

MINI-LINK™ HC

High capacity microwave solution



MINI-LINK HC is a compact microwave radio solution for voice and data transmission at 155 Mbit/s, that is SDH STM-1 or SONET OC-3, operating within 7-38 GHz frequency bands. It represents a diverse set of applications for point-to-point synchronous radio implementations.

Typical use is as transmission in various applications. In mobile networks used in the access as well as in other parts where higher capacity is required. MINI-LINK HC can also be used as complement to traditional trunk systems. The compact trunk solutions are designed to be outstanding in providing up to two protected STM-1/OC-3 connections. Other areas of use are as aggregation nodes of backhaul of broadband access such as xDSL and WLAN. MINI-LINK HC can also be used as redundancy for important fiber links.

The MINI-LINK HC terminals can be configured to support a combination of Ethernet and E1/T1 traffic over a link or network, typically used to connect LANs and PBXs. Being a member of the MINI-LINK portfolio guarantees key characteristics such as high reliability, fast network rollout, cost-effective solutions and easy installation and maintenance procedures. Furthermore, MINI-LINK HC utilises the same antennas and accessories and has the same compact mechanical design as all other MINI-LINK products.

Key benefits

- Simple and swift installation
- Reliable solutions for numerous network applications
- Covers compact trunk as well as dense city area applications
- Boosts capacity in microwave networks

System overview

The system comprises an indoor unit (IDU) and an outdoor unit (ODU). The units are connected by a single coaxial cable carrying traffic and DC supply. The IDU holds traffic, modem, service and switching functions while the ODU, which comprises a radio unit and antenna, transmits and receives radio signals.

The radio unit can work in either fixed or adaptive output power mode. In the latter case the transmitted power is controlled according to the level of the received signal at the far-end, which reduces interference. Modem units are available for 16 QAM or 128 QAM, which allows deployment of radio links with high spectral efficiency and system gain.

MINI-LINK HC can be integrated in any type of network topology; star, tree or ring. Terminals can be configured as unprotected (1+0) or protected (1+1), employing space and frequency diversity. STM-1/OC-3 line protection is also available.

Ericsson can provide one common radio unit for the complete MINI-LINK point-to-point portfolio that supports all capacity and modulation needs.

Network management

Local management at site is performed from the Local Craft Terminal (LCT), which allows access to all operation and maintenance facilities on the terminal, by communication with a web server in the terminal. Terminals can also be supervised remotely from MINI-LINK Manager, as well as

from a Network Management System (NMS), when connected to a TCP/IP based Data Communication Network (DCN). The provided management functions are configuration management, fault management, performance monitoring and security.

Technical data

Frequency (GHz)	7	8	13	15	18	23	26	28	32	38
RF output power (dBm)										
16 QAM	NA	NA	NA	NA	17	18	17	17	16	14
128 QAM	24	20	16	16	17	16	15	15	14	12
Receiver threshold BER 10⁻³ (dBm)										
16 QAM	NA	NA	NA	NA	-77	-76	-76	-76	-74	-73
128 QAM	-71	-71	-70	-70	-71	-70	-70	-70	-68	-67
Receiver threshold BER 10⁻⁶ (dBm)										
16 QAM	NA	NA	NA	NA	-75	-74	-74	-74	-72	-71
128 QAM	-69	-69	-68	-68	-69	-68	-68	-68	-66	-65
Channel spacing										
16 QAM	50/55/56 MHz									
128 QAM	27.5/28/28.5/29.65 MHz									
Transmission capacity	155.52 Mbit/s									
Traffic interfaces	STM-1 Electrical ITU-T G.703, STM-1 Optical S-1.1 ITU-T G.957 OC-3 Bellcore GR-253-CORE 10/100BASE-T									
Auxiliary channels	1 x 64 kbit/s ITU-T G.703 1 x 64 kbit/s ITU-T V.11 1 x 2 Mbit/s ITU-T G.703 or 1 x 1.5 Mbit/s ANSI T1.102 12 user input/output software configurable									
Power supply	24-60 V DC nominal									
Power consumption	48-110 W (depending on configuration)									
Antennas	0.2/0.3/0.6/1.2/1.8 m compact antennas for integrated and separate installation, 2.4/3.0/3.7 m antennas for separate installation									
Weights and dimensions (HxWxD)										
Radio unit 7/8/18 GHz	5.8 kg/411x326x144 mm, 12.8 lb/16.2x12.8x5.7 in									
Radio unit 15/23/26/28/32/38 GHz	4.4 kg/321x260x97 mm, 9.7 lb/12.6x10.2x3.8 in									
Indoor magazine 1U (1+0 Conf.)	4.4 kg/43x483x280 mm, 9.7 lb/1.7x19.0x11.0 in									
Indoor magazine 2U (1+1 Conf.)	7.3 kg/88x483x280 mm, 16 lb/3.5x19.0x11.0 in									
Operational temperature	-20°C to +60°C (IDU, full functionality) -50°C to +60°C (ODU, full functionality)									

Ericsson AB

Transmission & Transport Networks
SE-431 84 Mölndal, Sweden
Telephone +46 31 747 00 00
Fax +46 31 27 72 25
www.ericsson.com

EN/LZT 110 5100 R8

© Ericsson AB 2004

All technical data is typical and is subject to change without notice