

InfiNet Wireless R5000 - Technical User Manual



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InfiNet Wireless R5000 products offer scalable, robust, flexible and cost-effective broadband wireless access solutions for carrier-class networks. Wireless routing equipment from InfiNet Wireless is designed to implement and expand carrier-class networks for high-speed Internet access, enterprise campus networks, primary links for the Last Mile and backhauling traffic between cell towers and multiple access points.

InfiNet Wireless R5000 devices are especially applicable to regions with complex wired infrastructures where infrastructure upgrades require costly or time-consuming activities. Many deployments have been accomplished in regions with a dearth of wired infrastructure where wireless solution is the only viable option for both voice and data networks. The deployment of InfiNet Wireless Devices minimizes both capital and operational investments for the creation of network infrastructure.

Key product features:

- Wide range of frequency bands
- Outstanding performance
- Powerful QoS capabilities
- Best-in-Industry networking feature set
- Flexible management
- Powerful integrated diagnostic tools.

InfiNet Wireless R5000 devices can support flexible topologies including point-to-point links, point-to-multipoint links, MESH networks, high-speed transport connections (backbones) and relay-points building. They have been designed to prevent internal and external interference using such product features as software selectable transmit power control, static frequency selection, asymmetrical bit-rate/transmit power rates selection for base and subscriber units. In order to maintain link availability, solve the "hidden node" problem and reduce the collision rate, the product employs dynamic adaptive non-collision polling MAC protocol that dynamically redistributes data streams between active and inactive subscribers. Autobitrate mechanism is an optional powerful feature that provides link reliability in case of changing conditions on the path of the link.

The data network built on InfiNet Wireless products is implemented as a routed and switched IP network which reduces flooding and broadcast messages specific to bridged networks and to implementation of Quality-of-Service (QoS) features set. QoS definitions per subscriber's data flows are effectively mapped on MAC level flow attributes.

Each device in the network can be configured using serial console port, Telnet protocol, WEB-interface and NMS system.

The software/firmware is fully upgradeable for all InfiNet Wireless Devices. New firmware images can be downloaded from the Repository on the InfiNet Wireless support web-site <http://support.infinetwireless.com> for its further uploading on the device.

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About this Manual

This Technical User Manual contains the description of **InfiNet Wireless R5000** equipment including installation and configuration guidelines, recommendations and troubleshooting sections, supplementary materials. The document is intended to be used by Qualified **RF** engineers/technicians and IT professionals. Qualified personnel should have skills and experience in the following areas:

- Outdoor/indoor radio equipment installation
- Outdoor wireless networks
- **TCP/IP** networking protocols
- Safety procedures and instructions for installing antenna equipment
- Professional manage of electrical equipment and accessories
- Safety procedures and instructions for working on towers and heights.

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