

Network Termination Unit STU2



Always up-to-date

Extend the transmission range

The STU2 provides a transmission bandwidth of 384 kbit/s (2x 192 kbit/s) up to 4096 kbit/s (2x 2048 kbit/s) payload data over two copper wire pairs. In the particular case of the data module 10/100base-T, the maximum bitrate can be $2 \times 36 \times 64 = 4608$ kbit/s.

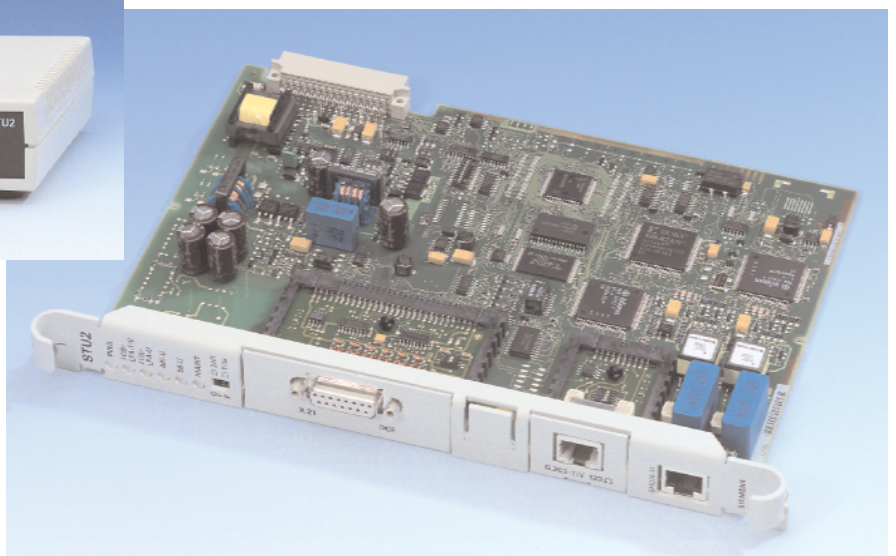
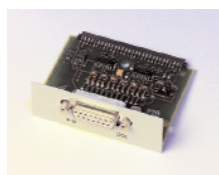
The STU2 motherboard is available as a plug-in unit and as a desktop version. The SHDSL interface connector is firmly assembled on the motherboard. Several modules are available for the 2 Mbit/s and nx64 kbit/s interfaces.

The STU2 plug-in and desktop units are available with remote power supply capability (RPS) or without it. The STU2 desktop without RPS can be powered either locally or remotely (there is no need for an external AC/DC adapter).

Several DSL technologies like HDSL or ADSL in the same cable with hundreds of pairs have the undesirable effect of disturbing each other. This results in a severe limitation of use for the pairs (e.g. in some cases, only 50% of them can be deployed with DSL services). SHDSL has here the best trump cards: almost all of the pairs in a cable can be in use with SHDSL. The days when you were forced to waste your precious copper resources are definitely over.

SHDSL offers the possibility of reaching longer distances by lowering the bitrate. The STU2 supports this feature in both data (nx64 kbit/s) and voice (2 Mbit/s for fractional E1) applications.

In order to verify the highest possible bitrate, the STU2 starts the so-called 'Line Probing' test. The SHDSL Transceiver investigates for each bitrate the corresponding 'Signal-to-Noise-Ratio'.



Regenerator

If the length of the connection between two STU2s exceeds the maximum bridgeable distance, up to 8 SHDSL regenerators (SRU) can be used. A separate regenerator will be needed for each SHDSL wire pair. The regenerators are fed via the remote power supply of the termination units or via local feeding. The SRU regenerates the SHDSL signal and doubles the transmission range.

Interface modules and submodules

Modules for the 2 Mbit/s interface

- RJ45 connector (120 Ω)
- Sub-D 9-pin connector (120 Ω)
- Coax BNC connector (75 Ω)
- Coax 1.6/5.6 connector (75 Ω)

Modules for the data interface

- 10baseT Advanced bridge module
- 10baseT Advanced bridge and router module
- X.21 Sub-D 15-pin connector
- V.35 ISO 2593 connector
- V.35 Sub-D 25-pin connector
- V.36 Sub-D 37-pin connector

Module for the clock and alarm interface

ULAF+ modules allow to derive the system clock source. In addition the prioritized alarms are forwarded via two floating alarm contacts. These functions can be optionally added by means of a module for the desktop unit. Both functions are available in the standard subrack.

Technical data

STU2 motherboard

Input voltage

Plug-in version40 V_{DC} to 72 V_{DC}

Desktop version40 V_{DC} to 72 V_{DC}

.95 V_{AC} to 260 V_{AC}

Power consumption (typical)< 3 W

when remotely supply (typical)< 13 W

Dimensions

Plug-in versionDouble Eurocard size

Desktop version (W x H x D)272 x 47,5 175 mm

Transmission interface

Medium2 copper pair

TechnologySHDSL (ETSI TS 101 524,

.ITU-T G.991.2)

Line codeTC-PAM 16

Bitrates384 kbit/s to 4096 kbit/s

SocketRJ45 (ISO 8877)

Network / Customer interfaces

Port for 2 Mbit/s interface1

Port for nx64 kbit/s interface1

Functionality

Basic configurationLTU / NTU

Operating modes

Transparent E1G.703

Structured E1G.704

ISDN PRAETS 300 233, ITU-T I.431

nx64 kbit/sV.35 / V.36 / X.21 / 10base-T

Clock sourcesLine/internal/external/incoming signal

Environmental conditions

Temperature (in operation)-5° – +50 C

.at 5 – 95% rel. humidity

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