

# Nera MultiLink I

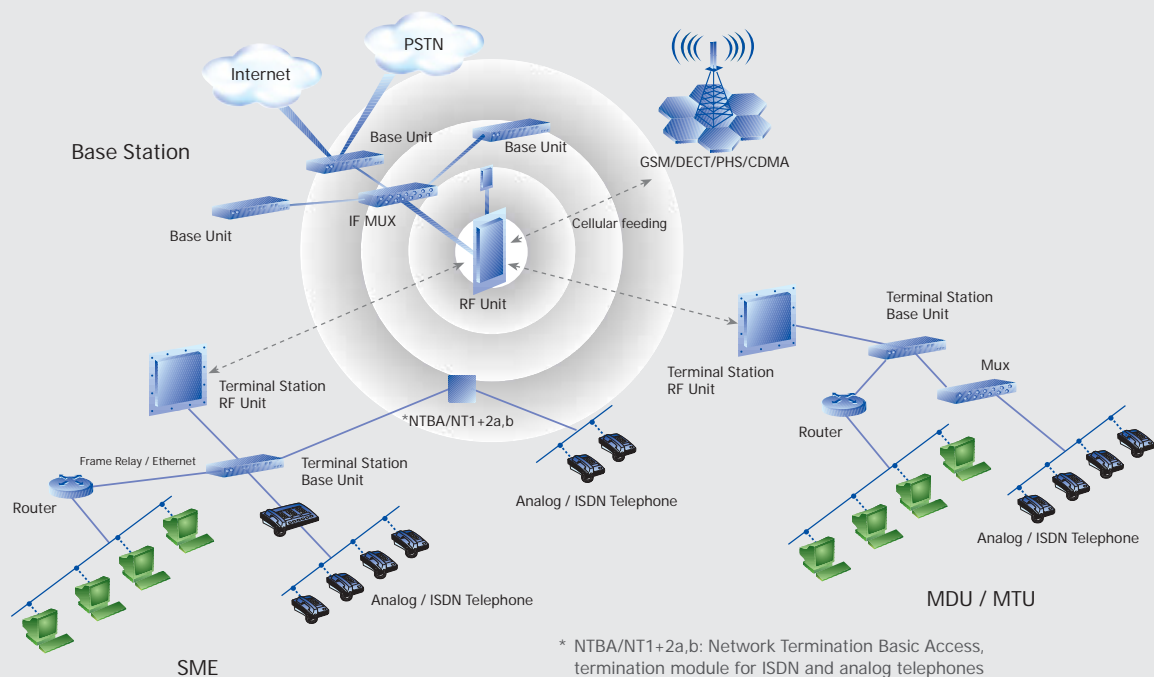
Nera MultiLink I is a point-to-multi-point (PMP) broadband wireless access system that enables telecom operators to easily and cost-effectively connect SME business subscribers in last-mile urban and suburban areas to their network. Nera MultiLink I utilises dynamic bandwidth allocation to maximize bandwidth capacity and facilitates the widest range of differentiated high-speed data and voice services at the lowest cost to customers. Multi-frequency band support, large-capacity base stations and multi-service support make Nera MultiLink the wireless access solution of choice for new competitive carriers and incumbents seeking diversification. A single Nera MultiLink I base station can support up to 2048 terminal stations with peak data-burst rates of 4 Mbps.



Nera MultiLink I operates in the same environment as Nera MultiLink III, and can reside on the same cell using the same radio, efficiently providing varying capacity ranges to a variety of user profiles. Both systems can be deployed on their own, or in tandem, by carriers operating in the licensed spectrum. The integration of the Nera MultiLink I and III enables new carriers to deliver the most efficient overall solution to SME and large enterprise markets, facilitating high flexibility in service provision and creating the ideal business model for the given market.

## Product highlights

- Demand-based build-out, easy installation and low cost of ownership enable rapid market penetration, increased subscription and enhanced value-added services.
- Single platform combines all communication and information technologies, including IP, Ethernet, Frame Relay, Leased Line, POTS and ISDN.
- Packet switching technology optimised for IP-based applications and "always on" connectivity.
- Efficient backhaul connectivity guarantees superior coverage for mobile and fixed narrowband wireless system base stations.
- High spectral efficiency – 2.5 Bit/Sec/Hz.
- IP QoS/CoS mapping to ATM QoS at the base station eliminates the need for multiple rooftop outdoor units.
- QoS using IETF standard in differential service (diff-serv).
- The 64 QAM modulation ensures high capacity, coverage and availability.
- Highly cost effective infrastructure and customer premises equipment.
- Fast packet-based data transmission and toll quality for delay and jitter sensitive telephony.
- Easy-to-use SNMP-based remote management system, enabling simple unit configuration and multiple simultaneous unit upgrading.



# Technical Data

Base Station	Terminal Station
<b>Antenna</b>	
3.5 GHz: 50 x 15 x 7cm 10.5 GHz: 75 x 11 x 10cm 26 GHz: 20cm horn	27 x 27 x 8cm (including RF unit)  33cm dish
<b>Indoor Unit</b>	
One or more stackable units, 48cm (19") width, 4.4cm (1U) height, 23cm depth These are rack (19" or ETSI) mount devices	48cm (19") width, 4.4 (1U) height, 23cm depth Weight: 3kg • Either rack mount, (19" or ETSI) wall mount or desktop
<b>Outdoor Unit</b>	
A single coaxial cable connects the indoor to outdoor device, at distances of more than 100m	
<b>3.5 GHz, 10.5 GHz</b>	
36 x 15 x 24cm, not including the antenna Weight: 10kg • Pole mount device	27 x 27 x 8cm including antenna Weight: 4kg
<b>26 GHz</b>	
28 x 25 x 12 cm Weight: 5.5kg	28 x 20 x 10cm Weight: 4.5kg
<b>Interfaces</b>	
• E1/G.703 • V35/X.21 • Ethernet (10/100 BaseT) • E1-FR • V35/X.21-FR	• E1/G.703 • ISDN BRI • E1-FR • V. 35/X.21 • Ethernet: (10/100 BaseT) • V.35/X.21-FR
<b>Services</b>	
Each stackable unit supports up to 3 telecom interfaces • ISDN PRI • Leased Lines • Frame Relay • IP	• ISDN PRI/BRI • Leased Lines • Frame Relay • IP • POTS (through an Ext. MUX)
<b>Power</b>	
Power consumption for a single stackable unit: 40W • Power supply: 48 VDC	Power consumption: 40W Power supply: 48 VDC or 110/220 VAC 60/50 Hz
<b>Signalling</b>	
V5.2	V5.1

## General

- **Frequency bands:** 3.5 GHz, 10.5 GHz, 26 GHz
- **Supported distance:** 10km @ 3.5 GHz and 10.5 GHz, 4km @ 26 GHz
- **Radio access method:** Multi Carrier-TDMA/FDD
- **Standard compliance:** ETSI TM4
- **Channel spacing:** 1.75 MHz

## Capacity

- **Base station capacity (single polarisation):** 130 Mbps @ 2 x 28 MHz allocation capacity may be increased significantly by applying second polarisation
- **Bandwidth per single user:** 64 kbps to 4 Mbps

## Radio

- **Spectral efficiency:** 2.5 Bit/Sec/Hz.
- **Modulation & coding technique:** 64 QAM @ Trellis Coding Modulation
- **Base station sectors:** 90°, 60° or 45° per sector
- **TM4 standard compliance**

## Environmental

- **Indoor device:** -5°C to 45°C
- **Outdoor device:** -45°C to 55°C
- **ETS 300019 compliance**

[www.nera.no](http://www.nera.no)



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