



HD8089A SERIES AUTOMOTIVE GRADE GNSS CHIP

INTRODUCTION

The HD8089A series is an automotive grade GNSS SOC solution targeting for the fleet management, logistic transportation and smart driving markets. The new generation GNSS engine, combined with MEMS sensors, is optimized to offer a seamless experience in dense urban canyons and indoor parking lot. The HD8089A gives the shortest time to position fix and continues to work wherever they are.

HD8089A meets the automotive requirements in ultra-low product defect rate for all kinds of working environment. Its special designed firmware fulfills the requirements for automotive applications, such as smart driving, the internet of vehicles, TBOX, and UBI, which simplifies the development process and reduces time to market.

HIGHLIGHTS

- Concurrent GNSS reception
- Beidou system support readiness
- Intelligent power control mechanism
- Jammer detection and suppression
- AEC-Q100 qualified

APPLICATIONS

- GNSS modules
- Smart driving
- Fleet management
- Internet of vehicles



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GENERAL SPECIFICATIONS

GNSS Engine

New Generation GNSS Engine
50 channels&DSP hardware acceleration

Satellite Reception

GPS/QZSS, Beidou, GLONASS, Galileo,
WAAS, EGNOS, MSAS, GAGAN, SDCM

Position Accuracy

GNSS	2.5m CEP
SBAS	2.0m CEP

Velocity & Time Accuracy

GNSS	0.1m/s CEP
SBAS	0.05m/s
1PPS	25ns

Time to First Fix(TTFF)

Cold start	30 secs
Hot start	1 sec

Sensitivity

Autonomous	-146dBm
Navigation	-162dBm

Operation Limit

Velocity	515 m/s
Altitude	18,000 m

Operation Condition

Main voltage	1.8V
Digital I/O voltage	1.8V/3.3V
Backup voltage	1.6 ~4.3V
Operation power	52 mA
Standby power	7uA

Safety Supervision

Short circuit protection
Low voltage detection

Others

Oscillator	Crystal or TCXO
RTC	32768Hz(optional)
Storage	16Mbit SQI flash

Serial Interface*

CAN	2
USB (FS, 12Mbps)	1
UART	3
SSP (master)	1
I2C (master)	1
ADC (10bit)	2
Ext. interrupt	12
Digital I/O	12

Dead reckoning

Gyroscope
Accelerometer
Speedometer

PACKAGE

Format	QFN56
Size	7.0mm x 7.0mm

ENVIRONMENT DATA

Operation temperature	-40 to +85°C
Storage temperature	-40 to +125°C
Certification	AEC-Q100

ORDERING INFORMATION

HD8089A	QFN56
HD8089AF	QFN56

CONTACT US

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