

FEEDING THE WORLD WITH SMART AGRICULTURE

The world of agriculture is facing a daunting array of challenges with the global population predicted to reach nearly 10 billion by the middle of the 21st century. Agriculture must compete for land, as the growing population results in increased urbanization, and the search for renewable energy sources will see farmland taken over by solar and wind energy infrastructure.

PRODUCING MORE WITH LESS

Therefore, farmers are looking for ways to increase food production while using less land and fewer resources. However, agriculture has always been an innovative industry, and it is quick to adopt the latest technology. The need to produce more food for the growing population is being met by the latest developments in high-speed communication, which are delivering new solutions for farmers.

THE LATEST TECHNOLOGY

The introduction of 5G communications has huge potential for use in industry. The capabilities of 5G mean that it provides a powerful tool for the agricultural industry. Not only does 5G compete with the speed of wired alternatives, but it can also connect rural areas that have traditionally not had access to high-speed communications.

THE SMART FARM

This has enabled the creation of smart or precision farming. 5G communications provide connectivity across the large areas covered by the smart farm, allowing even its farthest reaches to be integrated into a unified network. This network encompasses the latest sensor, computing, and connectivity technologies, and uses data to enable farmers to maximize their yield.

The data collected is being used to help decide strategy. Studying soil conditions or monitoring the health of livestock allows the farmer to manage the best use of resources to ensure the greatest productivity. New technology is therefore vital to manage this information. Modern electronics offer reduced size, lower production costs, and efficient power consumption, and make it possible to deploy sensors and connected devices even in the remotest areas.



A TOUGH ENVIRONMENT

This new technology will be used in a variety of applications, including static sensors and the latest heavy machinery. Farming is a tough business, and equipment must be able to resist all extremes of weather. A wide range of temperature, moisture, and prolonged exposure to sunlight means that agricultural equipment must be designed with care.

RF COMMUNICATIONS

RF or radiofrequency communication is at the heart of many of these innovations. In the current age of digital technology, it is easy to forget that wireless systems still depend on high-frequency radio transmitters and receivers to communicate. With the latest equipment sending data at staggering speeds and volumes, designers depend on high-performance RF connectors.

THE MOLEX ADVANTAGE

Molex has many decades of experience manufacturing complete solutions for RF applications. Embracing the latest 5G technology and designed for superior signal integrity, Molex cables and connectors are available for frequencies up to 65 GHz, even in the tough conditions found in the agricultural industry. Partnered with Avnet's global reach, Molex is an innovation leader in the smart agriculture industry, providing connectivity solutions for tomorrow's farmers.

To learn more, please visit avnet-abacus.eu/molex