

**ALPS Develops “UMSZ2 Series” Multi GNSS Module for Automotive Use**

*Multiple Positioning Systems Supported with a Single Module*

Duesseldorf, Germany, March 26, 2014 – ALPS ELECTRIC EUROPE GmbH has developed the “UMSZ2 Series” Multi GNSS Module for Automotive Use, providing support for multiple satellite positioning systems with a single module. Samples will be made available from April 2014.

Car navigation systems have become essential for driving comfort and require a global navigation satellite system\*<sup>1</sup> (GNSS) to be able to accurately display complex routes and junctions. A number of positioning systems are already in use, including the United States’ GPS and, in recent years, the Russian GLONASS and Chinese BDS. Europe, too, is readying for deployment of its Galileo system.

Because the positioning accuracy of satellite positioning systems can be improved by receiving signals from a large number of satellites, there is demand for modules that support multiple positioning systems. Some countries are even considering mandatory customs duties on products that are not compatible with their own positioning systems. Consequently, there is a growing requirement that product components also support multiple positioning systems.

Recognizing this need and conditions in the market, ALPS Electric has developed the UMSZ2 Series Multi GNSS Module for Automotive Use, which can receive signals from multiple GNSS. The UMSZ2 Series even allows simultaneous reception of signals from multiple positioning systems\*<sup>2</sup> with the single unit. It is a surface mount module with dimensions of 25.0 × 20.0 ×

2.6mm. Also equipped with an internal antenna status detection circuit, as required for GNSS signal reception, the module helps to reduce the customer's workload in designing and installing such circuits.

ALPS Electric harnessed RF circuit and software design technologies built up over the years to optimize the UMSZ2 Series' circuitry and create a single-package multi GNSS module. The time taken to acquire a position fix after turning on the system was also shortened, realizing the industry's fastest TTFF\*3.

Furthermore, the UMSZ2 Series can operate off a single 3.3V power supply despite simultaneously receiving signals from multiple GNSS. Eliminating the need for a multiple power supply contributes to greater freedom in system design.

A dead reckoning function for updating position information inside tunnels or in other areas where a signal is unavailable will also be added as an option.

## Features

### Multiple Positioning Systems Supported with a Single Module

- Supports GPS, GLONASS, BDS and Galileo (Galileo under development)
- The industry's fastest TTFF level
- Able to operate off a single 3.3V supply (not including antenna power)
- Internal antenna status detection circuit

\*1. Global navigation satellite system (GNSS): The general term for a system with global coverage that uses satellites to determine a current position on the ground

\*2. Type A supports GPS, GLONASS and Galileo (Galileo under development).

Type B supports GPS, BDS and Galileo (Galileo under development).

\*3. Time to first fix (TTFF): The time taken from turning on the system to acquisition of an initial position fix

## Principal Applications

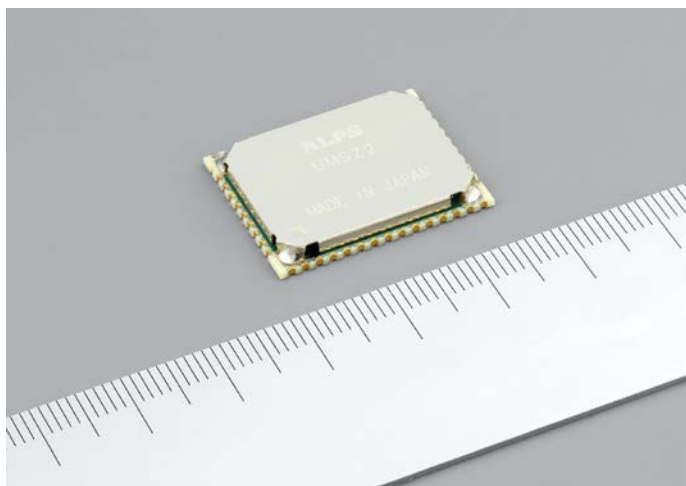
Car navigation systems and other automotive equipment

## Specifications

Model		UMSZ2 Series			
Dimensions (W x D x H)		25.0 x 20.0 x 2.6mm			
Supported satellites		GPS	GLONASS	BDS	Galileo (under development)
Frequency		1575.42 MHz	1598.0625 – 1605.375 MHz	1561.098 MHz	1575.42 MHz
Simultaneous reception	Type A	○	○	×	○
	Type B	○	×	○	○
Time to first fix (TTFF)	Hot start	1s			
	Warm start	28s			
	Warm start with instant fix	8s			
	Cold start	35s			
Sensitivity	Acquisition	-147dBm			
	Tracking	-160dBm			
Host interface		UART			
Mount type		Surface mount			

For more information on the new product please visit

[http://www.alps.com/products/e/npv\\_product/140326\\_UMSZ2/UMSZ2\\_E.PDF](http://www.alps.com/products/e/npv_product/140326_UMSZ2/UMSZ2_E.PDF)



**ALPS Electric Co., Ltd.**

ALPS Electric (Tokyo: 6770) is a leading global manufacturer of high-quality electronic components for mobile devices, home electronics, vehicles and industrial equipment. With the philosophy of "Perfecting the Art of Electronics" ALPS Electric supplies over 40,000 different components to about 2,000 companies all over the world. For more information, visit [www.alps.com](http://www.alps.com).

**ALPS ELECTRIC EUROPE GmbH**, a subsidiary of ALPS Electric Co., Ltd., was established in 1979. Since 1989 the European Head Office has been located in Düsseldorf, where a team of specialists works in Sales, Marketing, and Product Engineering. The activities of our branch offices in Munich, Paris, Milton Keynes, Gothenburg, and our sales office in Milan are coordinated from Düsseldorf.

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