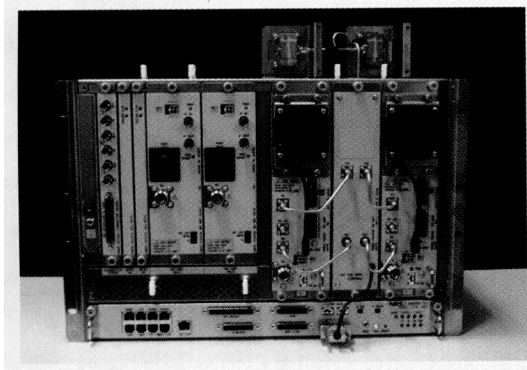


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PRODUCT FEATURE



# A COMPACT, COST-EFFECTIVE DIGITAL MICROWAVE RADIO SYSTEM

NEC America's brochure on its ever-growing family of digital microwave radio systems says "good things come in small packages." The NLite™ Lx is the latest addition to its NLite family of digital microwave radio systems and builds on the success of its predecessor, the NLite L. The new Lx version offers a compact, cost-effective digital microwave solution that delivers enhanced transmission capacity, allowing network operators the ability to transmit 3xDS3s plus 8xDS1s in a 30 MHz channel. The 7RU + 2RU WG interface allows up to four HS/HS systems in a single 19-inch rack.

The NLite Lx features a simple and flexible design that is consistent with other NLite series radios. By offering comparable installation guidelines and a similar, compact format, operators familiar with NEC's existing product line can smoothly transition to the new solution when upgrading, as well as save time and money on training costs. NLite Lx takes advantage of NEC's XPIC (cross pole interference cancellation) technology that allows users to expand to twice the current bandwidth capacity on a single microwave frequency pair.

The new radio system has been designed to meet the growing transmission requirements of wireless service providers by featuring a higher 3xDS3s plus 8xDS1s capacity (or SONET OC-3), a high power option of +33.5 dBm and increased reliability, all within a small, flexible format. The new system is initially available in three frequency bands — lower 6 GHz, upper 6 GHz and 11 GHz.

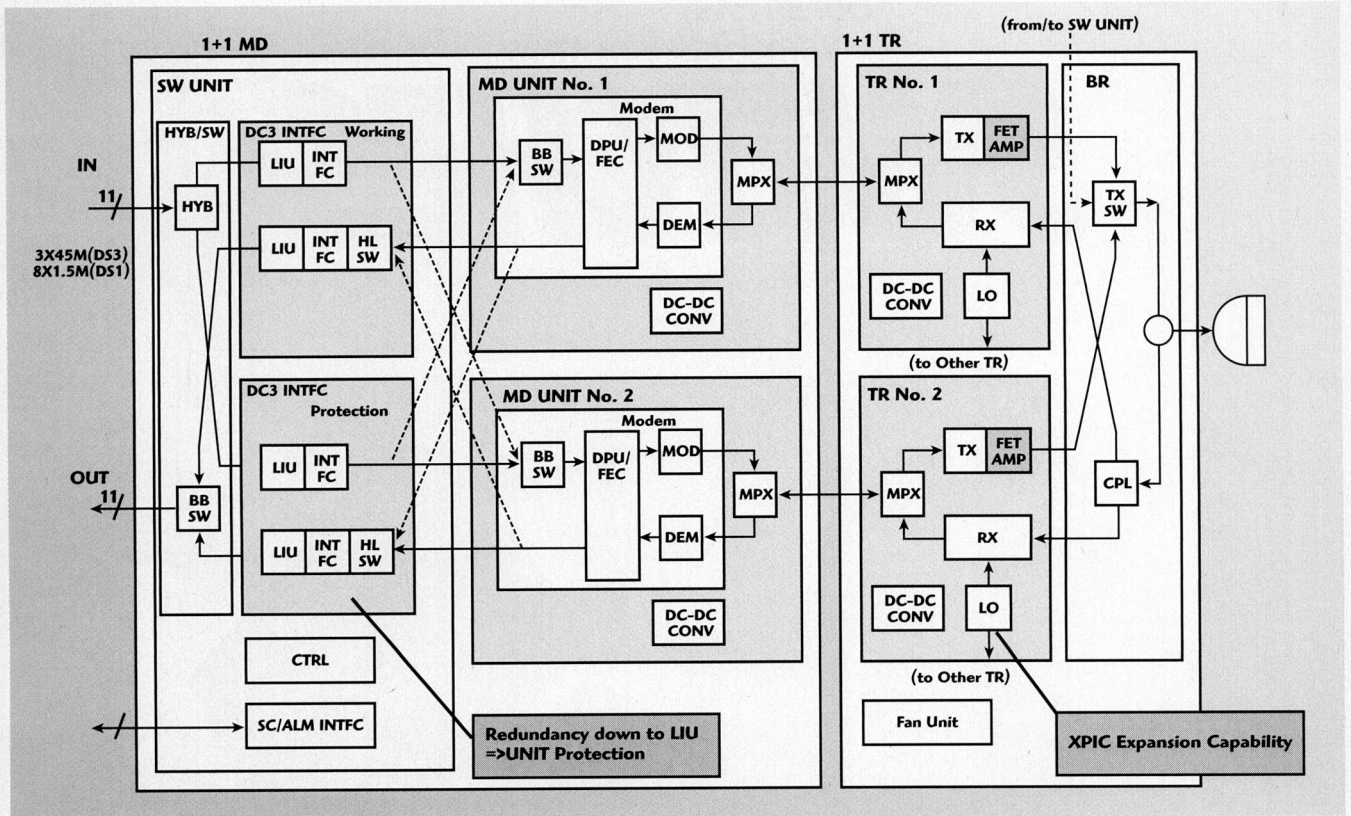
Standard power output for the radio's transmitter is 30.5, 28.5 and 25.5 dBm for the L6, U6 and 11 GHz frequency bands, respectively. A high power option of 33.5 dBm is available for the L6 GHz band. There is 20 dB of power output control per ATPC/MTPC (1 dB steps).

The unit utilizes 128QAM modulation with a channel bandwidth of 30 MHz. The transmit frequency is determined from a synthesized internal oscillator and features a stability of less than  $\pm 10$  ppm. The receive signal level (RSL) at  $10^{-6}$  is  $-69$  dBm with a system gain

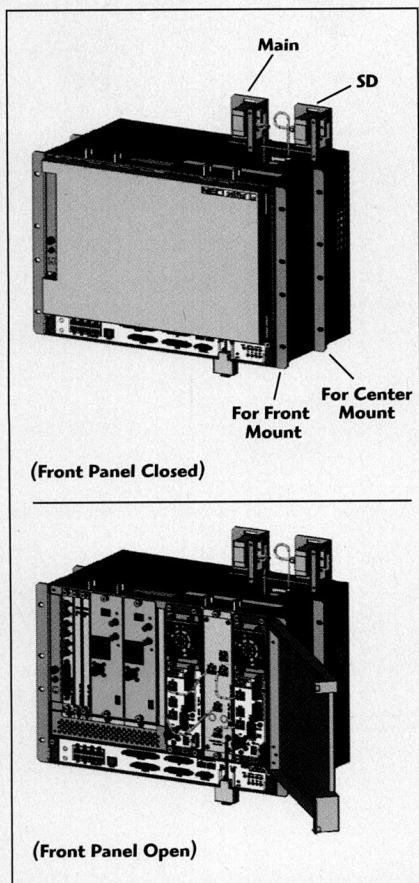
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NEC AMERICA INC.  
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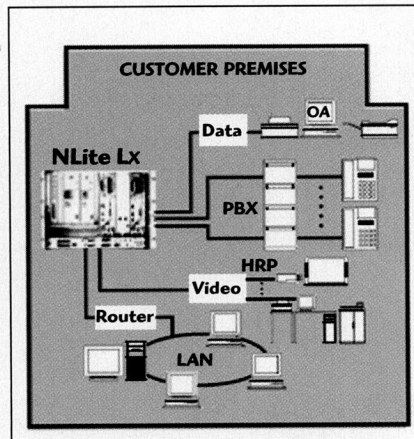
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▲ Fig. 1 NLite Lx functional block diagram.



▲ Fig. 2 The L6G/3xDS3 NLite Lx radio system.



▲ Fig. 3 A typical NLite Lx application.

of 99.5 dB at L6 GHz with standard power. Residual BER is less than  $10^{-12}$ . Figure 1 shows the NLite Lx system's functional block diagram.

The flexible architecture of the NLite Lx allows for split or all indoor configurations. The new microwave system, shown in Figure 2, supports high performance broadband transmission services for interconnections within cellular networks. In addition, the new system features independent private LAN connections between backbone networks and users' premises (see Figure 3).

Similar to other members of the NLite family, the NLite Lx radio system is compliant with SNMP protocol network management and centralized network management, and operates on standard platforms such as Windows NT or UNIX operating systems. Additional products in the NLite family include the NLite L series for small and medium capacity plus an economically friendly footprint, the NLite series for small and medium capacity with TI plus Ethernet capability, and the NLite 155 series to satisfy medium and large capacity demands. For additional information and the system's full specifications, contact NEC America Inc.

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