

H248-BRICKS

H248-Bricks is a software product designed, developed and marketed by Enea® that implements H.248 protocol in compliance with IETF, ITU standards as well as 3GPP IMS and ETSI TISpan specifications. H248-Bricks is fully written in ANSI C and operates in virtually any hardware and software configuration.

H248-Bricks is used in media gateways and in media gateway controllers. It features all procedures and packages that are required for usage in IMS or TISpan BGF (Border Gateway Function), MGCF (Media Gateway Control Function), Media Gateways (Trunking, Access, Border... gateways), Media Resource Functions (MRFC, MFRP), and similar classes of equipment.

H248-Bricks can be operated over UDP or SCTP transport protocol layers. Enea supplies a robust and widely deployed SCTP protocol layer with an adaptation module to operate H248-Bricks with standard SCTP socket interfaces supplied by a local operating system.

Text and ASN.1 BER message formats are both available according to customer requirements.

The H.248 protocol, also called MEGACO by IETF, results from the joint work of the IETF and ITU organizations to specify a Media Gateway Control protocol. H.248 has also been adopted by 3GPP and ETSI to be the media control protocol to be used in IMS and TISpan compliant networks. Subsequently, H.248 has become a major telecommunication protocol for operations of next generation networks.

Interfaces to many commercial operating systems are provided including Microsoft Windows NT/2000/XP®, Linux and embedded Linux (several major distributions supported), Solaris® (32/64bits), VxWorks®, AMX®, Nucleus®, PSOS+®, Enea OSE®, RTC®, VRTX®, and many others.

Enea's audit built-in logging mechanism is included as a tool to trace internal operations of H248-Bricks package.

STANDARDS

H248-Bricks design and working are based on the following standards:

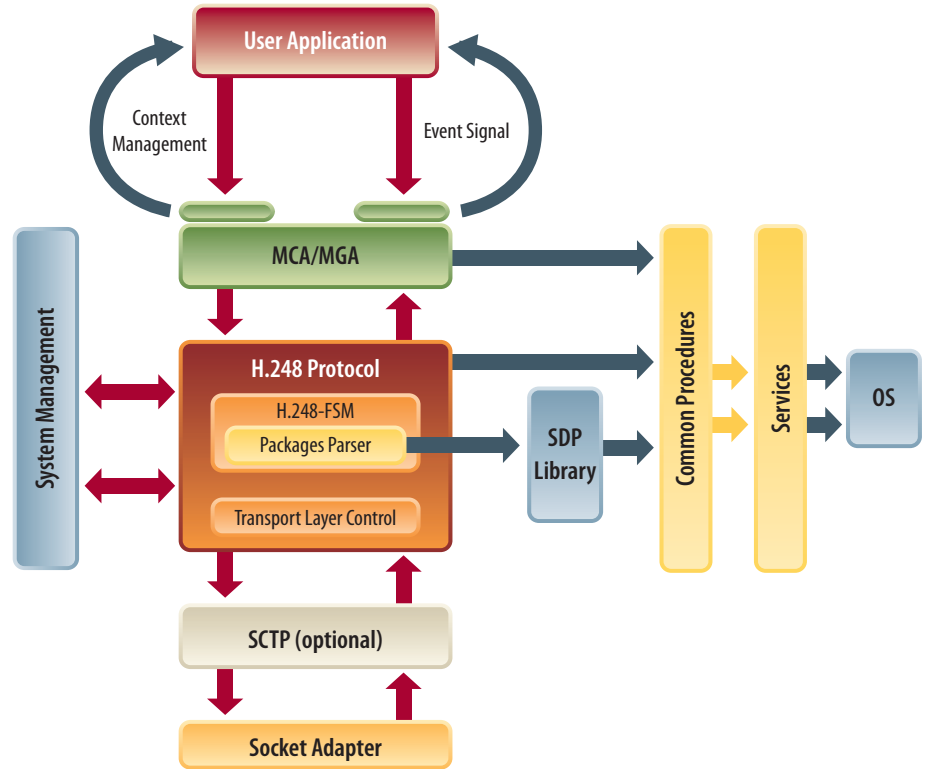
- ITU-T H.248.1 version 2 and IETF RFC 3525 version 1
- RFC 4566 (SDP)
- 3GPP TS 29.332-Mn interface between MGCF and IM-MGW
- ETSI TISpan ES 283 002-H.248 profile for controlling access and residential gateways

STANDARD	FUNCTIONAL PACKAGES
ITU-T H.248.1	Generic, Base Root, Tone Generator, Tone Detection, Basic DTMF Generator, DTMF Detection, Call Progress Tones Generator, Call Progress Tones Detection, Analog Line Supervision, Basic Continuity, Network, RTP, TDM Circuit
ITU-T H.248.2	Facsimile, text, conversation and call discrimination
ITU-T H.248.3	User Interface Elements and Actions
ITU-T H.248.7	Generic Announcements
ITU-T H.248.9	Advanced Media Server
ITU-T H.248.10	Congestion Handling Package
ITU-T H.248.11	Overload Control
ITU-T H.248.12	H.323 and H.324 interworking
ITU-T H.248.12 Amendment 1	Extended H.324, H.245 command and H.245 indication
ITU-T H.248.13	Quality Alert Ceasing
ITU-T H.248.14	Inactivity Timer
ITU-T H.248.16	Enhanced Digit Collection
ITU-T H.248.19	Floor control, view, volume control, volume detection, volume level mixing, mixing volume level control
ITU-T H.248.23	Enhanced Alerting
ITU-T H.248.26	Enhanced Analog Lines
ITU-T H.248.27	Conferencing tones generation
ITU-T H.248.37	IP NAPt traversal
ITU-T H.248.45	MGC information
ITU-T Q.1950	Expanded Call Progress Tones Generator & Basic Tones Generator Services Tones Generation Intrusion Tones Generation Business Tones Generation
TS 101 332	EMP package
TS 102 333	Diffserv Gate Management Traffic Management MPLS VLAN Gate Recovery Information NAT traversal

- ETSI TISPAN ES 283 018–H.248 profile for controlling BGF in the RACS
- ETSI TISPAN ES 283 024–H.248 profile for controlling Trunking MGW in PSTN/ISDN emulation system
- ETSI TISPAN ES 283031–H.248 profile for MRFP in the IP Multimedia System (IMS)
- ETSI TISPAN TS 102 333–Gate Control protocol
- All standards specifying supported packages (see features list above)

H248-Bricks main features:

- Support of both gateway and gateway controller sides
- Text encoded format with SDP encoding/decoding library
- ASN.1 BER mode format (option)
- Full implementation of H.248 finite state machine including timers
- All H.248 transactions can be supported
- Standard Media Gateway Application layer provided
- Standard Media Gateway Controller Application layer provided
- UDP and SCTP transport protocols can be used
- Netbricks SCTP protocol layer can be provided (option)
- Multiple instance support
- The following extensive list of H.248 packages is featured



H248-BRICKS SOFTWARE ARCHITECTURE

H248-Bricks software architecture is composed of the following entities:

- System Management: provisioning and event report system management
- MGA / MCA: Media gateway or Media Gateway Controller standard application layer that performs most of standard H.248 control operations
- H.248 protocol: H.248 protocol finite state machine including timer management, message parsing and building and control of transport layer
- SDP library: set of functions to encode and decode SDP part of H.248 messages in text format
- SCTP: Stream Control Transmission Protocol layer that can be provided by Netbricks as an option
- Socket Adapter: adaptation layer to operate over local socket oriented API for transport protocols (UDP or SCTP)
- Common procedures and Services: OS abstract layer and utility routines

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