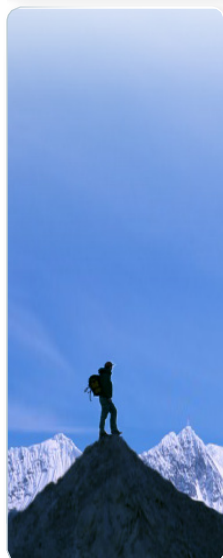


## GreenPeak Communication Controller Chips for ZigBee RF4CE Remote Controls

ZigBee RF4CE is an open standard for radio based remote controls in the field of audio/video consumer electronics. It was originally developed by the RF4CE Alliance founded by Panasonic, Philips, Samsung and Sony. RF4CE joined forces with the ZigBee Alliance to launch the RF4CE standard under the ZigBee umbrella.

It provides low power consumption, easy and intuitive pairing, instantaneous response time, frequency agility, co-existence with other IEEE802.15.4 (2.4 GHz) communication systems, robust connection, security and support for multiple applications.

GreenPeak, as a contributing member of the ZigBee alliance, is committed to the ZigBee RF4CE remote control market with the GP500C communication controller chip, RF4CE reference designs for remote controls, software stacks and a dedicated RF4CE specialist team supporting customers.



### RF4CE Remote controls

#### Benefits for the Service Provider (MSO) and the CE company

##### RF experience compared to IR

- More robust data-communication link, less service calls
- Simple worldwide RF-standard - lower cost; reduced number of different IR-code tables required
- STB or tuner-box in the closet eliminates the need for expensive identity design

##### Two-Way Communication

- Enables push-messaging and direct interaction with the end-user allows display on the remote control and service provider messages or advertisements
- Enables updating software and key code table in the RC (via STB)

##### Future opportunities

- Certified ZigBee RF4CE standard solutions allow vendor interoperability
- Offer new services like security and energy management
- Possible freeing up of bandwidth

### RF4CE Remote controls

#### Benefits for the End User

##### RF experience compared to IR

- Improved user experience: no aim and shoot anymore
- Improved esthetics: the STB in the closet
- One STB can service multiple screens in the house

##### Two-Way Communication

- Improved user-experience: enables active status display on remote control
- Enables easy "find-me" function for RC
- Enables active program participation (voting, buying, gaming, etc.)

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### GreenPeak Differentiators

- Superior range & reliability
- No maintenance - no battery replacement
  - A single low cost 2032 battery can last for the life time of the product (+15 yr)
  - No more "elastic bands" around broken battery compartments
- Low cost BOM for total solution (<2\$): same low cost for RF remote control as for IR remote control
- Robust against Wi-Fi and BlueTooth interference
- Find-Me and Push-Messaging apps without impact on battery life
- Robust and small software with only 1-2 months implementation cycle
- Certified ZigBee RF4CE stack

