

SHDSL LINE TERMINATION UNITS – LT2MSKU ELCONNECT®

SHDSL for high-speed data transmission
over existing copper lines

FIELD-PROVEN high quality and dependability

POWERFUL

large transmission range by using max. two repeaters and
remote power supply of the distant network components



THE PRODUCT

The overall system is designed for transmission of symmetrical 2 Mbps signals under using the SHDSL transmission technology (SHDSL: Symmetric High speed Digital Subscriber Line) and consists of the line termination unit LT2MSKU-E (19" plug-in module) resp. LT2MSKU-T (desktop unit) and the network termination unit NT2MSKU. This system saves the installation costs, because of the cost-effective use of the existing copper cables in the local loop access and the spectral compatibility of the SHDSL transmission line with respect to other services (ISDN, POTS, HDSL, ADSL).

The LT2MSKU-E / LT2MSKU-T unit is available as switchable 1/2-pair transmission unit. Both devices are also offered in a special version, allowing for the transmission of fractional data rates ($n \times 64k$) on the SHDSL.

The LT2MSKU-E / LT2MSKU-T can further operate with the network termination unit NT2MSKU for standalone operation. In this case the LT2MSKU can be connected over one coppers pair to two NT2MSKU units. Together with the optionally remote power supply module FSP2M a repeater can be fed by the LT or the NT can be fed by the remote power supply module FSP2M of the LT2MSKU.

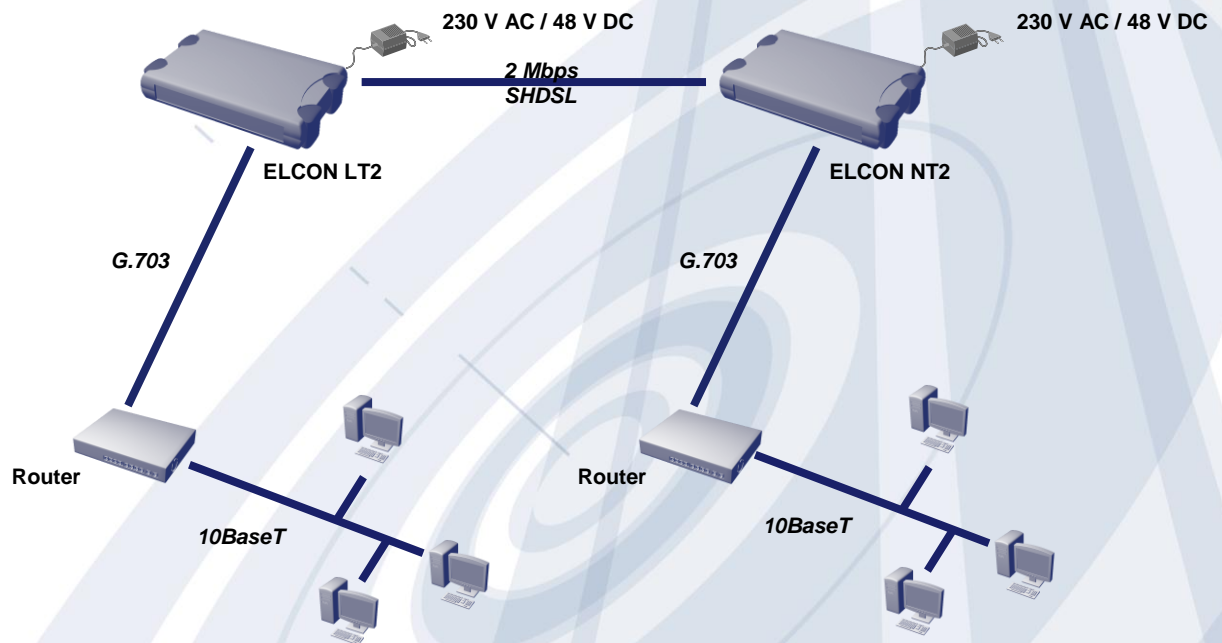
The transmission system is designed for the following applications:

- ISDN - Primary rate access (PRA)
- Structured Leased Line with frame structure acc. to ITU-T G.704
- Unstructured Leased Line

The system offers furthermore the possibility of the configuring and monitoring of the system, for example monitoring of several alarm states and measuring of the transmission quality of the SHDSL line and the customer interfaces.

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APPLICATION



TECHNICAL DATA

S2M interface

- Standard: ITU G.703/704; ETS 300 011
- Data bit rate: 2048 kbps, E1 PRA
- Line code: HDB3 (AMI)
- Impedance: 120 Ω
- Pulse shape: nominally rectangular
- Amplitude at S2Mab: $3 V_{SO} \pm 10\%$
- Permissible attenuation of the received signal at S2Man related to the transmitted signal: 6 dB
- Connectors:
 - plug-in version: Sub-D 25pole via the subrack
 - desktop version: RJ45

T3an interface

- Nominal clock frequency: 2048 kbps
- Impedance: 120 Ω
- Sensitivity: $0,5 V_{SO} \dots 1,9 V_{SO}$, symmetrical (rectangular or sine-shaped)

SHDSL interface

- Standard: ITU-T G.991.2 Annex B; ETSI TS 101 524
- Data bit rate from provider to subscriber (downstream):
 - 1-pair configuration: 2320 kbps ± 32 ppm (option: fractional 208 kbps ... 2064 kbps)
 - 2-pair configuration: 2×1168 kbps (option: fractional 2×208 kbps ... 1040 kbps)
- Data bitrate from subscriber to provider (upstream):
 - 1-pair configuration: 2320 kbps ± 32 ppm (option: fractional 208 kbps ... 2064 kbps)
 - 2-pair configuration: 2×1168 kbps (option: fractional 2×208 kbps ... 1040 kbps)
- Max. line digit rate:
 - 1-pair configuration: $773\frac{1}{3}$ kbaud (option: fractional 688 kbaud)
 - 2-pair configuration: $389\frac{1}{3}$ kbaud (option: fractional $346\frac{2}{3}$ kbaud)
- Line code: TC-16-PAM
- Impedance: 135 Ω
- Connector:
 - plug-in version: Sub-D 25pole via the subrack
 - desktop version: RJ45 and Wago clamp-free

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TECHNICAL DATA

Power supply

Power supply LT2MSKU

- Operation voltage range: -32 V ... -75 V DC
- Power consumption:
 - without FSP2M: < 7 W
 - with FSP2M: < 30 W

Power supply SNG2M (AC/DC adapter for desktop version)

- Operation voltage range: 100 V ... 240 V AC
- Frequency range: 47 Hz ... 63 Hz

Physical parameters

Casing

- Dimensions (W × D × H):
 - plug-in version:
25 mm × 186 mm × 262 mm
 - desktop version:
294 mm × 225 mm × 56 mm
- Weight: approx. 1,2 kg
- Casing material:
 - plug-in version: metal
 - desktop version: thermoplastic, flammability class UL94-V0

Environmental conditions

- acc. to ETS 300 019
- Operation:
 - Air temperature: -5 °C ... +55 °C;
 - Rel. air humidity: 5 % ... 95 %
- Storage:
 - Air temperature: -25 °C ... +55 °C;
 - Rel. air humidity: 10 % ... 100 %
- Transport:
 - Air temperature: -25 °C ... +70 °C;
 - Rel. air humidity: 60 % ... 95 %

EMC & Safety

- EMC: ETSI EN 300 386, EN 55022 Class B, EN 61000-3-2,3, ITU-T K.21, 1TR9
- Safety: EN 60950-1
- Degree of protection: IP40

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PURCHASE ORDER INFORMATION

Product designation	Order number
LT2MSKU-E SHDSL LT linecard (plug-in version)	6403
LT2MSKU-E n×64k SHDSL LT linecard (plug-in version with fractional data rates)	900114
LT2MSKU-T SHDSL LT linecard (desktop version)	6481
LT2MSKU-T n×64k SHDSL LT linecard (desktop version with fractional data rates)	900115
BGT LT2MS Subrack for installation of LT2MSKU plug-in units	6463
SNG2M AC/DC adapter for LT2MSKU desktop units	6524
FSP2M Optional power supply plug-in module for LT2MSKU plug-in & desktop units	6003