



## Description

TC-200GTK model, G.SHDSL modem, transports multi mega bit stream over one pair of copper wires using TC-PAM technology. This modem supports multiple data rates ranging from 64 Kbps to 5.7Mbps. It has Fast Ethernet and E1 interface or V.35 interface.

The TC-200GTK model uses in-band Embedded Operation channel for controlling and monitoring the remote unit. The comprehensive diagnostics function developed includes G.SHDSL, E1 line performance monitoring, in-band local and remote loop backs and real time alarm report.

HTTP and SNMP management interface facilitate friendly configuration and diagnostics, DIP Switch for management.

## Features

Meet ITU-T G.991.2 ETSI TS101 524. Support data rate from 64Kbps to 5.7Mbps per 64Kbps increment. In 2 wires Feature modular E1, LAN Provide remote control and monitoring using in-band EOC channel. Support DSL PRBS BER test for E1. Support local, remote loop back. Perform G.SHDSL and E1 line performance monitoring.



Detect and operate DSL loop crossover. Support DIP Switch, WEB and SNMP management interface.

# Specification

### **G.SHDSL** line

Line Coding:	16 TC-PAM, 32 TC-PAM is selectable
Line Rate:	PAM 16/32 192K bps ~ 57000 Kbps for one DSL loop.
	PAM 64/128 15Mbps (LAN only)
Protection:	ITU-T K.20, K.21 and IEC60950
Standard:	ITU-T G.991.2, Annex A (Default), Annex B
Impedance:	135Ù +/- 5 %
Connector:	RJ45 x 1
Wire:	2

#### System Timing

- Payload timing
- (1) Internal clock, accuracy +/- 30ppm
- (2) E1 / V35 input clock
- (3) Line Recovered clock

#### **SHDSL timing**

- (1) Plesiosynchronous, local oscillator: 22.1184MHz +/- 32ppm
- (2) Synchronous
- (3) Hybrid

#### **Data interfaces**

#### LAN Interface

Interface:	IEEE 802.3/802.u 10/100 Base-T
Data Rate:	up to 5.7Mbps / 15Mbps (option), Step : Nx64Kbps.
Bridge:	IEEE 802.1D transport, self-learning
Connector:	1xRJ-45



## E1 Interface

Line rate: 2048KHz +/- 50 ppm Line Code: HDB3 PCM31, PCM30, PCM31C, PCM30C and unframed Framing: Data Rate: 64 Kbps to 2048K bps [NX64Kbps, N=1 - 32] Full E1 or fractional E1 Operation: Meet ITU-T G.703 Pulse shape: balanced 120 $\Omega$  +/- 5% resistive or unbalanced 75 $\Omega$  +/-5% resistive Impedance: Connector: 120ohm RJ45 x 1 / 75ohm BNC x 1

#### V.35 Data Port Interface

Interface:V.35Data Rate:64 Kbps to 2048 KbpsConnector:MR34

#### Maintenance

Loopbacks: Local and remote AL/DL loopbacks via front panel loopback buttons, VT-100 menu screen or in-band loopback codes DSL PRBS BER testing SNR, LOSW, ES, SES and UAS for DSL loops Supports G.821 and G.826 error performance statistics for E1 interfaces

#### **Management Interface**

DIP SwitchQuick mode configuration(dip)WEB/ SNMP / Telnet /SSHDevice support by IP address to access those services.

#### Jitter and Wander

Meets G.823 and G.824 jitter and wander requirements for E1 interface

#### **Power input**

DC: -36 ~ -72 VDC AC: 90 ~ 260V AC (47 ~ 63 Hz)

#### Dimensions

Enclosure: 210\*129\*44mm (WxLxH)

#### Environment

Temperature: 0 ~ 60 degree C Humidity: Up to 95% non-condensing



## Order Information

Product	Description
TC-200GTK-E1-	1xE1, 1x10/100Mbps Ethernet Port, 1xRJ 45 (DSL) Port, DIP Switch with
ETH-DIP Switch	220VAC & 48VDC Power Supply
TC-200GTK-V.35-	1xV.35, 1x10/100Mbps Ethernet Port, 1xRJ 45 (DSL) Port, DIP Switch with
ETH-DIP Switch	220VAC & 48VDC Power Supply

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