

### / Case Study /

## The Department of Survey and Mapping Malaysia uses V110 rugged computer to enhance land surveyors' digital mapping efficiency

### / Challenge /

The Department of Survey and Mapping Malaysia often sends field agents to conduct topographic surveying and mapping work, which is critical for the country's development planning. They constantly cope with challenging conditions such as extreme temperature and weak signal reception and therefore are in need of high-performing rugged computers to help raise their work efficiency.

### / Solution /

Getac V110 rugged computer combines mobility, efficiency and safety. It features fast and precise GPS positioning, long-lasting battery life, display clarity under sunlight, certified dust and water resistance, wide operating temperature range and quick transformation from notebook to tablet, fully supporting surveyors working in the office or on the move.

### / Benefit /

JUPEM surveyors are able to complete their field assignments in extreme environments without a hitch thanks to Getac V110 and supported by Getac partner Cutz Technologies Sdn Bhd, delivering robust performance in a rugged package.

*"The users in land and survey department of Malaysia have given us the onus to deploy V110 as the field communicator on their field application for e-Kadaster. We have deployed nationwide across 11 states for the cadastral department field surveyors."*

TROY CH'NG WE KIAT, General Manager; Cutz Technologies Sdn. Bhd.



/ Getac V110 /  
Fully Rugged Convertible

## / Challenge /

Geographic information systems (GIS) are essential to development planning and policy implementation for modern countries. In today's world with frequent occurrences of natural disasters and unpredictable environmental changes, on top of global warming, geographic information serves as a fundamental basis for disaster prevention and forecast. GIS deployment and maintenance is an important part of national spatial data infrastructure (NSDI). In addition to making people's lives more convenient, GIS keeps a record of landscape information at different times including terrains, mountains and rivers as well as human activities such as land use, settlement distribution and political territories. It presents an overview of the people and objects and their interactions with the surroundings at a particular time and in a particular space. The endeavor to make digital geographic information available is of critical importance.



The Department of Survey and Mapping Malaysia - Jabatan Ukur dan Pemetaan Malaysia (JUPEM) is in charge of the nation's topographic surveying and mapping work and plays an indispensable role in keeping track of the changes in Malaysia's cultural life and natural environment. JUPEM surveyors often conduct field visits for precise gauging and detailed recording of the landscape. They make use of GPS coupled with information systems connected to the database to upload the field data, which is then used by the mapping team to update the digital maps that are available for access on the Internet.



As a country with a large territory, Malaysia covers different terrains including mountains over 4,000 meters high and tiny islands dotting its coastline. Take tropical Perlis in northern Malaysia for example. The



temperature can easily reach 40.1 °C, which poses challenging requirements on people and computer systems. Weak signal reception often results in GPS problems. Surveyors making arduous trips into remote areas can achieve nothing due to poor GPS signals.

## / Solution /

JUPEM selected Getac's V110 rugged computer mainly for its fast and precise GPS positioning and long-lasting battery life. Designed for operation in extreme environments, V110 combines mobility, efficiency and safety. Quickly transforming from notebook to tablet, V110 flexibly supports surveyors whether they are working indoors or outdoors. This is one more reason that V110 was picked over the competition.

V110 rugged computer provides accurate GPS coordinates at a fixed location. Using a Tri-Pass Through antenna, V110's GPS offers 2x search capacity, faster location positioning and enhanced accuracy to help users obtain important latitude and longitude coordinates. V110's hot-swappable dual-battery design supplies 2x battery capacity and ensures operation for an extended period of time. The system can maintain uninterrupted around-the-clock operation as users can replace one of the two batteries without having to shut down the system, which is particularly useful for people working on field assignments. V110 features an 11.6-inch display enabling clarity even in direct sunlight. Tested and certified to MIL-STD-810G and IP65 dust-proof and water-proof standards, V110 can operate in a wide temperature range between -21°C and 60°C, guaranteeing risk-free operation for people working outdoors.

## / Benefit /

JUPEM is particularly satisfied with V110's GPS and battery performance. Fast and accurate GPS positioning is instrumental to field agents' surveying and mapping work. It makes their work easy and hassle-free and more importantly, it improves their work efficiency. Furthermore, V110's hot-swappable dual-battery design accommodates the needs of long-time operation in the field. This enables a significant improvement to work efficiency and allows ample time for agents working in the field to gracefully deal with problems arising from

ever-changing outdoor conditions and wide-ranging interferences and thereby minimize risks. They can also prioritize their tasks with maximum flexibility to meet different requirements and carry out their field assignments in a more precise and timely manner. To JUPEM, Getac V110 rugged computer is a comprehensive solution that fulfills all their requirements. It protects against drop, vibration, and ingress of water and dust, which are common in an outdoor environment. It also overcomes the challenges of extreme temperatures.

With Getac V110 and supported by Getac partner Cutz Technologies Sdn Bhd, JUPEM can rest assured that its surveyors will be able to complete their field assignments without a hitch.



## / About JUPEM /

*JUPEM is among the oldest government agencies in Malaysia where measurement activities began in 1885 with the establishment of the Johor State Survey Department. Establishment of the Department continued with the establishment of JUPEM Sabah ( 1983 ), JUPEM Federal Territory of Labuan ( 1984 ), JUPEM Sarawak ( 1989 ) and concluded with the establishment of JUPEM Perlis in 1995. JUPEM is responsible for driving the country's development and serves as a government adviser in the field of surveying and mapping while conducting measurement and mapping works as the basis of socio-economic development and national sovereignty. Since its inception, JUPEM has planned various reforms and modernization to improve the quality of services and products offered. Starting from the use of conventional equipment to satellite applications, JUPEM is always up to date with the latest technological developments in the field of measurement and mapping.*

