## Tool Brief

## EASY 21653 Phone INCA-IP2 Reference Design

Infineon's EASY 21653 Phone is a vertically integrated GbE IP Phone HW and SW reference design. This represents an unprecedented opportunity for system developers to design IP Phones in a far shorter design window, and to concentrate on their real added value. It includes a complete set of voice firmware containing all of the voice processing codecs as well as algorithms for Acoustic Echo cancellation and Handset Echo Cancellation. Customers can test every HW interface using the delivered phone. Moreover they can test their model specific options by means of the Adapter-Board. The Phone runs a complete Infineon developed SPINACER IP PHONE SW suite including a SIP stack and application as well as all other IP Phone relevant SW on a Linux Operating System. Customers can test every HW interface using the daughter board as well as use keyboard, Colour TFT Display and all other important IP Phone features. The comprehensive IP Phone SW suite contains an optimized SIP stack devloped by Infineon based on Open Source Linux.

#### **HW Features**

#### **Complete IP Phone Including**

- Optimized PCB for INCA-IP2 based IP Phone
- Narrow and Wideband capable Speakerphone and Handset
- Daughter board with all available INCA IP2 interfaces; Paralell, SPI, UART etc...
- 4" WQVGA TFT colour display driven by Epson S1D13733 LCD controller
- NAND Flash Boot ROM (optional serial NOR boot)
- Gigabit Ethernet Phys

#### **Telephony Features Include**

- 3 Way conferencing
- Volume control
- Codec Selection
- Loudhearing / Speakerphone selection
- Address Book, Messaging

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# **Communication Solutions**



## **Telephony Features Continued**

- Call on Hold
- Call Waiting
- Call Forward

### SW Features Include

- Fully featured IP Phone Software solution (SPINACER IP PHONE V2.1)
- Complete set of device drivers based on open source Linux 2.4.31 kernel
- Telephony API
- Easy to use Icon driven GUI

#### **Management and Control**

- Web Based Management
- DNS Support
- PPP o Ethernet
- Standard Networking support: (IPv4, TCP,UDP, ICMP,ARP)
- SIP(RFC 3261, RFC 3265, RFC3515, 3264, 2782,3428)
- SDP RFC 2327
- RTP/RTCP RFC 3550
- Security: SRTP in Release 2.3
- Secure RTP RFC 3711
- DHCP for SIP : RFC 3361
- Manual SW upgrade through TFTP



Never stop thinking

## **Tool Brief**

### **Product Summary**

Туре	Description	Package
Sales Code		
EASY 216553 PHONE	INCA-IP2 Reference	Includes INCA-IP2 Board
	System	Support Package
STS9201	IP Phone SW solution in	*Except SIP Stack and
SPINACER IP Phone V2.1	Source code*	parts of User Agent

#### Block Diagram EASY 21653 Phone



## EASY 21653 Phone (Engagement Model 1) Includes

- Board Support Package including all device drivers, LINUX Kernel and IP Phone application with GUI in Binary Code.
- Complete set of Voice Codecs: G.711, G723, G.726, G.729 a/b and iLBC
- G.722 and G.722.1 Wideband
- IP Phone housing with Wideband capable speakerphone and handset capability

### STS9201 SPINACER IP PHONE V2.1 (Engagement Model 2) Includes

 Complete IP Phone SW suite in Source code (SIP Stack and User Agent delivered in binary code)

#### Adapter Board Description

- The adapter board sits out side of the telephone housing and is connected by a standard connector. The Adapter board allows customers to use all of the available INCA-IP2 interfaces without having to open the housing to do so.
- It also gives customers the possibility to test different kinds of Flash memory using either the memory controller or the SPI interface. In connector and serial terminal for addition an EJTAG connector for debugging is available.

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