



## Increasing demand

The world of satellite amplifiers is constantly evolving, becoming more cost-effective and efficient and able to handle high data rates. Satellite Evolution takes a look at the latest developments at Xicom, a leading amplifier manufacturer.

For the past two years Xicom has experienced a growth rate of 20 percent per annum and outgrown their facility on average every four years. That is a very impressive statistic. Established in 1991 and based in Santa Clara, California, Xicom also have offices in Maryland, Virginia and in the UK and manufacture and develop amplifiers for the commercial and military Satcom markets. In 2006, the company introduced a "shoebox" range of amplifiers, very small and easy to transport. Other amplifiers include travelling wave tube amplifiers (TWTAs), Solid-State Power Amplifiers (SSPAs) and Klystron Power Amplifiers (KPAs) operating in a wide range of communication frequencies. Amplifier products are available for fixed location and mobile applications and are packaged in rack-mount and antenna-mount Outdoor Units (ODU) configurations.

### Xicom expands X-band and Ku-band range

Xicom has announced the expansion of its X-band and Ka-Band uplink amplifier line for the new Wideband Global SATCOM (WGS) Satellite constellation. Deploying this year, the WGS system offers significantly higher data rate capability as compared to the DSCS III Satellite, and offers additional X-band capacity and new, dedicated Milcom Ka-band capacity.

Xicom introduced a total of 11 new amplifiers at the Satellite 2008 Conference in Washington D.C., including X-band and Ka-band TWTA's and SSPA's in indoor and outdoor packages. According to Walt Wood, CEO of Xicom Technology, "This new, expanded suite of products gives customers the world's largest selection of amplifiers for WGS applications, and further demonstrates our commitment to offering the cutting-edge products for Milcom applications."

Xicom's product offering covers power levels from 35W to 2500W in X-band, and 10W to 500W in Ka-band. Xicom HPAs include full

monitor and control via serial port connection, 25dB of gain control, internal filtering, and cooling. Available options include integral L-band input BUCs, Ethernet based monitor and control connections, power detection, and AC-to-DC power supply.

### Cost effective

Xicom has also introduced a new compact, solid-state, 100-watt, high power amplifier (SSPA) in a fully integrated antenna-mount package designed for low cost operation and longevity. The new SSPA, model XTS-100K1, is designed for SATCOM operation within the 14.0 to 14.5GHz Ku-band frequency with optional performance of 13.75GHz to 14.5GHz. The new antenna-mount SSPA eliminates the need to run a long expensive waveguide IFL from the HPA to the antenna. Additional benefits include complete self-contained digital monitor and control (M&C) interface, RF filters and cooling. A fully integrated power supply is used that accepts a wide range of prime power (90 to 264 VAC) and includes power factor correction. The compact amplifier measures 17.25 x 8.6 x 8.0 inches and weighs 42 pounds. The new 100-watt SSPA is targeted at both fixed and mobile users looking for small, lightweight high power solid-state performance. This is another example of Xicom's ability to continue to provide cutting-edge products and functionality that meet and exceed the requirements of the SATCOM market.

### Cost and performance

The demand for amplifiers, particularly in the Asian region for a wide variety of applications is becoming increasingly clear. Amplifiers are a vital part of satellite communications and are evolving as quickly as the rest of the industry. New and important innovations will help keep costs down without any loss of performance. ■

### Talking amplifiers

At CommunicAsia 2008, Brian Dolby of SatTV put some questions to Steve Walley, Marketing Director of Xicom:

**Question: Tell us a little about Xicom and its focus in the region.**

**Steve Walley:** Xicom has been in existence since about 1991. We're one of the largest high power amplifier suppliers in the world today, and we have been marketing pretty aggressively in Asia for the past ten years. We believe that we have one of the broadest product offerings of any of the amplifier companies with Travelling Wave Tube Amplifiers, Klystron Amplifiers and Solid State Power Amplifiers.

**Question: I believe that you are involved in the Olympics. Tell us more.**

**Steve Walley:** We have had a very active market so far in China this year. Business has been really good and one thing we have seen that has been a little of a surprise to us anyway was the fact that the Olympics are being broadcast in high definition which requires double the power out of the amplifier so we have seen a lot of the customers there upgrading their equipment such as SNG trucks using these high power amplifiers. So it has been a good year.

**Question: And what is new for you at Xicom?**

**Steve Walley:** We have a new Block Upconverter product – a Ku-band, 16-watt product that is in a box that is very, very small. It is one of the smallest on the market today. It is fully featured with filtering, and we are seeing sales starting right now in the US – we have some government customers there who are very interested in it. We are also seeing interest in Asia now for disaster communications for use with fly-away systems.