

ENEAS[®] V5.1/V5.2 CONVERTER



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V5.1 to V5.2 Protocol Converter

The Enea Netbricks V5.1/V5.2 Converter is a standalone protocol converter that transforms multiple V5.1 interfaces on the Local Exchange (LE) side into a single V5.2 interface on the Access Network side (AN).

The Enea V5.1/V5.2 Converter supports the following functions:

- V5.1 stack LE and AN sides
- V5.2 stack LE and AN sides
- V5.1 LE to V5.2 AN conversion
- V5.1 AN to V5.2 LE conversion
- Provisioning and driving across a UART line

Through dynamic provisioning, the Enea V5.1/V5.2 Converter can support up to seven V5.1 interfaces and a V5.2 interface with one (without protection) or two (with protection) E1 links.

The Enea V5.1/V5.2 Converter is used on the AN side to concentrate multiple V5.1 AN interfaces into a single

V5.2 interface. This reduces the number of E1 links connected to the Local Exchange. The Enea V5.1/V5.2 Converter is also used on the LE side to concentrate multiple V5.1 LE interfaces into a single V5.2 AN interface, thereby reducing the number of E1 links.

Features

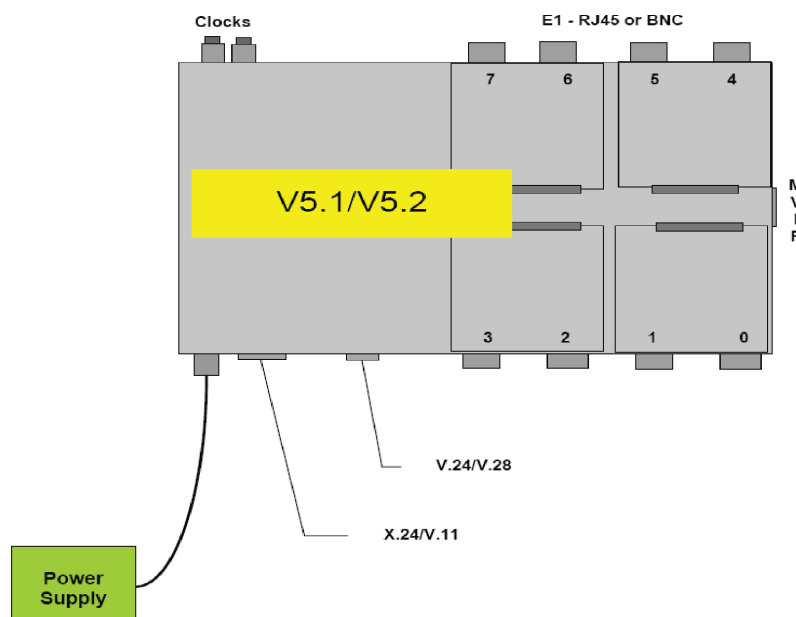
The Enea V5.1/V5.2 Converter includes the following primary hardware components:

- A Motorola MC68302 communication processor
- 1 Mbyte Flash memory
- 1 Mbyte SRAM memory

- Eight E1 Mitel MT9089 framers with 120W or 75W transceivers
- One or two Infineon ESCC8 HDLC framers
- One UART Line
- 6V DC power supply module

Resident downloadable software provides the following functions:

- V5.1 LE/AN stack
- V5.2 LE/AN stack
- V5.1 AN / V5.2 LE conversion
- V5.2 AN / V5.1 LE conversion
- V5 management and start-up sequence
- Layer 1 CCITT error information display (LEDs)
- Self-test and automatic restart



The Enea V5.1/V5.2 Converter.

Enea V5.1/V5.2 Converter Software Architecture

The Enea V5.1/V5.2 Converter is based on the Enea Netbricks architecture, which follows the ISO/CCITT X.200 model. All protocol entities are managed as isolated objects communicating through datagram message passing, which utilizes FIFO queues.

System entities are housed in processes (one or more entities per process), which are managed by the AMX68000 (KADAK) real-time multi-tasking kernel. When the origination and destination entities are in the same process, message passing is done

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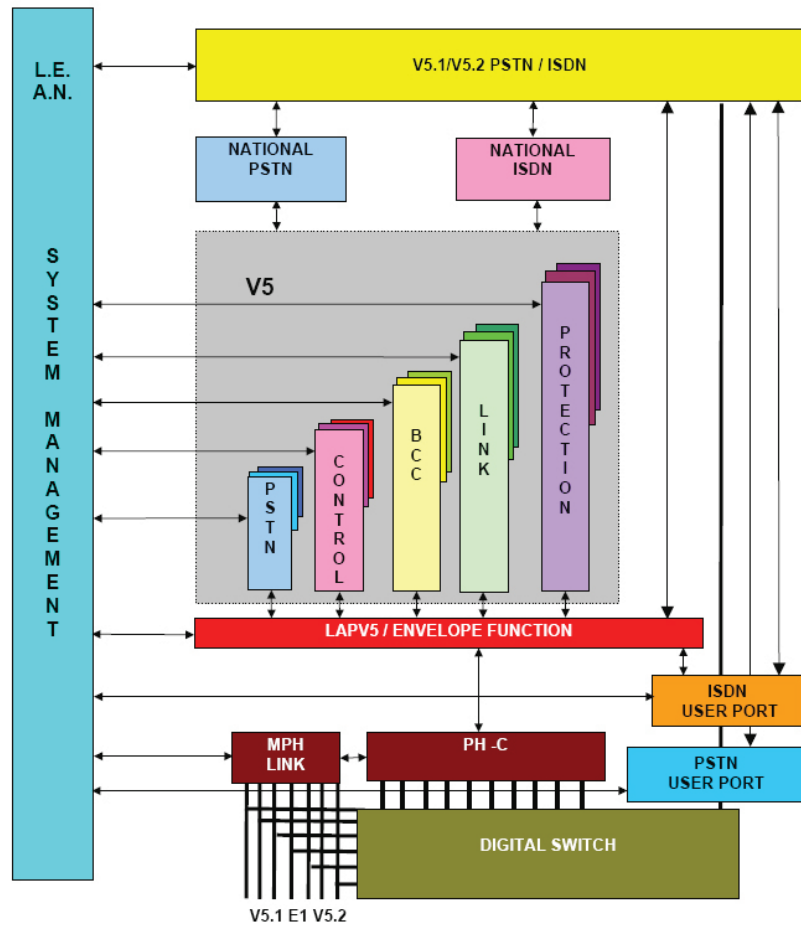


through an internal FIFO, without the need for AMX scheduling. When the two entities are in different processes, message passing is done through AMX message exchange management.

The software is downloaded to Flash memory through a UART serial port.

The figure depicts the different protocol stacks and communications between entities. The system contains the following stacks and entities:

- System Management entity (SM).
- V5 stack :
 - Control for PSTN and ISDN user port
 - PSTN out-of-band signal exchange
 - BCC Bearer Channel Control
 - LINK Id management
 - PROTECT Protection
 - V5.1/V5.2 conversion entity
- Data Link user data stack
 - DL data link protocol (LAPV5 and EF)
- Enea V5.1/V5.2 conversion entity :
 - V5-CONVERT entity for converting PSTN and ISDN from V5.1 to V5.2



Enea V5.1/V5.2 Converter Software Architecture.

