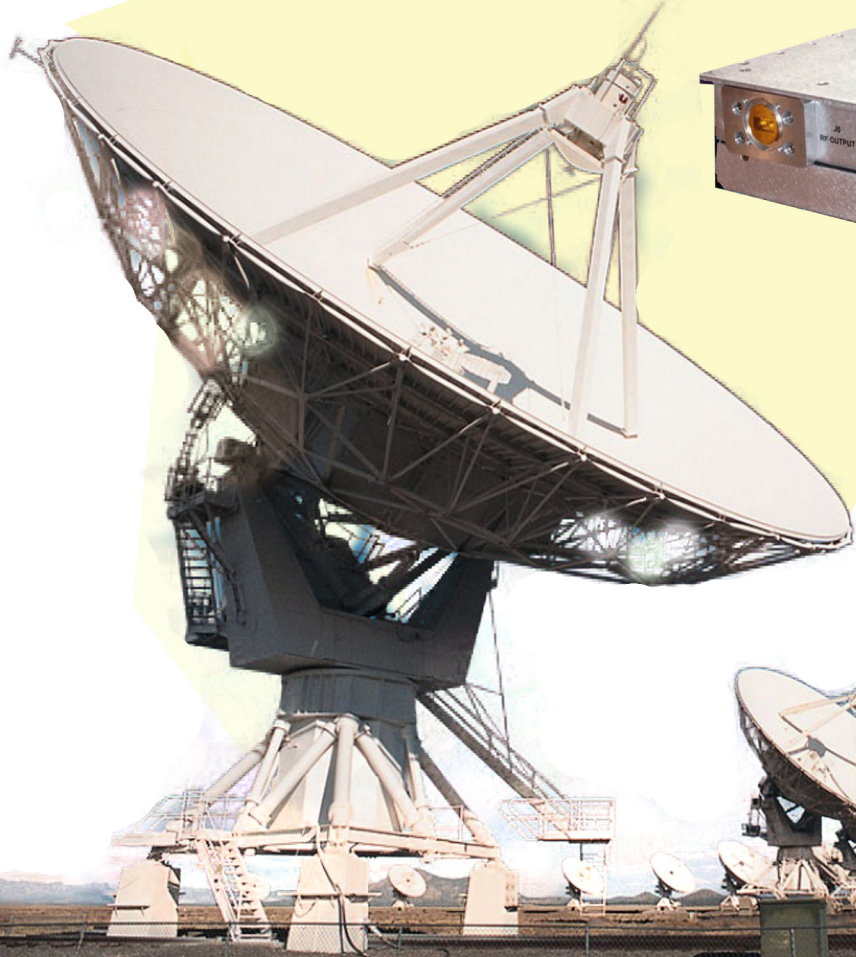
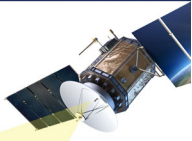


MARKET Briefs

Executive Summaries of Market Trends and Opportunities in Key Market Segments and Regions Worldwide

QUALITY CERTIFICATION for the **Satellite** **Ground Equipment**



Quality Certification for Satellite Ground Equipment

by Elisabeth Tweedie

The satellite industry has always been a competitive industry. It is also an industry where quality has been of the utmost importance. Once launched the typical lifespan of a geostationary satellite is anything from 12 to 20 years, with no opportunity to make any changes or improvements. Obviously, the same does not apply to ground equipment which is more accessible and can be updated if necessary. However, the high standards applied to satellite manufacturing have come to be associated with the industry as a whole; therefore, manufacturers of ground equipment strive to deliver the high level of quality.

The industry is currently going through a period of transition, as bandwidth prices are falling, new players are entering the business and the range of services offered is expanding. As a result of all of this change, and in order to stay competitive, the suppliers in the industry are becoming much more customer focused. For example, SES which for many years has been putting on “Industry Days” for its customers, where they are invited to come together and learn about the latest technologies; has recently taken this customer focus one step further, and appointed a Chief Services Officer (CSO). The remit of the CSO is to lead a single team charged with delivering exceptional services to SES’ Network and Video Division’s customers.

Another example would be teleport operators, who these days rarely sell bandwidth. Instead they sell a total package of managed services, providing a complete end to end service, including integration with terrestrial networks when needed. This not

only simplifies things for the customer, by giving them “one throat to choke,” a single point of contact, in what can be a very complex network, involving multiple vendors and technologies; it also provides a degree of “stickiness” for customer retention.

For an equipment manufacturer a different approach is needed demonstrate this focus on the customer. One approach that is being adopted by some companies, is obtaining ISO 9001:2015 certification. This is an internationally recognized quality standard.

The International Organization for Standardization (ISO) was founded in 1947 and is an independent, non-governmental organization (NGO). It is comprised of the standards organizations of the 164 member countries. It was established to help ensure that companies engaged in the design, development, manufacture, installation and service of any type of product, consistently meet international best practices and applicable regulatory requirements for quality management. The

certifications can also be awarded to companies that have an internal system for measurement that is directed toward meeting and exceeding customer needs and expectations.

The ISO facilitates world trade by providing common international standards, recognized by all member countries. Being a global industry, this is something that is particularly important for the satellite industry.

ISO 9001 is hardly new, it was first published in 1987, however it is regularly updated, to ensure that it remains relevant in the prevailing business climate. The standard sets out the requirements for a quality management system. The latest iteration was published in 2015. This revision takes into account the escalation in globalization and international trade, and the resulting complexity of supply chains. Increased access to information, has raised customer expectations, and frequently those of other interested parties as well. So, this revision incorporates elements such as a

stronger focus on stakeholders in the wider context of an organization, so as to fit the evolving needs of modern business.

The standard is designed to be flexible enough for use by different types of organizations. Therefore, it does not specify what the objectives relating to “quality” or “meeting customer needs” should be. Instead, it requires organizations to define these objectives themselves and focus on continuous improvement of processes in order to reach them.

ISO 9001:2015 is based on seven quality management principles [QMPs]. These principles are a set of fundamental rules, beliefs, norms and values, that are accepted as true and used as the basis for quality management. These, seven quality management principles are:

- Customer focus
- Leadership
- Engagement of people
- Process approach
- Improvement
- Evidence-based decision making
- Relationship management

Use of the standards helps in the creation of products and services that are safe, reliable and of good quality. Applying these standards help businesses increase productivity while minimizing errors and waste. The standards can also help a company enter a new market, as any company with the certification, is instantly recognized as one adhering to high standards, with a customer focus and one whose products reach internationally recognized standards.

Although the standard is not specifically targeted to the satellite industry, it nevertheless highly applicable and has been embraced by many companies. It gives customers the knowledge that a company having this prestigious certification, is one that maintains high standards not only in its operating procedures but also in its service to its customers.

Comtech Xicom, one of the world’s leading suppliers satellite uplink power amplifiers, is one such company that has embraced ISO 9001:2015. Comtech Xicom’s amplifiers are used by the military, and many commercial industries including broadcast, maritime, aeronautical, DTH and Satellite News Gathering (SNG) to name but a few. All of these have come to rely on Comtech Xicom’s focus on quality management.

ISO 9001:2015 Certified Ground Equipment Products

Santa Clara, California-based **Comtech Xicom Technology** provides a broad product line of KPAs, TWTAs, SSPAs and BUCs for worldwide satellite uplink covering C-, X-, Ku-, DBS-, Ka-, Q-band, Tri- and Multiband with power levels from 8 to 3,550 watts and available in rack-mount and antenna-mount ODU packages. Their products use the ISO process for development and production. Among the ISO certified products are its newly launched series of X-band solid-state power amplifiers (SSPAs) and block upconverters (BUCs).

The XTSLIN-25X, XTSLIN-80X, XTSLIN-150X and XTSLIN-250X lines of linear power X-band amplifiers provide the highest linear power density solutions available while drawing very low prime power and operating in the toughest environments. These units are designed to meet all RF requirements in challenging X-band networks, including Wideband Global Satellite requirements and support for multi-carrier systems. X-band is one of the most difficult satellite communications bands to operate in because the transmit and receive bands are directly adjacent. Xicom’s proprietary very-low leakage designs ensure that any transmit noise or spurious signals in the receive band is attenuated and contained to avoid disruption of the received signal, enabling multi-carrier operation with low Passive Intermodulation (“PIM”) antennas. These X-band SSPAs are all offered with optional built-in upconverters; with a range of monitor and control interfaces including SNMP; and options for redundancy or output power combining. The compact size and high efficiency of these units provide unparalleled linear power density, achieving 25W of linear output power (using MIL-STD-188-164 definition) with a 5.3 lb. package; and 150W linear output power with a 32 lb. package. These units operate air-cooled in -40C to +60C temperatures and meet stringent outdoor environmental requirements per MIL-STD-810G




For any company, customer satisfaction is not only a key performance indicator, it is also the driver for growth, letting customers know that you have this certification is a major factor in ensuring that satisfaction. As Mark Schmeichel, VP and General Manager, says: "At Xicom, we recognize that this achievement is not a standalone one. Through being certified to ISO 9001:2015 and complying with its guidelines and strategies, Comtech Xicom has linked customer satisfaction with technological prowess and quality management systems measurement, monitoring and improvements, to ensure new and existing products are developed and maintained in a consistent and focused structure."

Earning ISO 9001:2015 certification has resulted in the development of improved production processes and better operational efficiencies. Existing risk procedures and processes have also been strengthened through the certification process. The focus on quality and the streamlining of the development and production process has been a win-win situation. For Comtech Xicom it has resulted in consistent growth and innovation, as well as operating efficiencies. For the customers, it has resulted in improved relationship with Xicom, quality products and consistent innovation.

As well being an ISO 9001:2015 certified engineering and manufacturing organization,

most of Comtech Xicom's amplifiers are compliant with European CE-Mark requirements. Xicom is also WEEE compliant.

Other companies in the satellite industry that also have ISO 9001:2015 certification. It's an important benchmark in evaluating equipment providers. In an increasingly competitive environment, having ISO certification shows that a company is committed to high quality standards. 

Elisabeth Tweedie has over 20 years experience at the cutting edge of new communications entertainment technologies. She is the founder and President of Definitive Direction (www.definitivedirection.com), a consultancy that focuses on researching and evaluating the long-term potential for new ventures, initiating their development, and identifying and developing appropriate alliances. She can be reached at: etweedie@definitivedirection.com

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