

LMDS (Local Multipoint Distribution Service)

LMDS (Local Multipoint Distribution Service) is a broadband wireless point-to-multipoint specification utilizing microwave communications.

LMDS operates on FCC licensed frequencies. The FCC divided the United States into 493 BTA's (Basic Trading Areas) and auctioned the rights to transmit on the LMDS bands in each of those areas to LMDS service providers. Each BTA is licensed to two LMDS service providers. The LMDS bandplan is available from the FCC at <http://wireless.fcc.gov/auctions/data/bandplans/lmds.pdf>.

LMDS Specifications

Fixed/Mobile	Fixed
Circuit/Packet:	n/a
Max Bandwidth	1.5Gb downstream, 200Mb upstream
Range	4 miles
Frequency	27.5GHz-28.35Ghz, 29.1Ghz-29.25Ghz, 31.075Ghz-31.225Ghz, 31.Ghz-31.075Ghz, 31.225Ghz-31.3Ghz
Host Network	None
Definer	IEEE (Institute of Electrical and Electronic Engineers)
URL	http://grouper.ieee.org/groups/802/16/

LMDS and DOCSIS+

LMDS and [MMDS](#) have adapted the [DOCSIS](#) (Data Over Cable Service Interface Specification) from the



cable modem world. The version of DOCSIS modified for wireless broadband is known as DOCSIS+.

Data-transport security is accomplished under LMDS by encrypting traffic flows between the broadband wireless modem and the WMTS (Wireless Modem Termination System) located in the base station of the providers network using [Triple DES](#).

DOCSIS+ reduces theft-of-service vulnerabilities under LMDS by requiring that the WMTS enforce encryption, and by employing an authenticated client/server key-management protocol in which the WMTS controls distribution of keying material to broadband wireless modems.



LMDS and MMDS wireless modems utilize the DOCSIS+ key-management protocol to obtain authorization and traffic encryption material from a WMTS, and to support periodic reauthorization and key refresh. The key-management protocol uses [X.509](#) digital certificates, RSA [public key encryption](#), and Triple DES encryption to secure key exchanges between the wireless modem and the WMTS.

LMDS may be obsoleted by the newer 802.16 [WiMAX](#) standard which is due in 2004.

Source: <http://www.tech-faq.com/lmds.html>