



[Murata Puts Antenna on a Chip](#)

[EDN Staff](#) - September 27, 1999

Murata Electronics North America Inc. (MENA) this week is rolling out a new version of its **Chip Multilayer Antenna** product that slashes the space required to implement antennas in wireless products.

The **LDA82** chip antenna supports frequencies ranging from 900MHz to 2.6GHz, making it suitable for applications including personal digital assistants, cordless telephones and wireless LAN cards. Unlike conventional wire antennas, the LDA82 comes in a small, surface mountable package that occupies minimal space on a board. It also requires a smaller protrusion-or no protrusion at all-from the chassis of a product, reducing the likelihood of antenna breakage.

The introduction of the LDA82 fits in with Murata's strategy to redefine itself. MENA's parent company Murata Manufacturing Co. Ltd. of Japan has long been known as one of the dominant players in the capacitor market. However, the company is now playing up its products in other areas, particularly in application-specific components and specialty products for applications including wireless, automotive products and PCs and peripherals.

In pursuit of that goal, the company is attempting to act as a partner with its customers in the early stages of a design concept.



John F. Denslinger, vice president of Murata Electronics North America

"By working with them on their product development and by extending our roadmap, we are delivering to our customers total packages that are married to their particular needs," said John F. Denslinger, vice president of MENA, Smyrna, Ga.

In the case of the LDA82, companies will have to face significant mounting and layout challenges to take advantage of its space-saving potential. MENA said it plans to work closely with a set number of companies to help them address those issues.

The LDA82 represents the second generation of MENA's chip antenna line, succeeding the first

product introduced in 1996. The new version offers higher performance, allowing it to address a larger number of high-volume markets.

In addition to the applications mentioned before, Murata sees the LDA82 being used for products that support the Bluetooth specification, which allows short range radio links between mobile PCs, mobile phones and other portable devices. The space savings of the device also could allow it to be used in cellular telephones that support multiple standards or that have additional functions, such as GPS or Bluetooth.

The device is based on Murata's **Low-Temperature Co-fired Ceramics** technology, which allows a high level of integration for individual components. The dimensions of the device are just 9.5mm x 2mm x 2mm and its weight is less than 0.3 grams.

The LDA82 is priced at \$1 in high volumes.