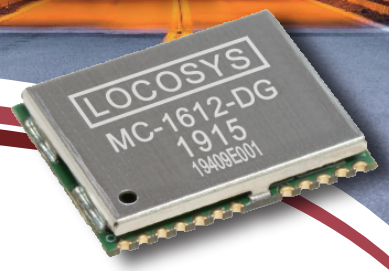
MC-1612-DG
MC-1612-DB

Single-Frequency, Multi-Constellation with ADR/UDR auto switch function



MC-1612-DG /-DB

LOCOSYS MC-1612-DG /-DB is a single-band multi-system with an ARM base processor. It not only supports GPS, GLONASS, BDS, GALILEO, QZSS and SBAS, but also has a flash memory, TCXO, RTC crystal, LNA and SAW filter, and embedded MEMS sensors (6-axis accelerometers gyros), 1-hole pressure (option) Micro-Electro-Mechanical Systems (MEMS) sensor, equipped with DR software. The extended Kalman filter algorithm combines GNSS and MEMS sensor data with a weighting function that relies on GNSS signal quality. With adverse GNSS conditions in urban canyons, tunnels or parking garages where DR boosts the accuracy, and the software fills the gaps. It supports three dimensional DR, Standard NMEA output including height, slope, message output, and so on and also fully supports various map mapping demand.

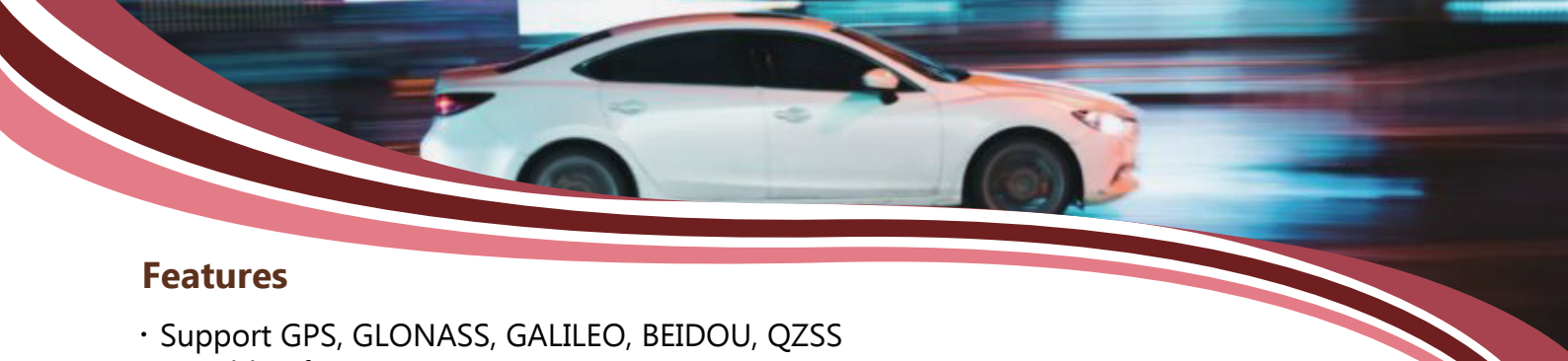
ADR mode, MC-1612-DG /-DB have high-precision positioning and dead reckoning performance, offers real-time 1.5m accuracy positioning and heading with low-power consumption. The software includes features to receive and use data from the built-in sensors along with external signals for wheel speed and Forward/Reverse direction. The vehicle signals are used to provide a high level of accuracy in the navigation solution. It features high sensitivity, low power and ultra-small form factor, and provide user the superior performance.

UDR mode, MC-1612-DG /-DB when under the environment with pool signal like tunnels, urban and under grounder also unable to gain the speed through vehicle, UDR will play the role to keep positioning by the built-in MEMS which means MC-1612-DG /-DB keeps to perform the capacity of seamless positioning with UDR where the application at the environment above.

LOCOSYS ADR/UDR software includes features to receive and use data from the built-in sensors along with external signals for wheel speed and Forward/Reverse direction. The vehicle signals are used to provide a high level of accuracy in the navigation solution.

MC-1612-DG /-DB multiple GNSS module with ADR/UDR auto switch function

MC-1612-DG /-DB offers the full-coverage positioning functionalities wherever the poor-signal environment or the installation position and keep to output high positioning performance for your applications might be under harsh environment. In the mean time, your design will be benefited from applying MC-1612-DG /-DB, the 3-in-1 solution so that easy to design (You can choose to have physical speed input or not)、saving time and efforts and boost the high positioning performance exceed your expectation.



Features

- Support GPS, GLONASS, GALILEO, BEIDOU, QZSS
- Capable of SBAS (WAAS, EGNOS, MSAS, GAGAN)
- Built-in LOCOSYS Dead Reckoning (ADR/UDR) both technology software
- Built-in MEMS sensor (3-axis Gyroscope and 3-axis Accelerometer)
- Support MEMS Raw data high update rate (up to 100Hz)
- Built-in pressure sensor (option)
- Fast TTFF at low signal level
- Great anti-jamming performance (due to multi-tone active interference canceller)
- Automatic configuration of wheel tick/speed input
- Support sensors data feed through the UART port
- Support Odometer (wheel-tick pulse) input
- Support ADR/UDR automatic fast learning calibration
- Small form factor 16 x 12.2 x 2.4 mm
- SMD type, RoHS compliant
- LOCOSYS IATF 16949 quality control

Model	MC-1612-DG MC-1612-DB
Constellation	GPS、GLONASS、Beidou、Galileo、QZSS
ADR	●
ADR /UDR auto switch	●
AEC-Q100	(Option)
Update Rate	1 HZ / 10 HZ (Option)
MEMS	3-axis Gyroscope 3-axis Accelerometer
MEMS Raw data update	100 HZ
Automatic fast learning calibration	●
Low-power consumption	●
Operating temp. −40 °C to +85 °C	●
Vehicle Speed Interfaces	ODO、UART
Protocols	NMEA 0183 / MEMS Raw Data output
Power Supply (V)	3.0 ~ 3.6
Size (mm)	16 x 12.2 x 2.4
LOCOSYS IATF 16949 certified production sites	●

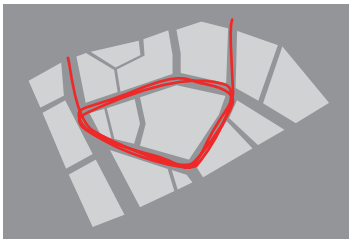
Note : The above specifications are subject to the announcement.
* ADR stands for Automotive Dead Reckoning
* UDR stands for Untethered Dead Reckoning

Application

◎Autonomous Vehicle Guidance
◎Autonomous Vehicle (ex: AVN/T-BOX/HUD)
◎Internet of Vehicles
◎Unmanned Aerial Vehicles
◎Precision Agriculture
◎Hand-Held Device
◎AGV Robotics
◎V2V / V2X System
◎Geographical measurement
◎Geographical survey points
◎Offshore / Marine applications
◎Tracker

GNSS Only

GNSS + UDR



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RoHS

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