

# Network Termination Unit QSTU

for ULAF+ access platform



## Product Overview

The QSTU is a SHDSL termination unit equipped with 4 SHDSL interfaces and (depending on the operating mode) up to 4 autonomous G.703 subscriber interfaces, what means, that an ULAF+ subrack can host up to 64 systems.

The QSTU significantly reduces space requirements in central offices, collocation and customer premises, thus reducing overall system costs. For cost-sensitive Telecom companies, the QSTU is the ideal platform to deploy 2 Mbit/s services.

## Management systems

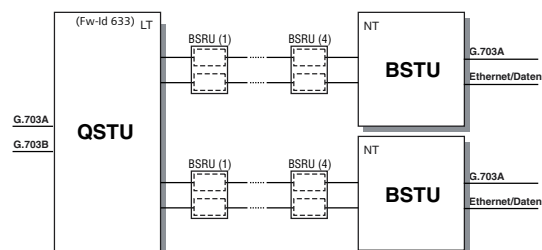
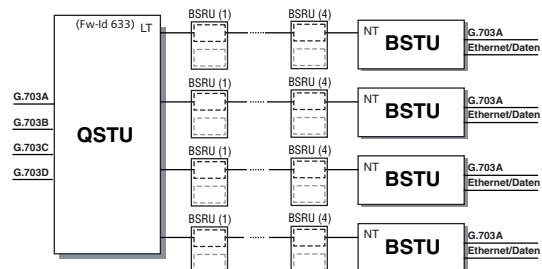
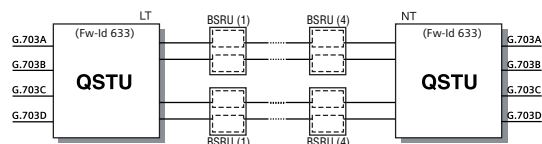
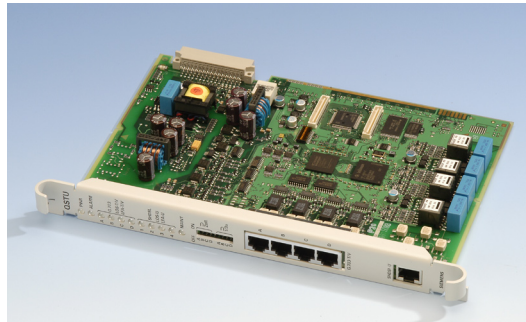
QSTUs are configured using the Local Craft Terminal (LCT) software, but the QSTU also fits perfectly into ULAF+'s remote management system environment (see management software 'AccessIntegrator').

## Operating modes

The QSTU can be used in 3 different system configurations:

- 1x 4 wire-pairs SHDSL allowing for up to 100% higher loop length
- 2x 2 wire-pairs SHDSL resulting in high port density and up to 40% higher loop length
- 4x 1 wire-pair SHDSL resulting in high 2 Mbit/s port density

You can combine the QSTU with all SHDSL network termination units (BSTU/BSRU) of the ULAF+ family.



## Regenerator

If the distance exceeds the maximum loop length, up to 4 SHDSL regenerators (BSRU) per wire-pair can be used. The regenerators are fed by the remote power supply of the termination units. Each BSRU regenerates the SHDSL signal and doubles the transmission range.

## Clock and alarm interface module

This optional module for the desktop unit allows to derive the system clock. In addition, the prioritized alarms are available on two alarm contacts.

## Technical data

### QSTU motherboard

|   |   |
|---|---|
| Input voltage                           |   |
| Plug-in version                         | 40 V <sub>DC</sub> to 72 V <sub>DC</sub>  |
| Desktop version                         | 40 V <sub>DC</sub> to 72 V <sub>DC</sub><br>95 V <sub>AC</sub> to 260 V <sub>AC</sub> |
| Power consumption                       |   |
| when providing remote power (120V/50mA) | < 6 W   |
| when providing remote power (120V/60mA) | < 37 W  |
| when providing remote power (120V/60mA) | < 42 W  |
| Remote Power Supply                     |   |
| Voltage                                 | 120 V <sub>DC</sub>   |
| Current                                 | 50 / 60 mA  |

### Dimensions

|                             |                      |
|-----------------------------|----------------------|
| Plug-in version             | Double Eurocard size |
| Desktop version (W x H x D) | 272 x 47,5 175 mm    |

### Transmission interface

|            |  |
|------------|--|
| Medium     | UTP copper                                     |
| Technology | SHDSL (ETSI TS 101 524, ITU-T G.991.2)         |
| Line code  | TC-PAM 16                                      |
| Bitrates   | 4x1 wire-pair mode: 192 kbit/s to 2048 kbit/s  |
| or         | 2x2 wire-pairs mode: 384 kbit/s to 2048 kbit/s |
| or         | 1x4 wire-pairs mode: 768 kbit/s to 2048 kbit/s |
| Socket     | RJ45 (ISO 8877)                                |

### Network / Customer interfaces

|                                    |                    |
|------------------------------------|--------------------|
| Versions available with            | 75 Ω and 120 Ω     |
| Connectors for 2 Mbit/s interfaces | 4x RJ45 (ISO 8877) |

### Functionality

|                     |  |
|---------------------|--|
| Basic configuration |  |
|                     | LTU / NTU                              |
|                     | 4x1 wire-pair mode                     |
|                     | 2x2 wire-pair mode                     |
|                     | 1x4 wire-pair mode                     |
| Operating modes     |  |
| Transparent E1      | G.703                                  |
| Structured E1       | G.704                                  |
| ISDN PRA            | ETS 300 233, ITU-T I.431               |
| Clock sources       | Line/internal/external/incoming signal |

### Environmental conditions

|                            |                            |
|----------------------------|----------------------------|
| Temperature (in operation) | -5° to +55°C               |
|                            | at 5 to 95 % rel. humidity |