



Protocols for Developers

TsLink3®

Documentation Overview
TeleSoft International

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1. Introduction

The TsLink3® ISDN software building blocks provide a complete telecom solution for Layers 1 through 3 of the International Standard Organization's Open System Interconnection (OSI) seven-layer communication model. The documentation overview directs users to the level of documentation detail appropriate to their needs.

Section 2 provides documentation "roadmaps" to indicate which TsLink3 documents should be studied for different levels of detail and specific purposes.

Section 3 lists commonly used Acronyms and Abbreviations.

2. TsLink3 Documentation Roadmaps

The TsLink3 documentation roadmaps are organized by the major classes of TsLink3 users and are intended to direct users to the level of documentation detail appropriate to their needs. The documents are listed in order of increasing application complexity.

2.1 High Level Overview of TsLink3

For Users who want to understand what the TsLink3 package includes and how the package functions, but do not want to run or alter the TsLink3 code:

- TsLink3 Overview (d0100ovr.doc)

2.2 Major Software Components and Interfaces of TsLink3

For Users who want to understand the overall architecture of TsLink3, but who do not want to examine or alter the source code:

- TsLink3 Overview
- TsLink3 Interface Reference Guide, Section 1 (Architecture Overview)
- TsLink3 Porting and Integration Guide, Sections 1-4

NOTE: The documents listed below require the reader to have detailed technical knowledge of and experience with telecommunications interface systems. It is beyond the scope of TsLink3 documentation to instruct users in the fundamentals of telecommunications systems development.

2.3 Interfacing Your Layer 4 to TsLink3

For Users who wish to interface their own Layer 4 (and higher layers) software to TsLink3:

- TsLink3 Porting and Integration Guide
- TsLink3 Interface Reference Guide Sections 1 and 2 (Architecture Overview and Coordinating Entity)
- TsLink3 User's Guide Sections 1 and 2 (Overview and Coordinating/Management Entity)

2.4 Porting TsLink3 Code to Different Real-Time Operating Systems and/or to Non-TeleSoft-Supplied Hardware

For Users who want to port TsLink3 to a different OS and/or non-TeleSoft hardware. The TsLink3 code is functionally partitioned such that most of the TsLink3 code will remain intact and can be treated as a black box. Users porting TsLink3 typically only need to master and alter a small portion of the TsLink3 code. The following documents should be read before modifying TsLink3 code:

- TsLink3 Porting and Integration Guide
- TsLink3 Interface Reference Guide Section 1 (Architecture Overview).
- TsLink3 User's Guide
- Generic Low-Level Driver Interface Reference and User's Guide
- TsRITE User's Guide (if TsRITE used)

2.5 Changing the Internal Code Structure of TsLink Software Layers

For Users who need to change the internal code structure of TsLink (Layer 2) or TsLink3 (Layer 2+) code in order to add application-specific features, or make use of the software as a foundation template for new, or modified, protocols. This class of users requires detailed study and mastery of the following documents:

- TsLink3 Porting and Integration Guide
- TsLink3 Interface Reference Guide
- TsLink3 User's Guide
- TsLink Users Guide
- TsLink Interface Guide

3. Acronyms and Abbreviations

The following acronyms and abbreviations are used in the TsLink3 documentation and source code:

BLLD	B-Channel Low-Level Driver
BRI	ISDN Basic Rate Interface
B-Channel	ISDN bearer channel for voice and data
CE	Coordinating Entity
CES	Connection Endpoint Suffix (Q.921)
connid	TsLink3 global <u>connection identifier</u>
CRV	Call Reference Value (Q.931)
D-Channel	ISDN channel for call control messages (and optional user data)
DLCI	Data Link Connection Identifier
DLLD	D-Channel Low-Level Driver
DN	Directory Number
DSC	AMD 79C30A 'S' interface transceiver/D-Channel HDLC/Codec device
HDLC	High-level Data Link Control
HSCX	Siemens 82525 HDLC device
ISAC	Siemens 2085 'S' interface transceiver/D-Channel HDLC device
ISDN	Integrated Services Digital Network
ITAC	Siemens 2110 UART/HDLC/V.110 device
I.430	ITU-T Layer 1 specification
L4	Layer 4
L4UI	Layer 4 User Interface
LAP	Link Access Procedure (Layer 2)
LAPB	Link Access Procedure Balanced (X.25 Layer 2)
LAPD	Link Access Procedure on the D-Channel (Q.921)
LCI	Logical Channel Identifier (X.25 Layer 3)
LLD	Low-Level Driver
M302	Motorola MC68302 device
M360	Motorola MC68360 device
M472	Motorola MC145472 'U' interface transceiver device or MC145572 in IDL-2 mode
M475	Motorola MC145474/MC145475 'S' interface transceiver device
M572	Motorola MC145572 'U' interface transceiver device in GCI-IOM mode
ME	Management Entity
ML-PPP	Multi-Link PPP
NLP	Network Layer Packet (X.25 Layer 3)
NLS	Network Layer Signaling (Q.931)
OS	real-time Operating System executive/scheduler
PCHAN	physical channel
PPP	Point-to-Point Protocol

PRI	ISDN Primary Rate Interface
PSS1	Private Signaling System Number 1 (see QSIG)
Q.921	ITU-T Layer 2 specification
Q.931	ITU-T Layer 3 signaling specification
QSIG	Inter-PBX Signaling system consisting of three sublayers
refnum	TsLink3 buffer (and occasionally timer) reference number
SAPI	Service Access Point Identifier (Q.921)
SPID	Service Profile Identifier
SS	Supplementary Services
TA	Terminal Adapter
TAUI	Terminal Adapter User Interface
TDM	Time Division Multiplexed
TEI	Terminal Endpoint Identifier (Q.921)
TP3410	National Semiconductor 3410 'U' interface transceiver device
TsLink	TeleSoft Layer 2 Software
TsLink3	TeleSoft Layer 3 Software
ITU	International Telecommunication Union
ITU-T	ITU - Telecommunication Standardization Sector (formerly CCITT)
ULLD	UART Low-Level Driver
V.120	ITU-T Rate Adaption standard (software intensive)
X.25	ITU-T Layer 3 packet data specification