly Inc., 6300 Yarrow Drive, Suite 100, Carlsbad, CA 92011 ☎ 760-930-4000 fax: 760-930-4008 E-mail: wally@saicorp.com Web: www.saicorp.com ☐



***Humidity-controlled component towers are linked to the MRP system and support line-side stocking.***