



# OPUS III ezRide - 22

32 Channel GPS/AGPS and 2 Channel SBAS Receiver Module



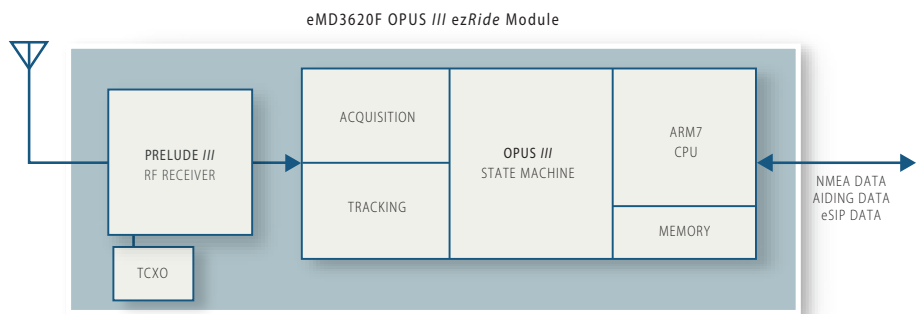
**eMD3620F ezRide-22™** is a high-sensitivity, complete GPS/AGPS receiver module that combines a hardware measurement platform with eRide's powerful navigation software integrated onto ARM 7 microprocessor. It delivers fast, accurate positioning data in challenging locations like indoor environments and deep urban canyons.

**eMD3620F ezRide-22** is based on OPUS III™ technology and includes the **ePV3600B** and the **ePR3036Q IC's**, a TCXO, two SAW filters 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.

**eMD3620F ezRide-22** has been engineered specifically for automotive applications such as Car Navigation Devices and Fleet Management, 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:** 125 mW power consumption while tracking, 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:** 22 x 22 mm total footprint for SMD compact designs
- Assisted-GPS Mode:** Assisted-GPS Navigation software features are already embedded into eMD3620F ezRide-22



The eMD3620F 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

<b>Receiver Type:</b>	L1, C/A Code 32 Channel Acquisition 12 Channel Tracking 2 Channel capable SBAS (EGNOS, WAAS and MSAS)
<b>Maximum Update Rate:</b>	1 Hz
<b>Position Accuracy:</b>	Outdoors <sup>1</sup> : 2.5 m, 50% CEP, Open Sky <sup>1</sup> Indoors <sup>2</sup> : 10 m, 50% CEP
<b>Start-up Times:</b>	Hot Start:      Outdoors <sup>1</sup> : < 1 sec Typ,   Indoors <sup>2</sup> : < 15 sec Typ Warm Start:     33 sec Typ @ -135 dBm Cold Start:      34 sec Typ @ -135 dBm
<b>Sensitivity:</b>	Acquisition, Reacquisition & Tracking <sup>3</sup> : -161 dBm, variable update rate
<b>Supply Voltage:</b>	3.0 to 3.6 V
<b>Power Consumption:</b>	Real Time Clock (RTC) Mode: 25 µW Track Mode, Outdoors: 125 mW Track Mode, Indoors: 185 mW Search Mode: 195 mW
<b>Operating Temperature:</b>	-40°C to +85°C
<b>Aiding:</b>	Message based, though bidirectional NMEA serial port (requires mobile network access)
<b>Package and Ordering:</b>	22.0 mm (L) x 22.0 mm (W) x 3.0 mm (H) SMD Module with dual edge SMD Pattern P/N: eMD3620F

INTERFACES

<b>Protocols:</b>	NMEA 0183 eRide Standard Interface Protocol (eSIP)
<b>Processor:</b>	Embedded ARM7TDMI®
<b>Serial Ports:</b>	Single Serial UART
<b>Digital I/O:</b>	3 Volt CMOS Digital Levels
<b>Antenna Interface:</b>	RHCP Passive GPS Antenna

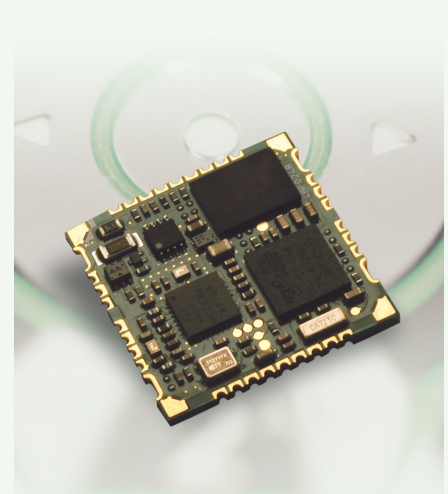
DATASHEETS AND EVALUATION KITS AVAILABLE

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  
3. with external LNA

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The eMD3620F ezRide-22 module is housed in a 22.0 x 22.0 x 3.0 mm SMD package that includes all the required components for a complete GPS/AGPS solution.

Combined with an external passive GPS antenna and power supply, the eMD3620F ezRide-22 offers a complete GPS/AGPS solution.



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