

WiMAX USB Reference Design

The **APW290 RDK** is a reference design kit for a low-cost mobile WiMAX subscriber adapter in a USB Dongle format. It contains: 1) a Reference Unit, 2) Software Drivers, 3) Operating Manual, 4) Fabrication Package, and 5) Test & Calibration Procedures.

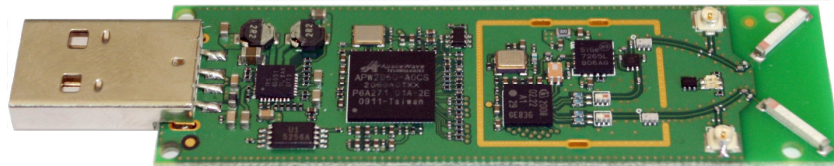
The **APW290** is supported by powerful Mobile Station embedded firmware, system drivers, APIs, connection manager, and various operating systems, such as Windows® XP and Vista. The APW290 is an excellent solution for external client WiMAX applications, such as Laptop and Netbook computers.

Based on ApacWave's advanced 65nm **APW2050 WiMAX baseband SoC**, which offers very low-power operation, while achieving high data through-put and robust performance, the APW290 offers excellent cost & performance value.

Features

- WiMAX Wave 2 compliant & Certification-ready
- Compliant with USB 2.0 specification
- WHQL certified drivers for Windows® XP & Vista
- Supports WiMAX profile MP05 (3A) for 5 MHz and 10 MHz, 2.3 to 2.7 GHz, 25 kHz steps
- High-efficiency PA with up to 24 dBm Transmit power meeting WiMAX EVM requirements
- WiMAX 2.3-2.7 GHz chip antennas for MIMO support
- Low-cost single-sided circuit board design
- Low power consumption design supported by intelligent power management software
- Complete manufacturing reference design kit available with automated test & calibration for fast high-yield production
- APW2050 meets RoHS requirements

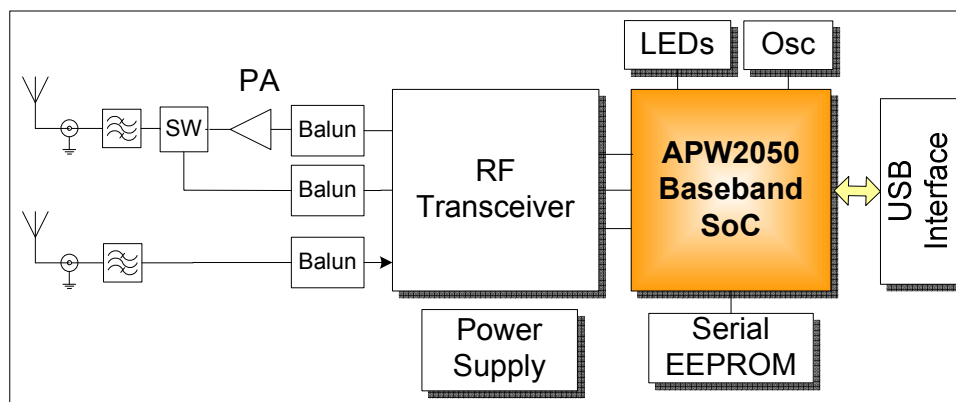
APW290 USB Dongle



APW290 Mobile WiMAX USB Specification Summary

Standards	Mobile WiMAX Wave 2; USB 2.0	Software:	
Host Interface	USB 2.0 Serial Data Interface	Operating System	WHQL certified drivers for Windows® XP and Vista
Throughput	Over 25 Mbps	Connection Manager	Provides network discovery, selection, and preferred network profile configuration
Bandwidths Supported	Profile MP05 (3A) for 5 MHz and 10 MHz	Configuration Manager	Provides debug commands for customer support
RF Frequency Supported	2.3 to 2.7 GHz in 25 kHz steps; APW2050 & RF Transceiver support 3.3 to 3.9 GHz	API	WiMAX standard API commands provided
RF Output Power	Up to 24 dBm transmit power; meets WiMAX EVM requirements	QoS Features	BE, UGS, RTPS, NRTPS, and ERTPS
Antenna	Two antennas with 2.5dBi peak gain, 0.5dBi average gain	Security	WiMAX Wave 2 compliant security
Production Test	Supports automated testing for rapid end-of-line test and calibration	Power Management	Supports Idle and Sleep modes with intelligent power management
Power Required	5V from USB interface	Status LEDs	Power, Service Available, Data Activity, Network Acquisition, Error
Ordering Information	APW290 – Reference Unit APW290RDK – Reference Design Kit	PCB Dimensions	70mm x 21mm x 2.5 mm

APW290 Functional Diagram



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