

TsLink3 Device Drivers

Source Code

TsLink3 Device Drivers

TeleSoft develops and licenses a wide range of low-level drivers for devices from the leading communications chip companies. TsLink3 device drivers provide a highly integrated solution with a clean interface between the physical layer of the chip and layer 2 of the TsLink3 telecom and data protocol stacks.

When used with TsLink3 telecom and datacom protocol stacks, each TsLink3 driver supports key hardware functions required to implement signaling or data transfer. TsLink3 drivers are delivered with the selected protocol stack modules interfaced to the operating system of choice.

TsLink3 protocol stacks are architected for embedded and host-based applications in which performance and code size are important. TsLink3 protocol stacks include PRI & BRI ISDN, QSIG, ML-PPP, PPP, X.25, Multi-Link Frame Relay, T1 CAS Robbed-Bit and E1 CAS R1 & R2. Pre-ported OS interfaces include support for Linux, MQX, Nucleus, OSE, pSOS, QNX and VxWorks.

Manufacturers license TsLink3 conformance-proven source code stacks to get their products to market faster while minimizing technical risk and development costs.

"TeleSoft code made our ISDN product feasible; it saved us at least one year of market opportunity."
 -- NxNetworks/Proteon, Westborough MA

Advanced Micro Devices (AMD)

Am186CC/CH/CU Microcontroller, 16-bit x86 processor with 4 HDLCs

Cologne Chip

XHFC-1SU	1 Channel S/T or Upn/Upo BRI with HDLC
XHFC-2SU	2 Channel S/T or Upn/Upo BRI with HDLC
XHFC-2S4U	2/4 Channel S/T or Upn/Upo BRI with HDLC
XHFC-4SU	4 Channel S/T or Upn/Upo BRI with HDLC
HFC-4S	4 Channel S/T Transceiver with HDLC
HFC-8S	8 Channel S/T Transceiver with HDLC
HFC-S Active	Not for new designs – use XHFC-1SU
HFC-S Mini	Not for new designs – use XHFC-1SU
HFC-SP	S/T Transceiver (not for new designs)

Freescal

MPC 8560 PowerQUICC III	8360 processor with multiple peripherals
MPC 8360 PowerQUICC II Pro	8360 processor with multiple peripherals
MPC 8260 PowerQUICC II	8260 processor with multiple peripherals
MPC 860 PowerQUICC 1	860 Processor with 4 HDLCs
MC 68302	Multiprotocol Processor (not for new designs)
MC 145574	S/T transceiver (not for new designs)
MC 145572	U transceiver (not for new designs)

Lantiq (Infineon)

PEF 22558 OCTALFALC	Octal E1/T1/J1 Framer/Transceiver with HDLC
PEF 22554 QUADFALC	Quad E1/T1/J1 Framer/Transceiver with HDLC
PEF 22552 DUALFALC	Dual E1/T1/J1 Framer/Transceiver with HDLC
PEF 2256 FALC56	Single T1/E1/J1 Framer/Transceiver with HDLC
PEB 3081 SBCX-X	S0 Transceiver
PEB 3086 ISAC-SX	S/T transceiver with HDLC, low voltage
PSB 3186 ISAC-SX TE	S/T Transceiver with HDLC
PEB 2186/2086 ISAC-S	S/T transceiver with HDLC
PSB 21150 IPAC-X	S/T transceiver with multi-HDLC
PEF 20525 SEROCCO-H	2 Channel Serial Optimized Controller
PEF 20532 SEROCCO-M	2 Channel Serial Optimized Controller
PEF 20542 SEROCCO-D	2 Channel Serial Optimized Controller
SAF 82525 HSCX	Dual HDLC controller
SAF 82526 HSCX-1	Dual HDLC controller
SAB 82532 ESCC2	Dual HDLC controller (discontinued)
SAB 82538 ESCC8	8-channel HDLC control (discontinued)
PEF 20256 MUNICH256	256 Channel HDLC Controller
PEF 20064 MUNICH64	64 Channel HDLC Controller
PEB 20320 MUNICH32	32 Channel HDLC Controller (discontinued)

Maxim (Dallas) Semiconductor

DS 2151	T1 Framer/Transceiver
DS 21Q42 Quad	T1 Framer/Transceiver
DS 21Q44 Quad	E1/T1/J1 Framer/Transceiver
DS 2152	T1/J1 Framer/Transceiver
DS 2153	E1 Framer/Transceiver
DS 2154	E1 Framer/Transceiver
DS 2155	E1/T1/J1 Framer/Transceiver
DS 2156	E1/T1/J1 Framer/Transceiver
DS 2196	T1/J1 Framer/Transceiver
DS 21352	T1/J1 Framer/Transceiver
DS 21354	E1 Framer/Transceiver
DS 21455 Quad	E1/T1/J1 Framer/Transceiver
DS 21458 Quad	E1/T1/J1 Framer/Transceiver
DS 21552	T1/J1 Framer/Transceiver
DS 21554	E1 Framer/Transceiver
DS 21Q352 Quad	T1/J1 Framer/Transceiver
DS 21Q354 Quad	E1 Framer/Transceiver
DS 21Q50 Quad	E1/T1/J1 Framer/Transceiver
DS 21Q552 Quad	T1/J1 Framer/Transceiver
DS 21Q554 Quad	E1 Framer/Transceiver
DS 21Q55 Quad	E1/T1/J1 Framer/Transceiver

Maxim (Dallas) Semiconductor**(Continued)**

DS 21Q58 Quad	E1 Framer/Transceiver
DS 21Q59 Quad	E1 Framer/Transceiver
DS 26514 Quad	E1/T1/J1 Framer/Transceiver
DS 26518 Octal	E1/T1/J1 Framer/Transceiver
DS 26519 16 Channel	E1/T1/J1 Framer/Transceiver
DS 26521	E1/T1/J1 Framer/Transceiver
DS 26522 Dual	E1/T1/J1 Framer/Transceiver
DS 26524 Quad	E1/T1/J1 Framer/Transceiver
DS 26528 Octal	E1/T1/J1 Framer/Transceiver
DS 26556 Quad	E1/T1/J1 Framer/Transceiver

National Semiconductor

TP 3410	U Transceiver 2B1Q
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PMC-Sierra

PM4351 COMET	E1/T1/J1 Framer/Transceiver with HDLC
PM4354 COMET QUAD	Quad E1/T1/J1 Framer/Transceiver with HDLC
PM4359 COMET TETRA	Quad E1/T1/J1 Framer/Transceiver with HDLC
PM4358 COMET OCTAL	Octal E1/T1/J1 Framer/Transceiver with HDLC

STMicroelectronics

MTK-20140	ADSL Chipset
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PMC-Sierra

LE79R70, Am79R70	Ringling SLIC
LE79R79, Am79R79	Ringling SLIC
MT9076	E1/T1/J1 Framer/Transceiver with 3 HDLC
MT90810	MVIP Matrix Switch

TeleSoft Advantages

TsLink3 software stacks are specifically architected for all types of embedded and host-based applications and are optimized for excellent performance and small code size.

Written in ANSI C and delivered as source code SDKs with a pre-ported interface to a defined RTOS of your choice, TsLink3 stacks give you an advanced starting point to shorten your development schedule, minimize technical risk and maintain the flexibility to exercise full control over your end product.

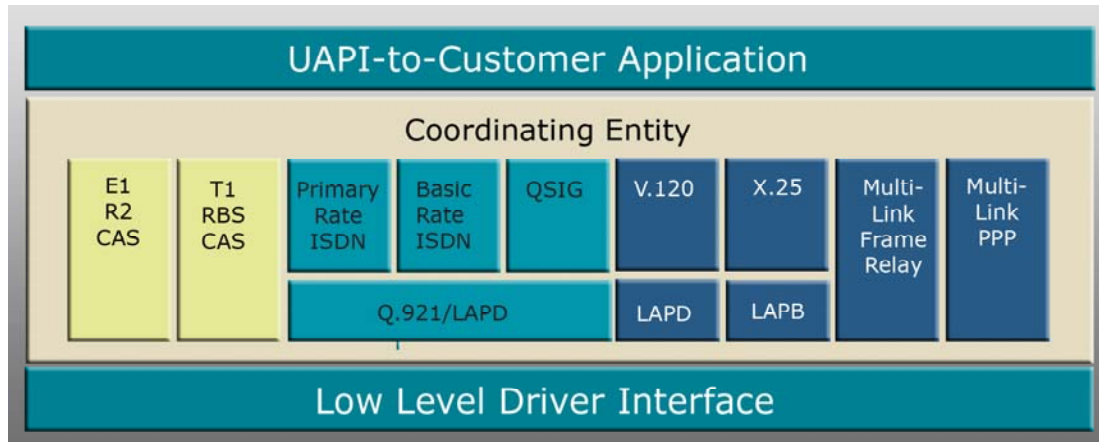
All TsLink3 protocol software stacks are based on a Standard Core Architecture (SCA) with a Universal API (UAPI) that enables easy migration between different stacks and portability to different software/hardware platforms.

Universal Application Programming Interface (UAPI)

TsLink3 code includes a rich message-based Universal API (UAPI) which presents a simple interface for simple applications such as signaling-only. UAPI also provides the versatility and power needed to support more complex configurations which combine signaling with data protocols or with specialized hardware. The TsLink3 Universal API coupled with the straightforward structure of the TsLink3 protocol stack enables you to easily follow the API message flow through the code to determine where to make modifications required for your application.

The majority of simple signaling-only applications require a very small subset of the TsLink3 API messages and parameters - and the non-applicable messages can be disregarded and unused parameters set to zero. More complex applications benefit from the large set of messages and parameters that we provide as templates.

UAPI is common across all TeleSoft stacks which decreases the time and effort required to add upgrade modules to an existing TsLink3 stack and to develop with additional TeleSoft stacks.



Faster debugging

- ◆ Specific defined constants, comment strings and variable naming - supports use of text search techniques to quickly locate a specific section of code and determine the side effects of changes that are being considered.
- ◆ ITU-T primitives and software structure - clear traceable dataflow.
- ◆ Development and testing on TsLink3 hardware - clean, proven and robust code.

Smaller inventory

- ◆ Each line can be configured at run-time for a different T1, E1, R2, PRI or BRI variant
- ◆ Co-resident T1, E1, R2, ISDN PRI and BRI switch variants, Frame Relay, X.25, MLPP, PPP, and ML-PPP stacks.

Documentation

Comprehensive documentation customized for your load. Provided in a searchable soft format. All nomenclature complies with ITU-T.

Technical and Custom Support

3-months included with each license. 12-month maintenance extensions include code updates and quick-response technical support via E-mail, phone and fax.

About TeleSoft International

TeleSoft International, Inc., is an industry-leading, US-based provider of field-proven, scalable, standards-based protocol stacks for developers. We specialize in telecom applications, licensing source code stacks to OEMs and ODMs worldwide for VoIP, ISDN, Q.931, Q.921, QSIG, Supplementary Services, ML-PPP, PPP, Frame Relay, T1 RBS, E1 CAS R2, and X.25.

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