



The IPWireless™ UMTS TDD Node B Base Station Portfolio

The Highest-Capacity Mobile Base Stations Available

IPWireless now offers a full portfolio of UTRA TDD Node B base stations to meet the needs of operators with range of business plans and deployment plans. Operators can select the Node B that best meets their needs, whether they want to initially focus on maximizing their coverage and lower their capital expenditure or want to maximize their capacity and ultimately lower their cost per megabit. All of the base stations use IPWireless UMTS TDD air interface technology to provide mobile broadband services to a range of PCMCIA's, modems, and other devices. The High-Capacity Rack Mount Node B offers operators the highest capacity mobile base station available in the market today, supporting thousands of users.

Summary of IPWireless Node B Products:

Node B Products	Sectors	Carriers	Base-band Shelves	Tx Diversity	Rx Diversity	Tx Power		Peak Throughput*	
						3.84 Mcps	7.68 Mcps	3.84 Mcps	7.68 Mcps
Outdoor	1	1	1	No	Yes	37dBm	34dBm	6 Mbps	12 Mbps
High Capacity Rack Mount	3	1	3	Optional	Yes	40dBm	37dBm	18 Mbps	36 Mbps
Low Capacity Rack Mount	3	1	1	Optional	Yes	40dBm	37dBm	6 Mbps	12 Mbps
Rack Mount Base-band Shelf	1	1	1	Optional	Yes	40Bdm	37Bdm	6 Mbps	12 Mbps

* Peak Throughput numbers assume 16QAM

All Node Bs Support the Following:

- > Designed to 3GPP UMTS TDD standards
- > Integrates with existing UMTS/GPRS core network equipment
- > Spectrum-efficient and optimized for cost-effective mobile data applications
- > Interfaces with standard IP or UMTS core network infrastructure
- > Interfaces with standard omni or sectorized cellular antennas (no expensive smart antennas required)
- > Indoor or Outdoor Use (For outdoor locations, the rack mount units must be mounted in a weather protected and cooled cabinet)
- > E1/T1, E3/T3 and Ethernet Interfaces, ATM enabled
- > 16 QAM (By software Upgrade)
- > Upgradeable to MAC-hs/HARQ for HSDPA (Option)
- > Operation in either 5 or 10MHz of spectrum in the following licensed bands: 1900-1920MHz, 2010-2025MHz, 2500-2686MHz, and 3400-3600MHz



Outdoor Single Sector Node B

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The Outdoor Single Sector Node B base station is a low-cost unit designed in a small, fully environmental form-factor, suitable for deployment in either typical cellular sectored macro cells or indoor/outdoor micro cells.

Sectored Cellular Configuration:

- > Can be deployed outdoors in 3- or 6- sectored macro cell configurations or in standalone micro cell configurations
- > Up to 12 Node B's are configured with sectored directional antennas and are controlled by an Integrated Network Controller
- > Typically mounted on top of building, at a cellular tower, or wall mounted as a microcell

Orderable Item Codes:

IPW-NB-2500-DC-01-02

IPW-TTLNA-2500-01-01 (1 per RF Sector)



Rack Mounted Node B System

High Capacity Rack Mount Node B

The IPWireless High-Capacity Rack Mount Node B uses a standard 19 inch rack configuration to support 3 sectors with 3 Base-band shelves. The Rack Mounted Node Bs additionally support Transmit Diversity and a high power Power Amplifier to support an increased coverage area and higher data-rates at cell edges.

Orderable Item Codes:

IPW-NB_RM-DC-3_3-2500-01-01 (no Tx Diversity)

IPW-NB_RM-DC-3TX_3-2500-01-01 (with Tx Diversity RF shelves)

IPW-TTLNA-2500-01-01 (1 per RF sector)



Low Capacity Rack Mount Node B

The Low-Capacity Rack Mount Node B utilizes a single Base-band shelf to support 3 Radio Shelves allowing operators to lower their initial capital expenditure and maximize their coverage. An operator can modularly add new base-band shelves once they are successful adding subscribers in the market. This Node B includes:

- > Control for 3 RF Tx Diversity Transmitters (Tx diversity optional)
- > 6 Way Maximal Ratio Combiner on Receiver

Orderable Item Codes:

IPW-NB_RM-DC-3_1-2500-01-01 (no Tx Diversity)

IPW-NB_RM-DC-3TX_1-2500-01-01 (with Tx Diversity)

IPW-TTLNA-2500-01-01 (1 per RF sector)

The Migration Path for Low Capacity Node B

A Low-Capacity rack mount unit can 'grow' to a full High-Capacity rack mount unit simply by adding 2 additional base-band shelves to the existing rack mount shelves and connecting the units up to the existing RF shelves as required via the 6 way combiner. This gives the operator the ability to grow capacity as required:

- > 1 Base-band shelf = 12 Mbps peak throughput
- > 2 Base-band shelves = 24 Mbps peak throughput
- > 3 Base-band shelves = 36 Mbps peak throughput



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