



# Horizon 3G-nx fiber

## Motorola's distributed Node B Solution

The Motorola Horizon 3G-nx fiber platform is a scaleable modular UMTS HSPA+ Node B solution supporting multiple sector and carrier configurations. Utilizing Remote Radio Units the Horizon 3G-nx fiber offers flexible radio deployment options both indoor and outdoor.

## Benefits

### Physical Design

Motorola's Horizon 3G-nx fiber is a scaleable rack mountable remote radio head solution offering straightforward deployment capabilities. It uses the Horizon 3G-nx BBU and RRU to provide a highly flexible solution and a variety of configurations in a small footprint.

### Easy and Quick Deployment

The fiber solution can be quickly deployed by simply siting the BBU prior to installing the RRU and connecting the external cables before downloading the data configuration file. Installation time and overall network rollout time are thus reduced.

### Functionality

As with all Motorola's Horizon 3G platforms, the fiber offers a variety of RF configurations. In this case the Horizon 3G-nx fiber is aimed at locations where the macro product would not be best suited. Furthermore it features low power consumption and is future capable via the download of the appropriate software releases.

### Additional Equipment Support

Support is also provided for a number of auxiliary items that can be used with the Horizon 3G-nx fiber, including an outdoor AC lightning protection box, advance power module and uninterruptible power supply.

### Controlled Cost of Ownership

**Deployment Flexibility:** The 3G-nx BBU frame can be rack mounted, providing easier site acquisition.

Digital pre-distortion (DPD) and A-Doherty techniques within the power amplifier enhance efficiency, which reduces system power consumption and lowers OPEX.

By using common components through-out the Horizon 3G-nx solutions portfolio, the cost of ownership is reduced. This applies to in particular, spares holdings and training.

**Future Capable:** The Horizon 3G-nx fiber is capable of HSPA+ including 2x2 MIMO antenna technology and is upgradeable to support peak data rates of up to 42Mbps in the downlink and 11Mbps in the uplink.

### Fast Time to Revenue

**Rapid Network Set-Up:** The fiber solution enables rapid deployment due to its relatively lightweight and small size providing rapid coverage flexibility to capture targeted subscribers during all stages of deployment of UMTS HSPA+ networks.

**Maximum Revenue Capture:** The Horizon 3G-nx fiber solution supports HSPA, STTD and TSTD open loop and closed loop transmit diversity. These features provide extra capacity and broader coverage for UMTS HSPA+ service delivery while maximizing revenue opportunities.

# Specifications

## MIMO Options

The Horizon 3G-nx has two options for supporting 2x2 MIMO. The first option is to use two 60W Remote Radio Units to provide a maximum of 2x60W MIMO. The second option is to use the single 80W RRU, that provides support for 2x40W MIMO in a single unit.

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<b>Size:</b> BBU: 86mm (H) x 420mm (W) x 310mm (D) RRU: 480mm (H) x 270mm (W) x 150mm (D)
<b>Weight:</b> BBU: 11kg (fully populated) RRU: 15kg
<b>Power Supply:</b> BBU: -48VDC RRU: -48VDC
<b>Power Consumption: 970W (maximum)</b>
<b>Operational Environment:</b> BBU: -20°C to 55°C BBU: ETSI EN 300 019-1-3 Class 3.1 (Operational Indoor) RRU: -40°C to 50°C RRU: ETSI EN 300 019-1-4 Class 4.1 (Operational Outdoor)
<b>Type Approval:</b> Type Approval: ETSI EN 301-908 EMC: ETSI EN 301 489-1 Safety: EN60215, IEC60215, EN60950, IEC60950, EN50385, IEC50385
<b>Environmental Approval:</b> 2002/95/EC Restriction of the use of certain hazardous substances in electrical and electronic equipment 2002/96/EC waste electrical and electronic equipment WEEE 94/62/EC Packaging and packaging waste

## Radio Specifications

<b>Supported Frequencies:</b> 2100MHz, 1900MHz, 850MHz, AWS
<b>Maximum Number Cells:</b> 24
<b>Maximum Number Carriers:</b> 8
<b>Maximum Number Sectors:</b> 6
<b>Transmit Diversity:</b> Optional
<b>Receive Diversity:</b> Two Path, Four Path Optional
<b>MIMO:</b> 2x2 Optional
<b>Maximum RF Output Power:</b> 60W
<b>Receive Sensitivity:</b> Single Path: -125dBm Two Path: -128dBm Four Path: -131dBm

## Capacity

<b>Downlink Peak:</b> 28.8Mbps (2x2 MIMO) 21.6Mbps (64QAM, 15 Codes)
<b>Uplink Peak:</b> 5.76Mbps
<b>Channel Elements:</b> Downlink: 1536 Uplink: 1536

## Ancillary

<b>Remote Radio Units:</b> Supported
<b>Remote Electrical Tilt:</b> Supported
<b>Customer Equipment Space:</b> None
<b>Internal Battery Backup:</b> None
<b>Mounting:</b> Floor, Wall, Pole, Mast
<b>Backhaul:</b> E1, T1, STM-1, FE



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