

# The importance of testing in electronic manufacturing

**T**HERE is undeniable opportunity in consumer and industry electronics, given the staggering size and diversity of the market, but electronic manufacturing is a competitive industry with high standards for reliability and performance, emphasising the need to reduce out-of-box and field failures. Testing throughout the manufacturing cycle is therefore vital to ensure products will work as intended, both functionally and within the conditions they will operate and during transportation.

In this arena, Grand Tellumat Manufacturing (GTM), a joint venture between Grand Parade Investments and the Tellumat Group, leads with a turnkey contract manufacturing and testing solution.

The company's experience in the market is

far-reaching, having been involved in everything from renewable energy, energy management, telecommunications, radio frequency equipment, televisions, set top boxes and even baby monitors and gambling slot machines.

Duncan Pollock, business development manager at GTM, says manufacturing processes invariably have process failures and faults. "To uncover as much as possible of it, you try to get as close to 100% test coverage as you can." That being said, customers have very particular testing requirements, "Some manufacture simple assemblies and have very basic requirements, while others need a complete functional test with 100% coverage."

"There are multiple strategies, and GTM accommodates all of them," says Pollock.

GTM also performs 'environmental' testing, says Greg Chin, GTM test engineer. This includes exposing avionics units or assemblies to extreme temperatures, vibration testing to ensure equipment can withstand transport over rough terrains, and testing to ensure a car radio will continue to operate over time when mounted in a particular environment.

"Pollock says a manufacturer must accommodate a wide range of customers. "If it's a large company, we can more easily offer a satisfactory array of tests that meets their needs. But often we encounter first-product entrepreneurs who are stunned when told of the need for testing. This often puts pressure on us to devise a suitably effective yet cost-efficient array of tests within a



very pressing time frame," continues Chin. GTM does the entire process under one roof.