



USB VoIP Telephone (Callstick)



1. CALLSTICK introduction

What is CALLSTICK?



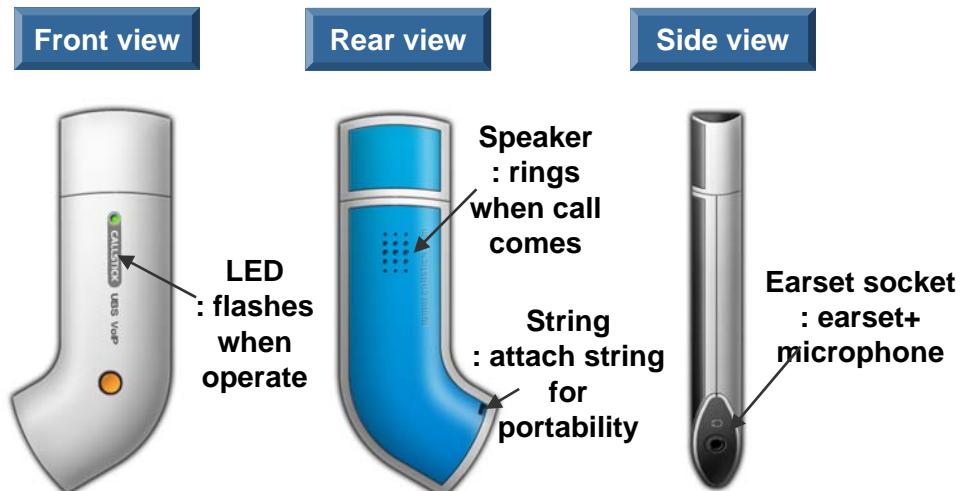
Callstick is SIP based internet phone device which enables enhanced telephony service using USB port.

Its hardware consists of flash memory, sound IC, and ear set while softphone S/W is embedded on the memory.

Major function

- **Internet phone: VoIP**
(Callstick ↔ Callstick, Fixed, Mobile)
- **Portable data storage device**
- **Digital international telephone card**

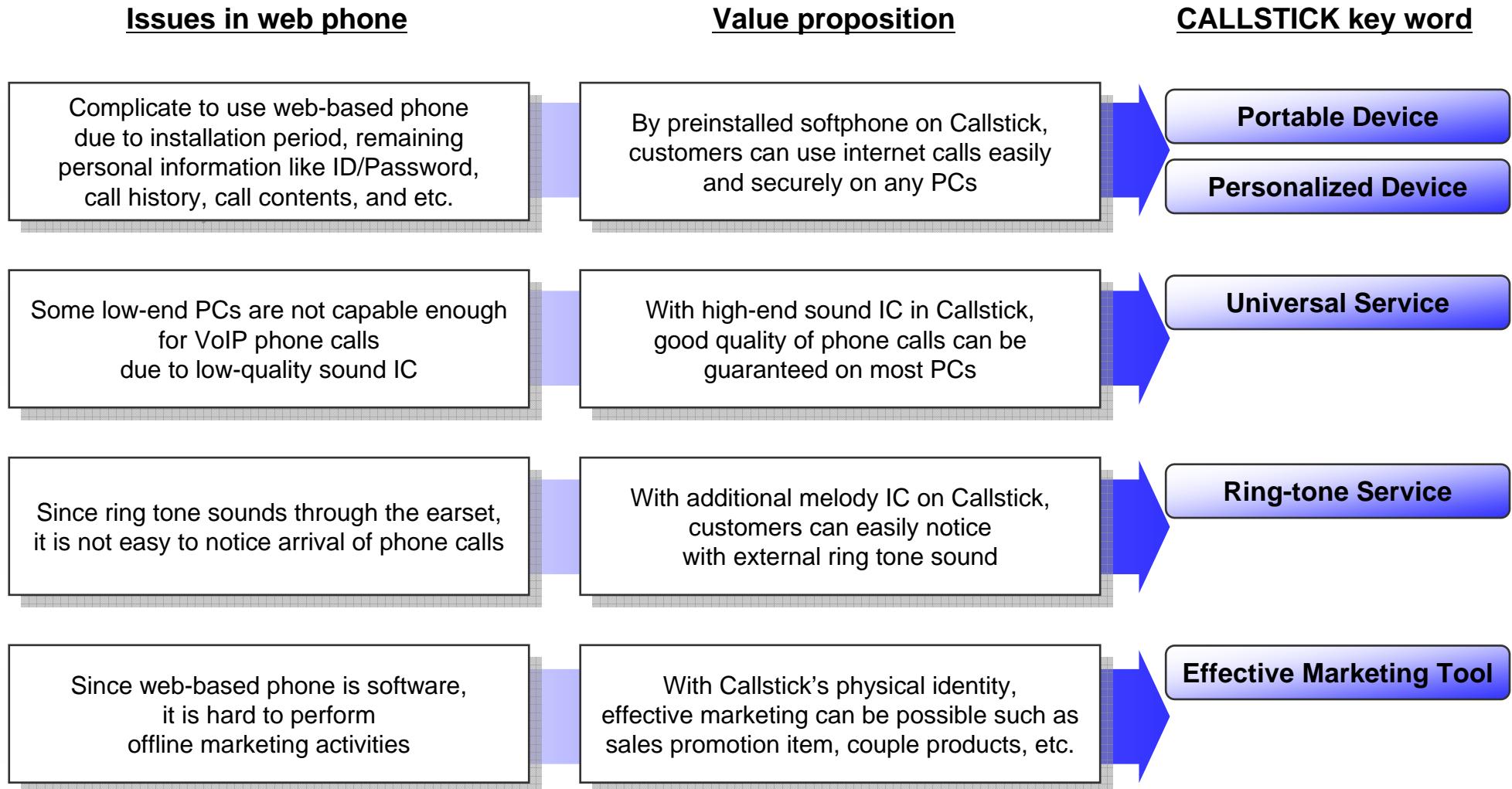
CALLSTICK design



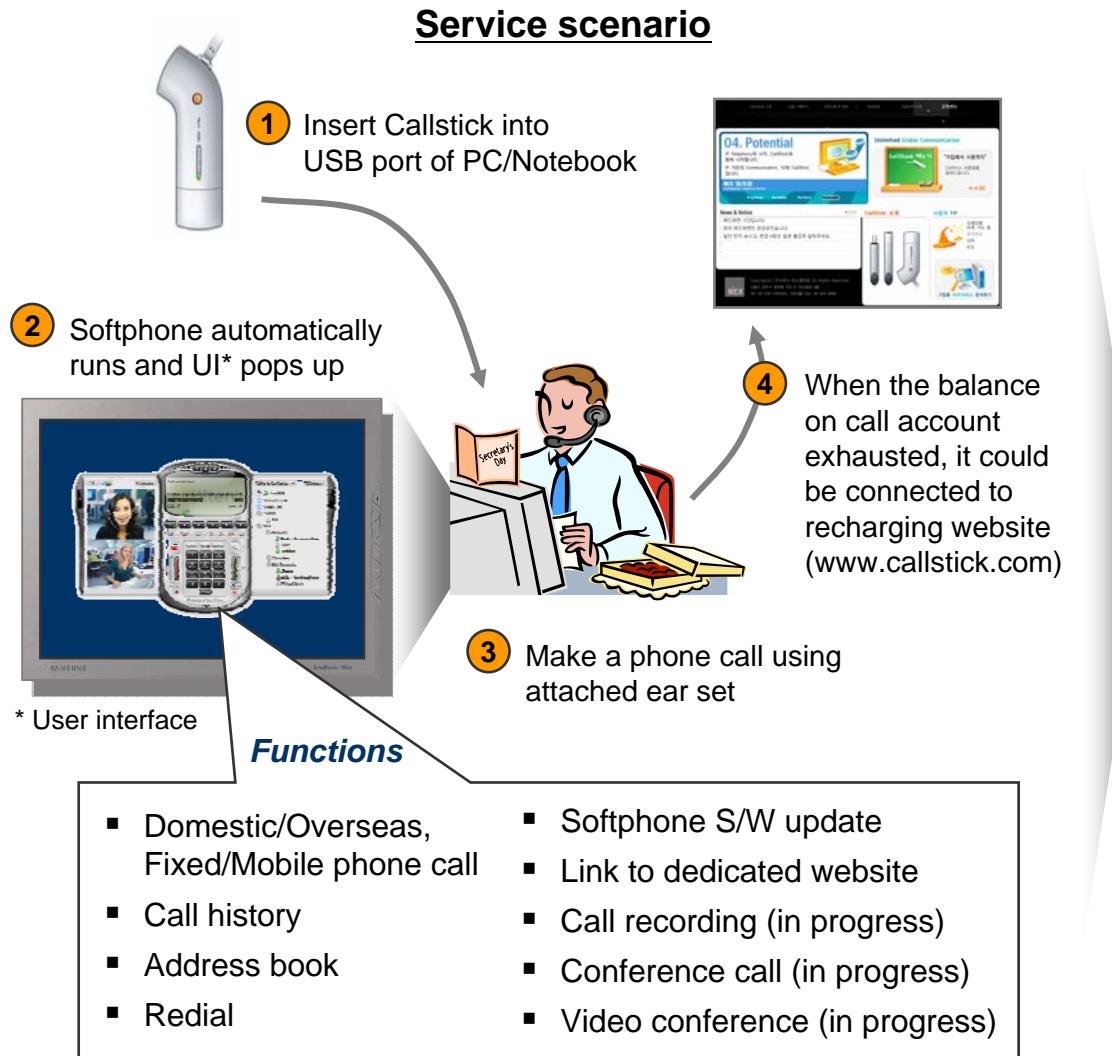
Callstick H/W major part list

- Audio USB SOUND CODEC CHIP : UAC3556B
- USB Controller (Flash+ Flash Disk): AU9254A21+AU9386
- Flash Memory : 128M (256M or above are also available)
- Buzzer, Melody, LED
- Connectors / Passive components
- Accessory : Ear-Set, User Manual, Gift BOX, Inner Packing, Packing Bag

2. CALLSTICK's value proposition



3. Service scenario & value proposition



Customer value

Cheap call rates

: Free between Callsticks. Domestic call rates for international phone calls (US: 50 cents per 1 Min)

Convenience in portability and usage

: Small sized like other accessories.
Easy to carry and simple to use.

Various VAS (Value Added Service)

: Since SIP-based VoIP solutions, video conference /SMS/call recording can be easily developed

USB flash memory function

: Additional usage as USB data storage (64/128M)

4. Detail features of software UI (User Interface) & hardware

Softphone UI



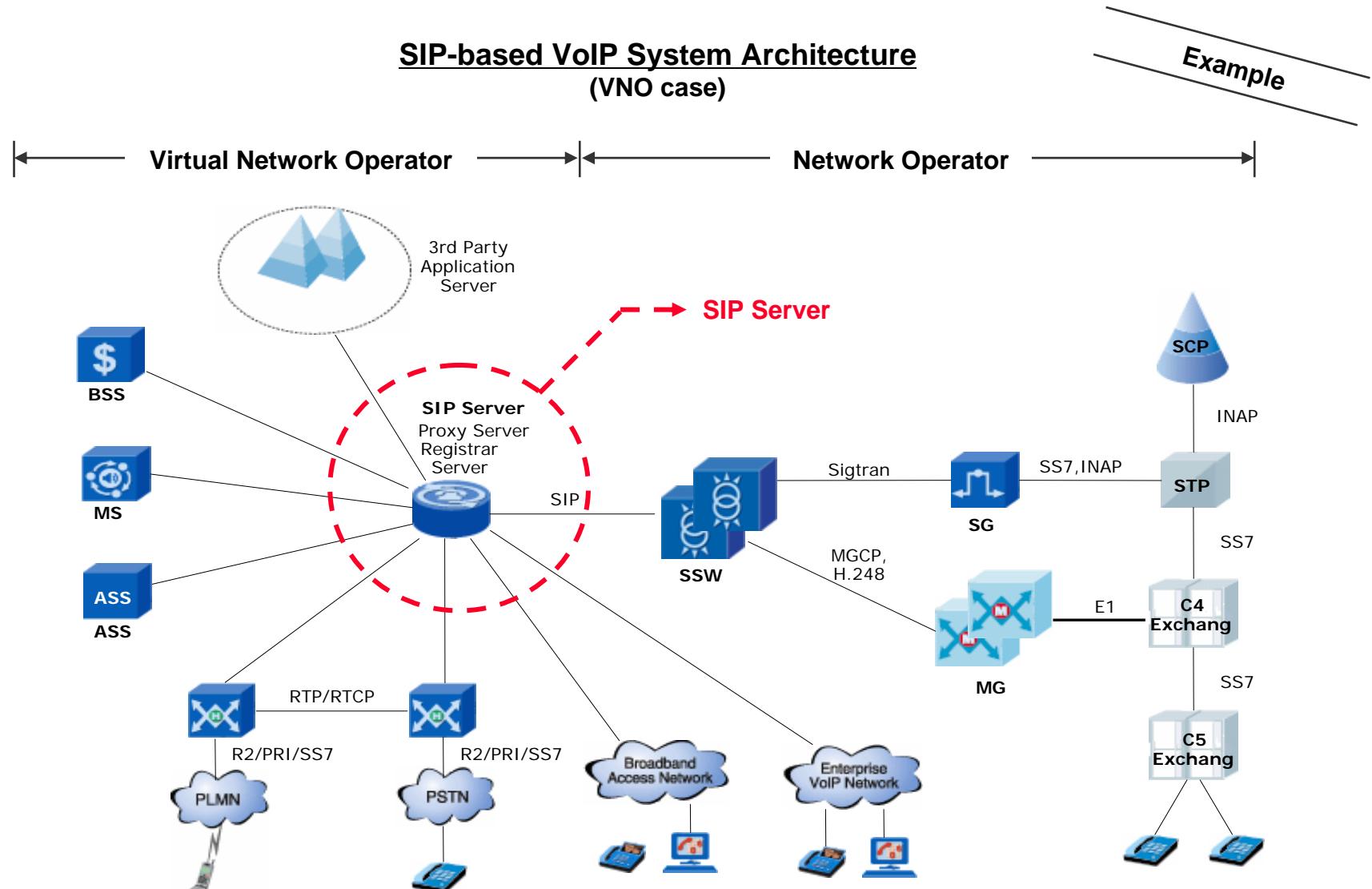
Hardware features

Tentative



Software & hardware designs could be differed to client's needs (OEM case)

5. SIP-based VoIP System Architecture



[Appendix] Hardware specifications of Callstick

Key hardware features

- USB 1.1 compatible
- Automatic program execution and termination using USB port (Autorun function)
- VOIP voice telephony service
- USB data storage function: 128MBytes (256M or above are also available)
- Enhanced sound quality by USB sound IC
- Call or music listening function via headset or earphone

Operating environment

- Windows 98/SE/ME, NT, 2000, XP (Drivers are needed for Windows 98/SE/ME)
- Pentium-III 300MHz or above
- RAM 32M or above
- USB 1.1

Major hardware part list

- Audio USB sound chip : UAC3556B / CM109 / CM108
- USB controller : AU9254A21+AU9386
- Flash memory : 128M (256M or above are also available)
- Buzzer, melody, LED
- Connector & Passive components
- Accessories : ear set, user manual, gift box, inner packing, packing bag

FCC NOTICE

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES.
OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:
(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND
(2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED,
INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRABLE
OPERATION.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures :

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit difference from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTE : The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment.
Such modifications could void the user's authority to operate the equipment.