



OPUS III ezRide

32 Channel GPS/AGPS Receiver Module



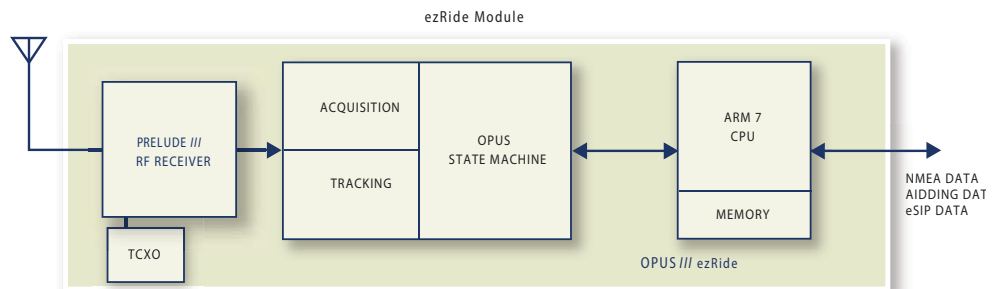
OPUS III ezRIDE is a high-sensitivity, complete GPS/AGPS receiver module that combines a hardware measurement platform (MP) with eRide's powerful navigation software integrated onto ARM 7 microprocessor. It delivers fast, accurate positioning data in challenging locations like indoor environments and deep urban canyons.

ezRide is based on **OPUS III** technology and includes the **Prelude III RF Receiver IC, OPUS III Baseband IC**, an ARM7 /TDMI microprocessor , on-board voltage regulator, a saw filter and various matching and peripheral components in a small form factor. It is your complete GPS/AGPS solution with only an external GPS antenna and power supply required.

ezRide has been engineered specifically for mobile and embedded applications such as Personal Navigation Devices, where performance, time to market and ease of integration are prime considerations.

KEY FEATURES

- Versatile:** 32 Channel GPS Receiver Module operates in Autonomous and / or Assisted-GPS mode
- Ultra-high Sensitivity:** -161 dBm sensitivity in acquisition and tracking ensures position fix availability indoors, outdoors and in urban canyons
- Fast:** < 1 sec TTFF ensures user satisfaction
- Highly Accurate:** 2.5 m outdoor, 10 m indoor typical with live-sky measurements
- Easy Integration:** Optimized RF and Digital design ensures GPS performance Standard SMD package, NMEA output ease GPS system integration
- Low Power:** 200 mW power consumption while tracking with intelligent power management to extend battery life in handheld products
- Dual GPS/AGPS Modes :** Complete Autonomous GPS mode with (and / or) Simple Assisted GPS mode for Plug and Play solutions
- Small Size:** 25 x 25 x 3 mm small form factor for SMD compact designs
- Assisted-GPS Mode:** Assisted-GPS Navigation software and other eRide software plug-ins easily integrated into Opus III ezRide



The ezRide Module is a complete GPS receiver, combining eRide's OPUS III's high sensitivity positioning engine with an ARM 7 CPU and highly integrated peripheral components, to offer state-of-the-art GPS receiver performance. Its high level of integration reduces to a minimum the needs for design and system integration and allows you to take your new GPS products up and running and off to the market, quickly and efficiently.

32 Channel GPS/AGPS and 2 Channel SBAS Receiver Module

KEY SPECIFICATIONS

Receiver Type:	L1, C/A Code 32 Channel Acquisition 12 Channel Tracking 2 Channel capable SBAS (EGNOS, WAAS and MSAS)
Maximum Update Rate:	1 Hz
Position Accuracy:	Outdoors ¹ : 2.5 m, 50% CEP, Open Sky ¹ Indoors ² : 10 m, 50% CEP
Start-up Times:	Hot Start: Outdoors ¹ : < 1 sec Typ, Indoors ² : < 10 sec Typ Warm Start: 34 sec Typ @ -135 dBm Cold Start: 35 sec Typ @ -135 dBm
Sensitivity:	Acquisition, Reacquisition & Tracking: -161 dBm, variable update rate
Supply Voltage:	ezRide Module Voltage Range is 3.3 to 5.0 Volts
Power Consumption:	Real Time Clock (RTC) Mode: 5 mW Track Mode, Outdoors: 200 mW Track Mode, Indoors: 350 mW Search Mode: 400 mW
Operating Temperature:	-30° to +85°C
Package and Ordering:	25.4 mm (L) x 25.4 mm (W) x 3.0 mm (H) SMD Module with dual edge SMD Pattern P/N: eMD3500F, Opus III ezRide Module

INTERFACES

Protocols:	NMEA 0183, Aiding Protocol eRide Standard Interface Protocol (eSIP)
Processor:	Embedded ARM7/ TDMI
Serial Ports:	Single Serial UART
Digital I/O:	3.3 Volt CMOS Digital Levels
Antenna Interface:	Either RHCP Passive and / or Active GPS Antenna

DATA SHEETS AND EVALUATION KITS AVAILABLE

eRide, Inc. is a fabless semiconductor company that develops advanced satellite navigation solutions. eRide products help fuse wireless technology with the internet, enabling the rollout of mobile commerce and location-based services. Our products are designed to be easily integrated and scalable, and to help ensure end-user satisfaction and loyalty. They include ultra-sensitive GPS chipsets, as well as navigation and server software.

1. Open Sky: All visible satellites with received power at -140 dBm or higher.
2. Indoors: All visible satellites with power levels at -153 dBm or lower

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The ezRide module (eMD3500F) is housed in a 25.4 x 25.4 x 3.0 mm SMD package that includes all the required components for a complete GPS/AGPS solution.

Combined with an external (passive and / or active) GPS antenna and power supply the ezRide offer a complete GPS/AGPS solution.



Enabling Satellite Navigation

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