

GDM7213 Product Brief

Mobile WiMAX™ IEEE 802.16e Wave 2 Compliant
3.5 GHz Monolithic Single-Chip Solution

Key Benefits

- Reduces PCB design complexity
- Ultra low power consumption
- Small form factor
- Optimizes mobile WiMAX implementation in mobile devices
- Minimizes external RF front-end components
- Satisfies high demands of multimedia processing

Applications

- Mobile WiMAX devices—
smartphones
- Hotspots
- USB Dongles
- PC Cards
- CPEs

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Features

- Integrates up to 160 MHz ARM926E RISC CPU and 120 MHz P2D DSP with 128 KB on-chip SRAM
- Single 1.1V supply voltage
- Highly integrated CMOS RF transceiver for 3.5 ~ 3.6 GHz WiMAX band
- Complies with IEEE 802.16e
- Maximum throughput: >30 Mbps/ DL, 6 Mbps/ UL
- Supports CC/CTC and Chase-combining-CTC Hybrid ARQ in both DL/ UL supporting category 1 and 2
- Integrates two receivers and a single transmit path for MIMO-DL (Matrix A/B) and collaborative MIMO UL

GDM7213

GCT's GDM7213 is the industry's first mobile WiMAX 3.5 GHz Wave 2 single-chip, which includes RF, MAC and PHY, all into one monolithic integrated circuit. This single-chip enables low-power consumption, small form-factor design and low bill of materials cost, all key factors for driving broader WiMAX deployment. Compliant with WiMAX Forum® standards, GDM7213 is ideally suited as the core of WiMAX applications such as USB dongles, data cards (incl. PCI Express), customer premises equipment (CPE) and small modules.

Based on GCT's industry-proven CMOS RF technologies, GDM7213 implements MIMO, and all PHY and MAC features required for WiMAX Forum Wave 2 Certification. This compact solution offers a highly integrated, low-power transceiver which minimizes the number of external RF front-end components. It also includes a mobile WiMAX baseband with high performance dual-processors, and an impressive array of peripherals for connectivity.

GDM7213 complies with IEEE 802.16e mobile WiMAX and WiMAX Forum Wave 2 certification requirements, supports seamless handover across different cell sectors and operates over the full 3.4 to 3.7 GHz range.