The C165UTAH is a new low-cost member of the Infineon Communication Controller family. The device combines the successful Infineon C166 16-Bit full static core with a full-speed Universal Serial Bus (USB) device core, four independent HDLC controllers, IOM-2 interface and 3-Kbyte of on-chip Dual-Port RAM. The C165UTAH addresses all USB based features in ISDN-TA, Intelligent-NT, IDSL low cost SOHO-PBX and low cost VoIP phones designs offering up to 18 MIPs along with legacy peripherals such as USART SSC/SCI and Timers.

The USB device core has a built-in DMA, that provides maximum flexibility and performance. Off-loading the CPU in such a manner allows the user to implement value-added software features for enabling product differentiation.

The C165UTAH provides:
C166 Static Core with Peripherals Including

- 16-Bit fully-static core design running up to 36 MHz (18 MIPs)
- Peripheral Event Controller (PEC) for 8 user-defined independent DMA channels
- Sixteen dynamically programmable priority-level interrupt system
- Eight fast external interrupts
- Up to 72 software-configurable Input/Output (I/O) ports, some with interrupt capabilities
- 8-Bit or 16-Bit external data bus
- Multiplexed or demultiplexed address/data bus
- Up to 8-Mbyte linear address space for code and data
- Five programmable chip-select lines with wait-state
- On-chip 3-Kbyte Dual-Port SRAM for user applications
- On-chip 1-Kbyte special function register area
- On-chip PLL with output-signal
- Five multimode General Purpose Timers (GPTs)
- USART with AutoBaud detection & IrDA support
- SSC/SCI serial interface
- On-chip programmable watchdog timer
- Glueless interface to EPROM, Flash EPROM, and SRAM
- Power management supporting idle and power-down modes
- Bootstrap loader support via USART interface
- On-Chip Debug Support (OCDS) & JTAG Boundary Scan Test Support (IEEE 1149.1) for low-cost product development & debugging

ISDN BRI Core Including

- 56 kbit/s to 144 kbit/s user data rate
- IOM-2/PCM interface to S/U transceiver
- TE mode support
- Four on-chip independent full duplex HDLC channels
- Independent FIFOs for each transmit and receive channel

USB Interface Including

- USB Specification 1.1 compliant
- Support for audio, data and communication device class
- 12 Mbit/s full-speed mode
- Seven configurable endpoints in addition to control endpoint
- Support for multiple configurations and alternate settings
- DMA support

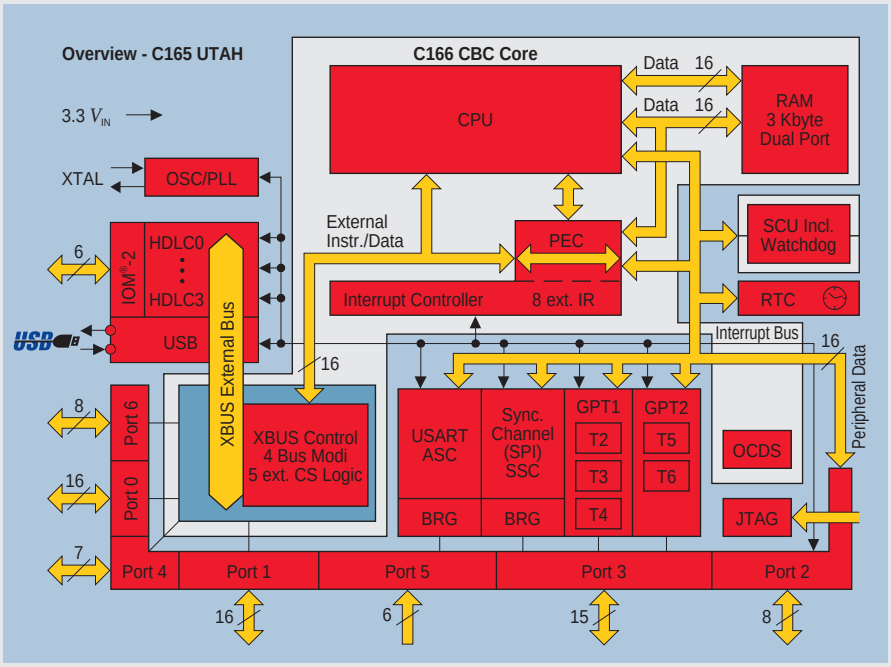
SAB C165UTAH

www.infineon.com/hdlc

Infineon technologies

Never stop thinking.

C165UTAH Block Diagram



Document and Support Package

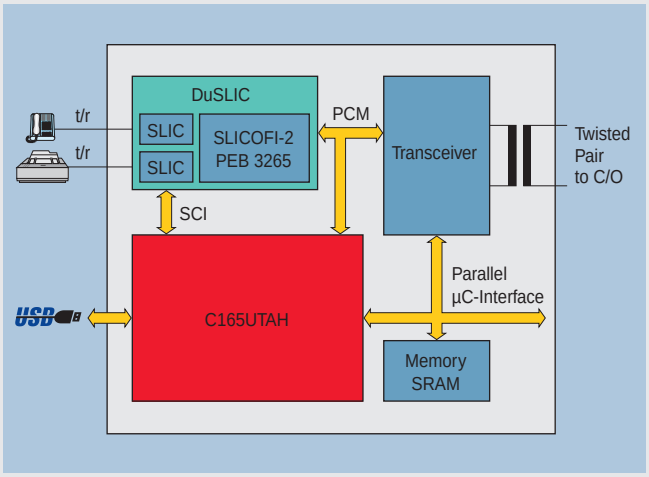
- Application Notes
- Application Hints
- System Verification Report
- CD-ROM

Availability

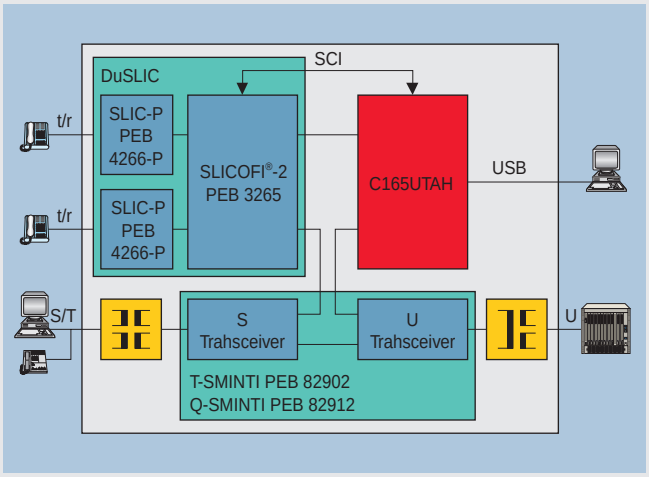
The UTAH device is available with complete documentation and support package. A dedicated engineering support team is there to assist you. Please contact your local Infineon office for further details.

C165UTAH Application Examples

ISDN/SDSL/MDSL Modem



High End Intelligent NT with Dataport



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