

LMS3100

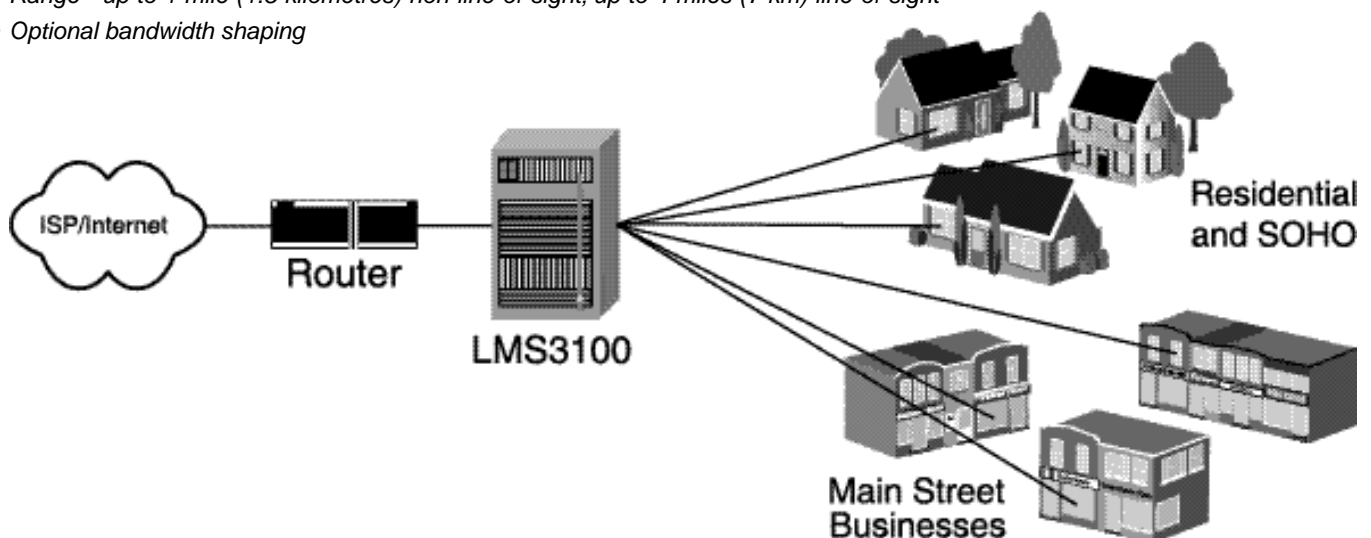
WaveRider's LMS3100 is a high-speed fixed wireless Internet access network that provides a fast and cost-effective way to connect residential and SOHO customers — markets that can be costly to reach using traditional wired networks. The LMS3100 includes a wireless end-user modem and proprietary indoor antenna that uses NON-LINE-OF-SIGHT technology and can be self-installed by the user, eliminating the truck-roll costs associated with other available services.

Each WaveRider LMS3100 network connects up to 300 subscribers, delivers throughput up to 1 megabit per second and operates in the license-exempt 902 MHz spectrum. It provides an economical entry point for Internet Service Providers and telecommunications carriers to introduce wireless service to small business and residential customers — with just 200 subscribers, service providers can realize a payback within 12 months.

The LMS3100 is fully compatible with all WaveRider Last Mile Solution systems, so WISPs can easily build out larger networks using additional LMS3100 systems or upgrade to WaveRider's fully-managed LMS3000 non-line-of-sight wireless network. The LMS3100 can be installed and deployed quickly and easily and is designed to operate with an ISP's or carrier's existing infrastructure.

Key features:

- *Non-line-of-sight connectivity*
- *Complete system solution that connects residential and small business customers to the Internet*
- *Best-in-class components*
- *Compatible with ISP's or carrier's existing infrastructure*
- *Supports up to 300 subscribers*
- *User-installed wireless modem and indoor antenna*
- *Fully scalable network*
- *Easily upgradable to a fully network-managed WaveRider LMS3000 system*
- *Real time alarms for critical components through SNMP*
- *Fast, easy deployment*
- *Allows roll out of new system features from the ISP's central location*
- *Operates in the 902 MHz ISM license-exempt frequency band*
- *Up to 1 Mbps of throughput*
- *Range - up to 1 mile (1.5 kilometres) non-line-of-sight; up to 4 miles (7 km) line-of-sight*
- *Optional bandwidth shaping*



LMS3100 TECHNICAL SPECIFICATIONS

The following tables list the technical specifications for the **LMS3100, CCU & EUM**.

LMS3100 Radio Specifications

Maximum Number of Operational CCUs and Orthogonal Channels	3
Maximum Number of Standby CCUs	1
Maximum Number of subscribers per CCU	100

Ethernet Backhaul Interface Specifications

Physical Interface	10/100BaseTx auto-sense, full or half-duplex
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* Based on acceptable service quality and normal user applications (e-mail, HTTP, FTP and no UDP applications)

CCU and EUM Radio Specifications

Minimum Channel Center Frequency	905 MHz
Maximum Channel Center Frequency	925 MHz
Channel Bandwidth	5.5 MHz
Center Frequency Spacing Increment	0.4 MHz
Minimum Separation Between Orthogonal Channels	6.4 MHz
Maximum Orthogonal Channels	3
Maximum Output Power	+26dBm or +15dBm (software selectable)
Modulation Scheme	CCK (Complementary Code Keying) DSSS (Direct Sequence Spread Spectrum) payload with DPSK header
Receiver Sensitivity for BER < 10 ⁻⁵	-86 dBm
Maximum Over-the-Air, Raw Data Rate	2.75 Mbps
Maximum Data Throughput	1 Mbps

Interface Specifications

Physical Interface	CCU 10 BaseT half-duplex EUM 10 BaseT half-duplex
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Power Supply Specifications	LMS3100	CCU & EUM
AC Input	110/220 ±10% VAC	110/220 ±10% VAC, auto-sensing
AC Input Frequency	single phase 50/60 ±3 Hz	single phase 50/60 ±3 Hz
Maximum Input Power	1700 VA	less than 2 amps
Regulatory Approvals		UL, CSA(Pending)
Max UPS Operating Time at full load	10 minutes (standard)	Not Applicable
Environmental Specifications	CCU	EUM
Operating Temperature	10° to 40° C environment, 5% to 95%, RH non-condensing	10° to 40° C environment, 5% to 95%, RH non-condensing
Storage Temperature	-20° to 70° C (degrees)	-40° to 70° C (degrees)