OPUS *IIIez*™

32 Channel GPS/AGPS and 2 Channel SBAS Receiver Chip Set

OPUS *IIIez*™ is e*Ride*'s latest generation of GPS technology, defining Satellite Navigation to new performance heights.

Engineered as a complete solution highly integrated architecture, **OPUS *IIIez*™** provides unparalleled performance by combining a hardware measurement platform with powerful navigation software running on an embedded controller. It delivers fast, accurate positioning, velocity and timing (PVT) data ideal for wireless applications and handheld system in challenging locations like indoor environments and deep urban canyons.

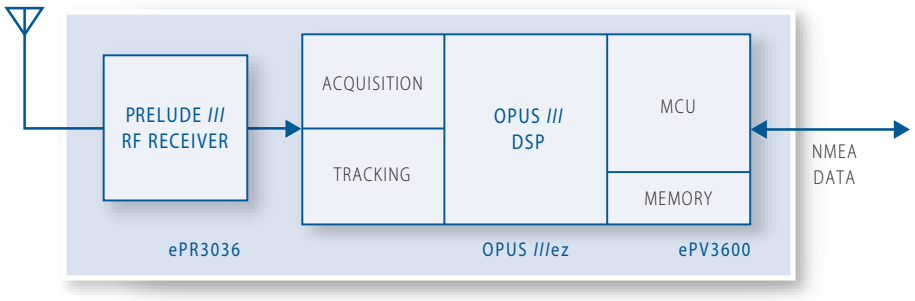
This chipset includes the **ePV3600 OPUS *IIIez*™ Baseband IC** and the **ePR3036 Prelude *III*™ RF Receiver IC**. The navigation software runs on an embedded MCU, resulting in a GPS/A-GPS solution that offers a small footprint, low power consumption, and real cost savings.

ePV3600 baseband employs novel decoding algorithms, effectively achieving 44,000 correlators. Taking measurement data through a single input from the RF receiver, it supplies position, velocity and timing data through a simple serial interface and set of commands. ePR3036 combines an LNA with an image-reject mixer/RF-AMP, a bandpass filter, an AGC, and a fully integrated VCO/PLL..

FEATURES

Versatile:	32 channel receiver/baseband processor chip set operates in Autonomous and Assisted-GPS mode and 2 Channel Real Time Differential GPS with SBAS
Ultra-high sensitivity:	-161 dBm sensitivity in both acquisition and tracking ensures position fix continuity indoors, outdoors and in urban canyons
Fast:	< 1 sec TTFF ensures user satisfaction
Highly accurate:	2.5m outdoors, 10 m indoors typical, live-sky measurements
Low power:	90 mW power consumption while tracking indoor, with intelligent power management to extend battery life in handheld products
Simple, low cost:	Highly integrated solution, single rail supply. Position, speed, time, and aiding data over bidirectional industry standard NMEA interface
Easy integration:	Connects to application via serial port
Miniature size:	Total footprint supports miniaturized designs
Flexible:	Supports embedded ROM and/or external Flash mode

OPUS *IIIez* CHIPSET



The **Opus *IIIez*™** chipset is a highly integrated solution, with on-chip MCU, ROM, and navigation software, so it facilitates system power system integration, reduces time to market, and lowers costs. e*Ride* has the tools and the engineering support team it takes to get your new GPS-equipped products up and running and off to market , quickly and efficiently.

OPUS *IIIez*™

ePV3600
ePR3036

32 Channel GPS/AGPS and 2 Channel SBAS Receiver Chip Set

SPECIFICATIONS

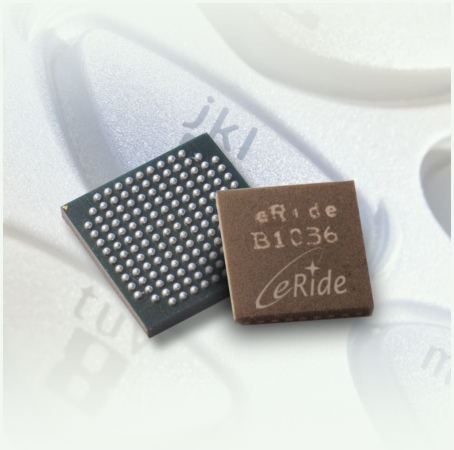
Receiver Type:	L1, C/A Code 32 Channel Acquisition 12 Channel Tracking 2 Channel capable SBAS (EGNOS, WAAS and MSAS)
Maximum Update Rate:	1 Hz
Position Accuracy:	Outdoors: 2.5m, 50% CEP, open sky Indoors: 10m, 50% CEP
Start-up Times:	Hot Start: Outdoors: 1 sec typ, Indoors: < 15 sec typ Warm Start: 33 sec typ @-135 dBm Cold Start: 34 sec typ @-135 dBm
Sensitivity:	Acquisition, Reacquisition & Tracking: -161 dBm, variable update rate
Supply Voltage:	ePR3036: 3.0V +/-10% ePV3600: 2.7V - 3.6V single rail, or 2.7 - 3.6 and 1.8/1.0V +/- 10% ext.
Power Consumption:	Deep Sleep/RTC Mode: 20 µW Search Mode: 94 mW Track Mode: Outdoors 70 mW Indoors 90 mW
Operating Temperature:	-40°C to + 85°C
Package:	p/n: ePV3600 Baseband IC: 7.0 x 7.0 x 1.2 mm, TFBGA ePV3600 Baseband IC: 3.4 x 3.4 mm Solder Bump p/n: ePR3036 RF Receiver IC: 5.0 x 5.0 x 0.75 mm, QFN ePR3036 RF Receiver IC: 2.6 x 2.6 mm Solder Bump
Aiding:	Message based, though bidirectional NMEA serial port (requires mobile network access)

EMBEDDED MICROCONTROLLER

Embedded Processor:	ARM7TDMI-S®
CPU Load:	5 - 9 MIPS
RAM:	160 KB
ROM:	384 KB
I/F:	2 UART's, SPI, I2C, 8 GPIO's

eRide, Inc. is a fabless semiconductor company that develops advanced satellite navigation solutions. e*Ride* 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.

ePB-3600B0001-00A



The ePV3600B **OPUS *IIIez*™ PVT** *baseband chip is housed in a 7.0 x 7.0 x 1.2 mm TFBGA package. The ePR3032Q* **Prelude *III*™ RF** *chip is housed in a 5.0 x 5.0 x 0.75 mm QFN-28 package. Together they offer a complete GPS/AGPS solution.*

eRide™
Enabling Satellite Navigation

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