



OPUS ONE compactRide

32 Channel GPS/AGPS Receiver Module

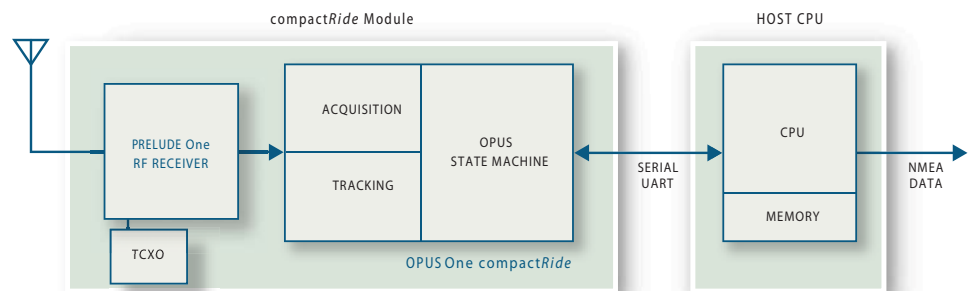


compactRide is a compact high-sensitivity, low-power GPS/AGPS module that integrates eRide's hardware measurement platform (MP) into a single, compact and easy to integrate SMD device. Combined with eRide's powerful navigation software running on a host microprocessor, the module offers a complete high performance GPS receiver.

compactRide is based on **OPUS ONE** technology and includes the **Prelude One RF Receiver IC, OPUS One Baseband IC**, a saw filter, the TCXO and various matching and peripheral components in a small form factor suitable for a broad spectrum of GPS applications where performance, cost and time to market are prime considerations.

FEATURES

- Versatile:** 32 channel receiver integrated module operates in Autonomous and Assisted-GPS mode
- Compact Size:** 13 x 18.5 mm small form factor SMD solution supports highly compact designs cost effectively
- Ultra-high Sensitivity:** -157 dBm sensitivity ensures position fix availability indoors, outdoors and in urban canyons
- Fast:** < 4 sec TTFF ensures user satisfaction
- Highly Accurate:** < 7 m outdoor, < 30 m indoor
- Easy Integration:** Optimized RF and electrical design ease GPS system integration Standard SMD package enables cost-efficient, high volume production
- Simple, Low cost:** Host based: leverages resources of host CPU and memory Navigation software runs in background, requires under 6 MIPS
- Low Power:** 135 mW power consumption including TCXO and peripherals intelligent power management helps extend battery life
- Scalable:** Navigation software and drivers easily matched to memory footprint and processing power availability on host system



The OPUS One Module is a hosted solution, so it reduces system power consumption, eliminates redundant resources, and lowers costs. eRide has the tools and the engineering team support it takes to get your new GPS-equipped products up and running and off to market, quickly and efficiently.

32 Channel GPS/AGPS Receiver Module

SPECIFICATIONS

Receiver Type:	32 Channel Acquisition 8 Channel Tracking L1, C/A Code
Maximum Update Rate:	1 Hz
Position Accuracy:	Outdoors ¹ : < 7 m, 50% CEP, Open Sky ¹ Indoors ² : < 30 m, 50% CEP
Start-up Times:	Hot Start: Outdoors ¹ : < 4 sec Indoors ² : < 20 sec Warm Start: < 37 sec Cold Start: < 44 sec
Sensitivity:	Acquisition & Tracking: -157 dBm, 2.5 sec update rate -155 dBm, 1 sec update rate
Supply Voltage:	OPUS One Core: 1.2 V RF and I/O: 3.0 V
Power Consumption:	Deep Sleep Mode: < 99 µW Search Mode: 190 mW Track Mode: Outdoors: 135 mW Indoors: 180 mW
Operating Temperature:	-30° to +85° C
Package & Ordering:	18.5 mm (L) x 13.0 mm (W) x 2.5 mm (H) SMD Module with QFN Pattern P/N: eMD1000K, Opus One compactRide Module

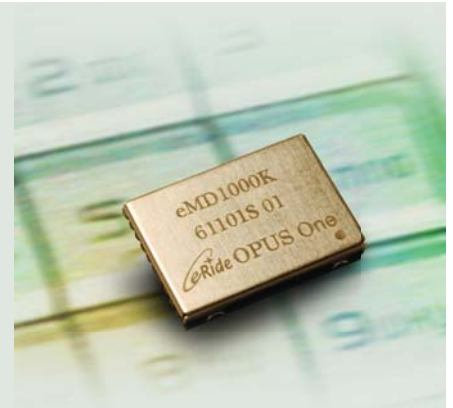
HOST ENVIRONMENT

Host CPU Load:	6 MIPS
RAM:	128 KB
ROM/Flash:	256 KB
Host Processor:	ARM, Strong ARM, Pentium, SH, Motorola, NEC, Samsung
Host OS:	Single thread, OS independent

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



The compactRide module (eMD1000K) is housed in a 18.5 x 13.0 x 2.5 mm 20 pins SMD package, that includes all RF matching elements, an RF SAW filter, thermal components and the TCXO crystal reference. Combined with eRide's navigation software, the

CompactRide offer a complete and easy to integrate miniaturized GPS/AGPS solution.



Enabling Satellite Navigation

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