

Four Reasons Why You Need To Know About Phased Arrays

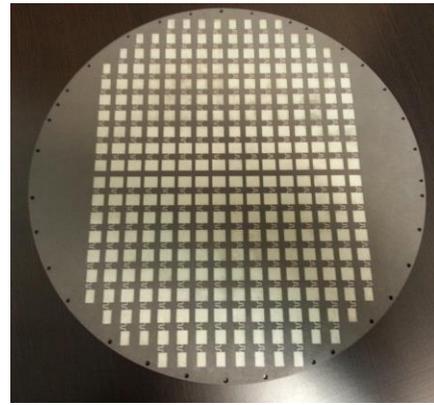


Image of a phased array developed by MPT

Phased arrays are used in radar and communication systems. They focus the communications signal and scan it to other areas electronically. Think of a satellite TV dish that can be repositioned to a new satellite electronically. Phased arrays are extremely common on fighter plane radar and missile defense systems. However, new commercial and consumer opportunities have emerged. As a result, the number of systems using phased arrays is expected to increase significantly over the next 5 years. This white paper reveals four of the reasons why you need to know about active electronically scanned arrays for communication and radar systems.

The Problem Solved

Phased arrays solve significant issues for many different types of systems. For instance, they solve the high data rate challenge in dynamic and changing environments.

Phased arrays are able to maintain a high level connectivity because the antenna beam can be scanned electronically. This allows the high gain antenna to remain “locked” onto the access point in a communication system.

For a radar system, the electronically scanned antenna beam is able to lock onto a target or scan very rapidly for new targets. For these reasons, active electronically scanned arrays are increasing in use.

Reason #1: Satellite Based Internet Access

Several companies are pursuing the deployment of satellite based internet delivery. These systems cannot use the more familiar satellite TV dishes which only work with geostationary satellites. Rather, these new systems will require the use of phased arrays for each user or group of users. Estimates are more

than 50 million phased arrays will be required. At \$250 each, this is a \$12.5B opportunity.

Reason #2: Internet of Things (IoT) Enabler

Phased arrays allow IoT solutions such as mobile phones and large area connectivity since the antenna beam can scanned to connect to individual devices.

Reason #3: High Data Rate Back Haul Systems

High data rate back haul systems and small cell networks for 5G benefit from phased arrays since they reduce interference and improve data rate.

Reason #4: U.S. Military Upgrades

The U.S. military plans to upgrade many existing radar and communication systems to use active electronically scanned arrays.

For More Information

For more information about how MPT can help with your phased array needs, feel free to contact us today at www.mptcorp.com

