



# TeleSoft International Protocols For Developers



## TELESOFT COMPACTSIP SIP STACK + ISDN STACKS - A WINNING COMBINATION FOR VOIP APPLICATIONS -

TeleSoft International is an industry leading supplier of portable protocol stacks, used worldwide in hundreds of thousands of gateways, routers, terminal adapters, video-conferencing systems, remote access products, and PABXs. Our highly adaptable TsLink3® code is written in "C" for ease of porting and has been validated on TeleSoft hardware platforms and at certified test centers. TsLink3 reduces time to market — giving users a competitive edge by providing the base for efficient, cost effective products. Listed below is a sampling of TeleSoft protocols. Please visit [www.telesoft-intl.com](http://www.telesoft-intl.com) for more information.

**SIP:** Session Initiation Protocol is a signaling, presence and instant messaging protocol developed to set up, modify and tear down multimedia sessions over the Internet. **IETF CompactSIP** is a very small SIP stack developed specifically for embedded applications including IP phones, PDAs, ATAs & Telematics.

**3GPP/IMS CompactSIP** complies with IMS standards for 3G mobile phones while maintaining a very small memory footprint.

### SIP- PSTN Gateway:

**TsGATE** is a Soft Gateway solution that translates SIP IP packets to PSTN TDM messages. TsGATE is configurable to support worldwide PRI, BRI and QSIG switch variants.

**Q.931** ISDN worldwide switch variants that are run-time selectable and include **BRI** and **PRI** support of **Network** and **Terminal** sides for:

North America	Japan	Europe
South America	Africa	Taiwan
Australia	China	Korea

**Q.932** defines the ISDN Voice Supplementary Services. PRI and BRI Supplementary Services are available for Lucent 5ESS, US National ISDN-1 & 2, and EuroISDN DSS1.

**QSIG**, a set of standard signaling protocols defined for interworking between PABXs, is supported by the Q.931 and Q.921 implementations. The TeleSoft QSIG stack includes the Basic Call and the Generic Functional procedures. Also available are QSIG Supplementary Services.

**PPP** is the standard Internet Point-to-Point Protocol and **ML-PPP** (Multi-Link Point-to-Point Protocol) is the IETF standard B-channel aggregation mechanism to achieve higher bandwidth connections. **BACP/BAP** (Bandwidth Allocation Control Protocol) within ML-PPP manages the bandwidth by allowing in-band address passing and dynamic channel allocation.

**X.25** provides support for packet networks and can be used independently or integrated with TsLink3 ISDN software. Setting up X.25 calls through the ISDN network removes the need for a permanent connection to an X.25 router.

**Multi-Link Frame Relay** is a highly efficient packet switching service that combines the benefits of bandwidth sharing and circuit-switched networks. TeleSoft's FR includes support for ML-FR, PVCs and SVCs.

**T1 Robbed-bit (RBS), E1 Channel Associated Signaling (CAS)** with **R2** are alternative signaling protocols to PRI. T1 RBS is used in North America whereas E1 CAS is used in many other countries. TeleSoft currently supplies R1/R2 for:

Argentina	China	Nicaragua
Bangladesh	Colombia	Singapore
Brazil	Korea	Spain
Chile	Mexico	Taiwan

### TsLink3 OS Interface Support:

- Nucleus PLUS
- Montavista Linux
- MQX
- OSE
- TsRITE
- VxWorks

## Technology Solutions Software + Hardware Designs

MIDAS design packages offer the lowest cost and shortest development path to a final custom product. Each MIDAS solution is a Technology Transfer Package that gives customers full control over their product design and direction. They can customize, add value and change form factor. They have full flexibility because MIDAS solutions include a complete Hardware Design Kit and Software Source Code Kit with a fully functioning board, schematics and bill of materials. MIDAS platforms are backed up by experienced, responsive technical support that enables customers to meet aggressive production schedules with cost-effective products. The growing families of MIDAS solutions are designed specifically to meet the needs of OEMs for fast development of a range of low-cost WAN products.

Types of End Products	MIDAS Solutions	Data Protocol Modules*	Interfaces
PBX Protocol Converter	APD860 Advanced Development Platform	BRI, PRI, QSIG E1 CAS, T1 RBS	3 BRI S/T 3 BRI U 1 T1, E1
ISDN PBX Hybrid PABX Video Conferencing Satellite ISDN Adapter	ADP860	Voice	3-BRI S/T 3-BRI U 1-T1/E1/PRI 1-Ethernet
ISDN Voice/Data Modem ISDN Dial Backup ISDN TA	UE / SE Series	V.110 + AT PAD V.120 + AT PAD ML-PPP + AT PAD	BRI U or S/T RS232 2 POTS
RAS ISDN Card ISDN Data Modem ISDN Dial Backup PBX ISDN Card	ULC	V.120 + AT PAD ML-PPP + BACP X.25 AO/DI	BRI U COM Port
Video Conferencing PBX ISDN Card	PRI	Switch Signaling	2 T1/E1/PRI MVIP

\* Worldwide ISDN signaling software available for all applicable MIDAS solutions

### A Selection of Semiconductor Devices Directly Supported

<b>Zarlink</b> MT9076	<b>Maxim/Dallas</b> DS2151 DS 21Q42 DS 2152 DS 21352/552	DS 2154 DS 21354 DS 21554 DS 2155	PEB2186 ISAC-S PEB2086 ISAC-S PSB21525 HSCX TE SAB 82532 ESCC2 SAB82538 ESCC8 PEB2256 FALC56 PEB20320 MUNICH32	<b>Legerity</b> Am79R70 Am79R79	<b>Freescale</b> MPC8260 MPC860 MC68MH360 MC68302
<b>Cologne</b> HFC-S		<b>Infineon</b> PEB 2115 IPAC PEB21150 IPAC-X			
<b>AMD</b> Am186CC Am186CH	DS 2153 DS 21Q44			<b>PMC-Sierra</b> PM 4351 COMET	MC145574 MC145572