

# CLR260 PCIe 802.11n Single Chip



## Dual Band and High Performance 450Mbps 3x3 802.11n WLAN Chip with Transmit Beam Forming

Celeno's CLR260 is a single PCIe 450Mbps 3x3 dual band WLAN chip designed to meet the cost and performance challenges of the growing Wi-Fi multimedia home networking market. The powerful CLR260 PCIe chip is a highly integrated yet low cost chip combining 802.11n MAC, PHY and 2.4/5 GHz dual band radio. The CLR260 leverages host CPU processing and memories to minimize RBOM yet delivers superb performance and ensures reliable, feature rich wireless connectivity.

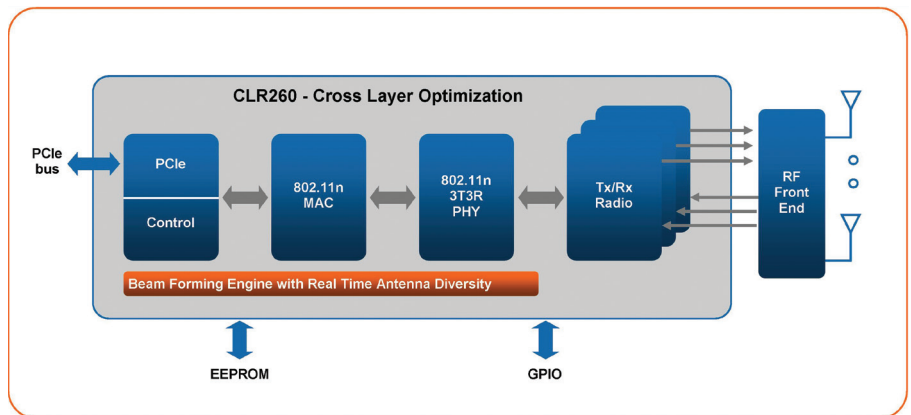
### Benefits

- Celeno's integrated OptimizAIR™ video-grade performance and functionality
- High QoS
- Real-time Transmit Beam Forming MIMO
- 2.4GHz/5GHz dual band operation
- Low power consumption
- Cost effective solution

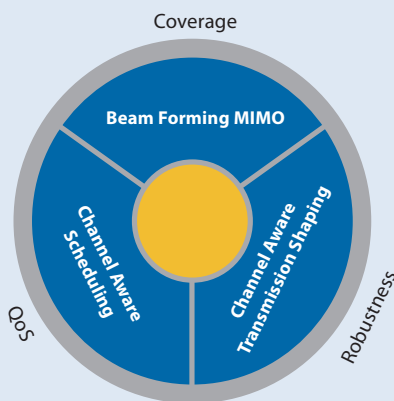


### Applications

- Wireless Home Gateways
- Digital Video Recorders
- Wireless Set Top Boxes



### Celeno OptimizAIR™ Technology



Powered by the OptimizAIR™ technology, the Celeno CLR260 delivers multiple, concurrent HD stream to client devices independently of the 802.11n client chipset (even to single stream, single antenna clients).

OptimizAIR™ combines several innovative technologies that work together intricately at all layers to achieve the full-home, robust throughput needed for HD video streaming. These include Transmit Beam Forming MIMO for increased range, Schedules Access MAC to support multiple clients with the appropriate QoS, channel aware rate selection for zero packet error rate, real-time antenna diversity for robustness and interference resiliency with fast channel selection and dynamic 20/40MHz operation. The OptimizAIR™ expert system is driving up the performance by real-time packet-by-packet channel estimation for fully channel-aware silicon.

## Features

- **802.11n compliant 3T3R MAC/BB/RF**
  - 2.4GHz / 5GHz dual band
  - Up to 3 spatial streams
  - 450Mbps physical Wi-Fi speed
  - 20MHz/40MHz channel bandwidth
  - WiFi Compliant: WPA2/WMM/WMM Power Save/ WPS/ WPS2
  - Advanced power management to support CoC 2013/2014
- **Integrated with OptimizAIR™ technology**
  - Real-time Transmit Beam Forming MIMO
  - Optimized rate selection for consistent, reliable streaming
  - Dynamic antenna selection (Antenna Diversity)
  - Client-to-client direct connections (TDLS) for increased whole-home capacity
  - Whole-home QoS supporting triple play (voice, video and data) with traffic shaping and admission control to enhance basic WMM
  - Superior interference immunity:
    - Dynamic channel selection
    - Advanced PHY-level interference detection and automatic channels scanning
- **PCI Express 1.1 interface**
- **Operating Systems**
  - Linux

## Specifications

Standards	802.11a/b/g/n/d/e/h/i
WiFi	WPA, WPA2, WPS, WPS2
Encryption	AES, TKIP, WEP64/128
Baseband	3x3
RF	2.4GHz, 4.9GHz – 5.85GHz
QoS	WMM, WMM-PS
BSSID	8 x BSSID
Max PHY Rate	450Mbps
Channel Bandwidth	20MHz, 40MHz
Data Path Interfaces	PCI Express
Package	Green/RoHS compliant 88 LD QFN (10mmx10mm)
Temperature	-10°~70° C



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