qBRIDGE-101   Ethernet to E1 Converter
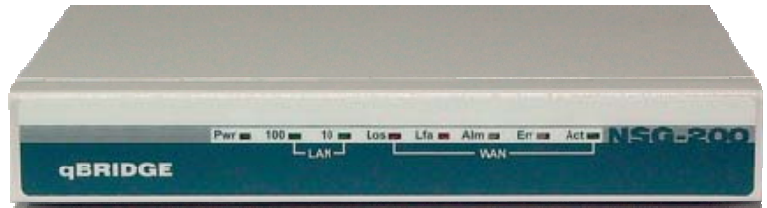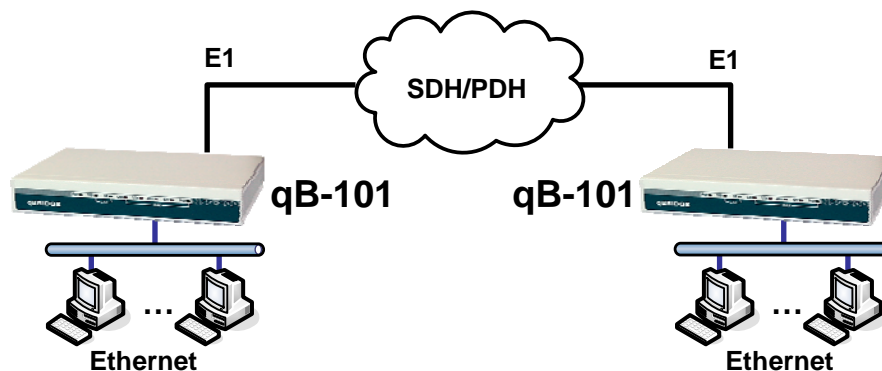
Ethernet over PDH/SDH

qBRIDGE-101 is a high performance converter/bridge that can be used for connection of remote segments of 10/100Base-TX Ethernet networks over standard E1 channels (SDH or PDH network). qBRIDGE-101 can be connected to ITU G.703/G.704 framed as well as to ITU G.703 unframed links. So qBRIDGE-101 enables connection of two LANs through an whole G.703 stream or through selected timeslots only. The E1 port meets all

requirements of ITU recommendations G.703, G.704, G.706, and G.732. The converter supports all functions of the qBRIDGE-100 but has some additional features including Data transfer speed is 64-1984 Kbps with 64 Kbps steps, Automatic alarm generation and Fractional E1 mode.

The converter also can be used to connect remote LAN segments through two pair (4 wire) copper line with maximum reach up to 2 km (24 AWG cable).

"Bridge connection" mode converter is transparent for Ethernet frames with VLAN tag and for VPN packets. It has one Ethernet 10/100Base-TX port with Auto-Negotiation and Auto-MDIX capability and one E1 port. User can easily configure qBRIDGE-101 with no additional equipment (terminal emulation program and so on). DIP-switches are used to control all qBRIDGE-101 functions. The Device has selectable frame buffer configuration, configurable LAN Filtering mode, IEEE 802.3x flow control, E1 mode (E1 Framed/ E1 Unframed). Any desired combination of timeslots can be used for Ethernet traffic transport. For E1 interface it's also possible to setup CAS signaling, CRC4 multiframe, Transmit clock source, Automatic remote alarm indication, Idle code for unused E1 timeslots. For diagnostic purposes and troubleshooting qBRIDGE-101 provides remote loopback mode.

The product is available with AC or DC power supply as a standalone unit in iron enclosures.

Technical Specifications

Ethernet: "Bridge connection" mode
· 802.1d transparent learning bridge
· MAC Table: 256 MAC address
· IEEE 802.1q VLAN pass-through
· Filtering and Forwarding: 90000 pps
· Frame Buffer: 340 frames

E1 Interface Framed/ Unframed
· Interface: ITU-T G.703; One E1 port
· Data rate: 64-2048 Kbps
· HDB3 coding; Impedance: 120 Ohm
· Jitter performance: ITU–T G.823
· Relative receive level: 0 to -43 dB
· Clock modes: Internal or Recovered
· ITU-T G.704, CRC4, CAS
· Link-Loss Forwarding
· Remote loopback mode
· Automatic alarm generation
· Connectors: RJ-45

Ethernet Interface
· One Ethernet port 10/100Base-TX
· IEEE 802.3/ 3u/ 3x flow control
· Auto-Negotiation 10/100M
· Auto-MDIX
· Half/Full duplex (10/100-20/200Mbps)
· Ethernet to HDLC encapsulation
· Frame length up to 1536 bytes
· Connector: Shielded RJ-45

General
· Configuration: DIP-switches
· Various Diagnostic LED Indicators
· Power supply: 100~240VAC/36~72VDC
· Power consumption: 3 W
· Size: 182 x 140 x 30 mm (metal case)
· Weight : 0,6 Kg
· Temperature: 0 ÷ 45 ºC
· Humidity: 0 ÷ 95% without condensation