



### GREENPEAK LAUNCHES THE EMERALD GP500C COMMUNICATIONS CONTROLLER

*GreenPeak introduces the first ultra low power transceiver-centric communications controller chip for wireless sensor networks*

June 10, 2008 - Utrecht – The Netherlands – GreenPeak Technologies, a leader in battery-free and therefore maintenance-free communication technology for wireless sense and control applications, today announced the Emerald GP500C communications controller chip for ultra low power wireless sensor networks.

The Emerald GP500C is the only IEEE 802.15.4 standard compliant chip available today with extreme low power features that enable energy harvesting solutions for wireless sensor networks. GP500C-driven networks powered by energy harvesting bring true maintenance-free operation.

The Emerald GP500C is a standards compliant communications controller that incorporates a transceiver with a fully integrated communications layer and an on-chip energy manager. Unlike other solutions on the market, the Emerald GP500C device is an “autonomous transceiver” able to drive and control the data communication instead of being driven by a microcontroller. By greatly reducing energy consumption, this ground-breaking architectural concept enables end nodes to run on energy harvesting devices and to be truly wireless, free of power cords and free of batteries

Cees Links, CEO of GreenPeak said: “Ultra low power consumption in wireless sensor networks is the determining precondition needed for mass market adoption: it enables battery-free and therefore maintenance-free and truly green wireless sensor networks. Beyond that, the GP500C is a low cost solution which enables manufacturers to provide standard-compliant two-way communication for remote wireless light switching and dimming, HVAC control, access control and automated metering.” Links continued, “The key for sense and control networks is: reliable communications without creating a maintenance burden. This is what customers have repeatedly told us.”

Roy Freeland, Chief Executive of Perpetuum Ltd - world leader in vibration energy-harvesting adds: “Energy harvesting is the preferred solution for powering wireless sensing and this new ultra low power GreenPeak communications controller chip is an important step in developing the enormous potential of this technology.”



In addition to being best in class for energy consumption, GreenPeak's radio creates superior reliable communication over a significant indoor range (30-50m, 100-150 feet) because it utilizes embedded hardware based antenna diversity that reduces dead spots. Furthermore, the Emerald includes other link reliability features such as message-over-message enabling, excellent sensitivity, a robust signal processing engine and interference detection and avoidance mechanisms.

Designs using the Emerald GP500C communications controller are fully IEEE 802.15.4 compliant. Developers have the option to use GreenPeak's ultra low power networking protocol which reaches beyond standard implementations while maintaining standard compliance.

The Emerald GP500C only consumes a fraction (10-25%) of the energy of traditional microcontroller based designs (depending on the usage profile) by using a lower peak current, an ultra low leakage current, and very short transmission times via just-in-time transmission scheduling. The GP500C's low energy consumption allows developers to build sensor systems with a peak current of about 20mA (two times lower than typical) and a system sleep mode of below 100nA (ten times less than typical) without compromising the network reliability.

The Emerald GP500C is delivered with a reference design and development kit that allows OEMs to build their own communication modules and applications. The GP500C will also support a wide range of software stacks that can run on different processors including ZigBee Pro as well as Low Power Routing, Low Power Sensing (robust communication under intermittent power availability), a micro stack and other application-dedicated low power protocols. In addition, since the GP500C is an integrated solution, all key functions and features are integrated and minimal external components are required. The total system bill of material (BOM) will be lower and makes the GP500C best in class for total system cost, allowing for the opening of mass markets for maintenance-free sense and control applications.

## **About GreenPeak**

GreenPeak is a leader in battery-free communication technology for wireless sense and control applications. This revolutionary technology, based on the IEEE 802.15.4/ZigBee wireless networking standard, utilizes energy-harvesting to facilitate battery-free operation in a totally wireless environment, without the need for either communications or power connectivity. GreenPeak is based in Utrecht - The Netherlands and has offices in Zele - Belgium, Tokyo - Japan and Austin, TX - USA. GreenPeak is backed by venture capitalists: DJF Esprit (UK), GIMV (Belgium), Motorola Ventures (USA) and Allegro Investment Fund (Belgium).

[www.greenpeak.com](http://www.greenpeak.com)

# GreenPeak Press Release

→ 10 June 2008  
→ For immediate release



---

## Press Contact Europe and Rest of World

Elly Schietse, GreenPeak Marketing & Communications Manager

Tel +32 52 45 87 30

Cell +32 479 76 18 25

[elly.schietse@greenpeak.com](mailto:elly.schietse@greenpeak.com)

## Press contact USA

SRS-Tech PR for GreenPeak

Mark Shapiro

Tel +1 619 249 7742

[mshapiro@srs-techpr.com](mailto:mshapiro@srs-techpr.com)

## Press contact Japan

TOCS Communications

Rui Hashiba or Koji Uenoyama

Tel +81 3 3261 7715

[release@pr-tocs.co.jp](mailto:release@pr-tocs.co.jp)

## Press Images & Logos

For hi-resolution logos, product pictures and images, management pictures and additional background information, please visit our website:

[www.greenpeak.com/press/](http://www.greenpeak.com/press/)

