

The best of
 Télécommunication
 Technologies

The Company



With facilities and selected representatives on 3 continents, a client list of more than 400 of the world's leading data and telecommunication companies, and more than 1,000 different products based on its technologies being marketed worldwide, Netbricks has clearly become a world leader in providing telecommunication technologies to the OEM marketplace. From inception, all Netbricks products are designed specifically for the unique needs of the OEM. Everything we offer is designed to ensure portability, to ease implementation, and to minimize "time to revenue" ... while still providing maximum design flexibility. Our adherence to a consistent design architecture ensures easy growth and migration for all of our products and services. Our business is built on providing that specific level of functionality, support, and service that best fits your business model.

Netbricks is 100% committed to providing software products that are complete implementations of industry standards. All Netbricks software products are guaranteed to be fully compliant with applicable International (ITU, IETF), European (ETSI) and North American (ANSI) specifications and recommendations... as well as those from individual countries, industries or carriers worldwide.

Netbricks is truly a "full service" supplier. We can provide assistance ranging from data and telecommunications consulting to "turnkey" software development - and everything in between. Our industry leading warranty is based on your "acceptance" of the Netbricks product - not on "delivery". On-going maintenance programs and extensive technical assistance is provided with everything we ship. Product and technical training programs are available.

Netbricks is genuinely proud of the range and quality of services that we provide ... and are confident that you will be too!

Software Products

For centuries, the "brick" has been the basic building block of most of the world's great projects. Capturing this theme, Netbricks has developed a family of software products that are known collectively as "BRICKS". Engineered specifically for the OEM market, all BRICKS software is written in "C" and takes full advantage of our modular and portable architecture which allows compiler, OS and CPU independence. Netbricks has a unique experience of communication protocols for both traditional TDM and Next Generation Networks. We encourage you to utilize our "BRICKS" as building blocks for your data and telecommunication projects.

SIGNALING PROTOCOLS

SS7-BRICKS

SS7-BRICKS is a portable software package implementing the Network Service Part of SS#7 protocol stacks for narrow and broadband networks.

- MTP1 Message Transfer Part 1 (SDL) Narrow band (ITU-T Q.701, Q.702, Q.703).
- MTP2 Message Transfer Part 2 (SL) Narrow band (ITU-T Q.701, Q.702, Q.703 and ANSI T1.111.3) and Broadband (SSCOP Q.2110, Q.2140 and Q.2144).
- MTP3 Message Transfer Part 3 Narrow band and Broadband (ITU-T Q.701, Q.704, Q.707, ANSI T1.111.4, China variant...).
- SCCP Signaling Connection Control Part (ITU-T Q.711 thru Q.716 and ANSI T1.112).
- TCAP Transaction capabilities (ITU Q.771, Q.772, Q.773, Q.774 and ANSI T1.114).
- ISUP (ITU-T Q.761, Q.762, Q.763 and Q.764).

MGCP-BRICKS

MGCP-BRICKS is Netbricks' implementation of the Media Gateway Control Protocol (MGCP), a signaling and control protocol for Voice over Packet (VOP) developed by the IETF. MGCP-BRICKS is compliant with IETF RFC 3435 version 1.0, RFC 2327 and Packet Cable Call Signaling Protocol.

MEGACO-BRICKS

MEGACO-BRICKS is Netbricks' implementation of the Media Gateway Control Protocol jointly specified by ITU-T and IETF to be used between Media Gateway and Media Gateway Controller in Next Generation Networks. Netbricks source code is available for both Media Gateway and Media Gateway Controller sides. MEGACO-BRICKS is compliant with last releases of IETF RFC 3525, RFC 2327, and ITU-TS H.248.1.

SIGTRAN-BRICKS

Netbricks software product implementing the protocols defined by the IETF to transport signaling traffic (ISDN, SS7 or V5) in IP based Next Generation Networks (NGN). Stream Control Transmission Protocol (SCTP) and the User Adaptation Layers (UA) for each protocol over IP are available in source code and compliant with RFC 2719 Architectural Framework for Signaling Transport, RFC 2960 SCTP, RFC 3057 ISDN UA (IUA), RFC 3331 SS7 MTP2 UA (M2UA), RFC 3332 SS7 MTP3 UA (M3UA), RFC 3868 SS7 SCCP UA (SUA), RFC 3827 V5 UA (V5UA), Draft IETF Sigtran 08 for DPNSS UA (DUA).

SIP-BRICKS

SIP-BRICKS is a source code implementation of the Session Initiation Protocol (IETF RFC 3261, RFC 3263, RFC 3264 and RFC 2327). SIP-BRICKS is a control protocol that can establish, modify, and terminate multimedia or voice calls — including conferences. Code for SIP user agent and SIP Proxy can be supplied. It is intended primarily for VoIP applications. SIP-BRICKS also features many IETF defined SIP extensions like SIP-T, support of T.38...just ask us for the complete list of SIP-BRICKS features.

ISDN-BRICKS

ISDN-BRICKS is a highly versatile and complete implementation of the ISDN features and functionality required to address the ISDN marketplace — both voice and data — on a worldwide basis. Totally modular in design, the ISDN-BRICKS software can be provided with only those features necessary for your project

- See our website for complete details, but some of the key features include:
 - Worldwide signaling (25+ variants)
 - BRI and PRI support (both network and user sides)
 - QSIG (both BC and GF)
 - 'Ease of use' features such as AutoSPID and AutoSWITCH

Also available from Netbricks a Least Cost Router software which can be used within LCR devices to restrict and/or direct outgoing calls to any number of alternative carriers. Implemented primarily at the data link layer, it is fully transparent to the ISDN protocol.

ATM-BRICKS

ATM-BRICKS is a software source code package that implements the signaling protocols required for endpoint equipment and switches in an Asynchronous Transfer Mode (ATM) network.

- ATM signaling at User to Network interface (UNI) and Network to Network Interface (NNI) compliant with ATM Forum UNI specifications 3.0, 3.1, & 4.0, and ITU Q.2931, Q.2110 (SSCOP) and Q.2130 (SSCF).
- LANE (client side) in conformance with ATM Forum specifications.
- AAL2 signaling in compliance with ITU Q.2630 and Q.2150

V5-BRICKS

V5-BRICKS is a complete implementation of the V5 access protocols. Available as source code, or in an object code format for use with Netbricks' hardware. Monitoring and test tools are also available. Key features include:

- Provides both V5.1/V5.2 Access Network (AN) and Local Exchange (LE) in conformance with ITU-T G.964, G.965 recommendations and with ETSI : ETS 300 324-1 and ETS 300 347-1 standards
- Tested with Alcatel E10, Nortel DMS100, Italtel UT100, Siemens EW5, Lucent 5ESS, Alcatel System 12, DGT, Indonesian LE, China, ... and more

LES-SIG-BRICKS

LES-SIG-BRICKS implements Loop Emulation Service using AAL2 protocols and features :

- Full compliance with ATM Forum standard AF-VMOA-0145.000 and AF-VMOA-0145-001
- Support of IAD end equipment (CP-IWF), Central Office equipment (CO-IWF) and Voice-gateway to PSTN using V5 interface.
- Easy interfaces to Netbricks convergence sub-layer (SSTED, SSSAR) product
- Full software implementation of AAL2 available.

FRAME RELAY

FR-BRICKS is a portable software package (source code) which implements the protocols required by access devices (end points) of Frame Relay networks. It complies with ITU (Q.922, Q.933), ANSI (T1.606, 617, 618) and Frame Relay Forum (FRF.4) for both PVC and SVC.

NETBRICKS-ANALYZER

NETBRICKS-ANALYZER is a Windows® (98/2K/XP) application which can monitor and analyze V5, LES, ISDN and SS#7 protocols. An easy-to-use graphical interface (GUI) ensures a short learning curve and easy access to all features.

- Provides on-line monitoring
- Supports off-line analysis
- Fully configurable & scalable
- Supports Remote Access through a simple TCP/IP port.

Protocol Converters Netbricks considers as an essential part of its mission to be technology enabler for a seamless and cost effective transition to Next Generation Networks. Thanks to its wide portfolio of signaling protocols and its expertise in both circuit and NGN packet technologies, Netbricks can contribute to this transition by supplying protocol conversion software packages like ISDN to SIP or SS7 to SIP signaling converters that are required in softswitches and gateway controllers. Available off the shelf or integrated "on demand" such full software solutions are using interfaces based on standardized IP transport protocols like Sigtran.

DATA TRANSFER PROTOCOL

FAX-BRICKS

FAX-BRICKS is a portable Group 3 FAX software package. It provides fax communication and coding functions in conformance with ITU-T recommendations (T.30, T.4, T.6). The Error Correction Mode (ECM) and V.34 hdx extensions are included.

T38-BRICKS

As part of its strategy to address market transition to Next Generation Networks over IP, Netbricks has developed the protocol defined by ITU-T to convey T.30 fax over IP networks. This implementation named T38-BRICKS can be used in fax gateways or in Internet Aware Fax machines (IAF) and is compliant with ITU-T T.38.

LAP-BRICKS

LAP-BRICKS is Netbricks' implementation of the LAPB, LAPD and LAPF link layer protocols. It is in full compliance with ITU-T Q.921, Q.922 & X.25 recommendations, as well as ISO 7776 and applicable ANSI & ETSI specifications.

V42-BRICKS

V42-BRICKS is a source code software solution which provides error correction (LAPM) and data compression in conformance with ITU V.42 and ITU V.42bis recommendations. Support for MNP4 and MNP5 is included.

X25-BRICKS

X25-BRICKS is a source code implementation of both the X.25 and PAD protocols. It can operate as a 'standalone' product or can be easily integrated with Netbricks' ISDN-BRICKS to provide X.25 support over either the ISDN 'D' or 'B' channel.

- Packet network protocols fully ISDN compatible ITU X.25-88, ISO 8208, X.75, MLP
- Triple X PAD option (ITU X.3/X.28/X.29)

V120-BRICKS

V120-BRICKS is a software source code implementation of the rate adaptation protocols described in the ITU V.120 recommendations.

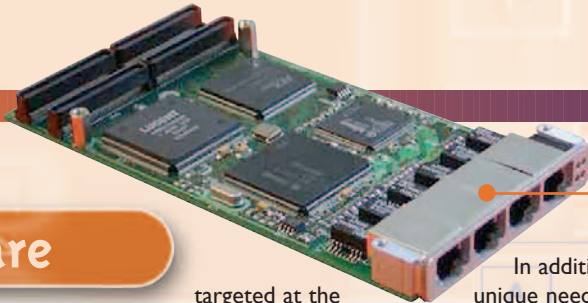
SOFTMODEM-BRICKS

A family of software products designed to implement modem modulations. Written in 'C' it is fully-compatible with existing Netbricks protocols :

- FAX (Group 3) — up to V.17 (14,400 bps) and V.34hdx (33,600 bps)
- Low Speed — up to V.22bis (2,400 bps)
- Medium Speed — up to V.32bis (14,400 bps)
- High Speed — up to V.90 (56,000 bps)

DMOD-BRICKS

This software product is a demodulation variant of SOFTMODEM-BRICKS. It can demodulate streams of samples (real-time or batch processing on recorded samples files). All data and fax modulations from V.21 to V.34/V.90/V.92 are supported as well as upper layer protocol decoding: Asynchronous characters, HDLC, V.42, V.42bis, MNP4, MNP5, Fax T.30 with ECM and JBIG, JPEG, T.4/T.6 image coding. DMOD BRICKS has been ported and optimized onto various platforms. It is the perfect building block for lawful interception and CALEA application and equipment.



PMC7 Quad E1/T1

Hardware

targeted at the unique needs of the OEM. Each solution is in full compliance with International (ITU), European (ETSI), North American (ANSI) or National specifications and recommendations and includes European and / or FCC certification

PMC7 Quad E1/T1

Netbricks lets customers take full advantage of the growing acceptance of the PCI Mezzanine Card (PMC) specifications in PCI, cPCI and ATCA configuration and proposes its PMC7 Quad E1/T1 module.

Netbricks PMC7 Quad E1/T1 is a PCI Mezzanine Card (PMC) which can provide up to four (4) E1/T1 interfaces each of which connectable to SS7 signaling trunk. In addition, it can process, at the same time, up to 128 bearer channels either in transparent, V.110 or HDLC mode. NETBRICKS PMC7 Quad E1/T1 is an active MTP1 signaling engine that operates in conjunction with Netbricks SS7-BRICKS upper protocol layers running on hosts system for connection to Public Switched Telephone Networks (PSTN) or Mobile Core Network.

V5-ENGINE

Netbricks also provides V5-Bricks software pre-installed on the same PMC Quad E1/T1 hardware module. This solution supports V5.1 and/or V5.2 and can be configured as either Access Network (AN) or Local Exchange (LE). A virtual 'feast' for anyone looking to enter the V5 marketplace.

CARRIER BOARD

Carrier boards with additional HI00 bus switching capabilities to host Netbricks PMC7 Quad E1/T1 in PCI systems are also available. Ideal to build PC based SS7 intelligent peripheral or signaling gateways.

SERVICES

Netbricks is genuinely committed to being a "full service" supplier to the OEM marketplace. Our entire organization and all of our products are structured around the unique needs of the OEM. The following is a listing of the more common services that we provide. As with all of our listings – "... if you do not see what you are looking for ... ask !"

PORTATION

A full range of porting services is offered. Options vary from simple telephone support to complete "turnkey" solutions. Our intention is to be able to provide the specific level of support that you think is appropriate for your needs.

Every Netbricks customer receives extensive access to our trained engineers for questions and assistance with any issue relating to Netbricks' products. This access includes porting questions.

TRAINING

All Netbricks customers receive full technical training with each of our products - at no additional cost. Training sessions are loosely structured to allow customization to the specific needs of each customer.

We strongly recommend that you send your technical personnel to a Netbricks facility for the training (it allows us to provide a broader exposure to Netbricks expert personnel), but if that is not possible ... we will come to your site. The important point is that we want you, our customer, to understand how to get the maximum benefit from our products - it helps you ... and it helps us support you.

CONSULTING

Netbricks' expert technical personnel are always available to our customers and prospects. We can provide market and technical support ranging from a simple telephone call to recommendations regarding an entire product line.

Collectively, our senior management has more than 200 years of experience in the data and telecommunication fields. Experience that ranges from end-user to OEM ; from software to hardware ; from domestic to international ; from small company to multi-national - this collective experience can be put to your use.

Certification

In addition to meeting the recommendations and specifications of all of the major standards organizations - ANSI, ETSI, ITU, EITF and more - Netbricks products are guaranteed to meet the applicable certification requirements of every manufacturer, PTT, individual country, and certification agency ... worldwide.

We have the unique advantage that we not only "develop to specifications - we have taken products through the certification process ... worldwide.

Our homologation expertise is always available to our customers - at whatever level of involvement you, our customer, feel is appropriate.

Custom Engineering

We offer custom software engineering services. We can "customize" an existing Netbricks product to better fit your needs - or "develop" one specifically for you. Our services are available worldwide.

We work with new companies, old companies, small companies, and big companies. We like what we do, and are proud of what we have done. Give us a call...

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