



USB VoIP Telephone (Callstick)



### 1. CALLSTICK introduction

#### What is CALLSTICK?



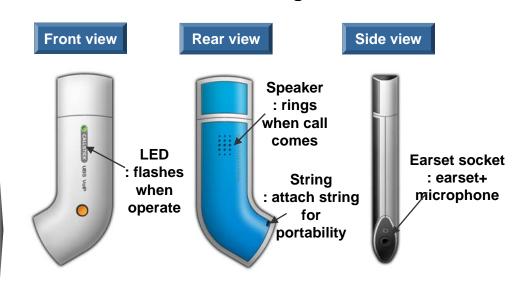
Callstick is SIP based internet phone device which enables enhanced telephony service using USB port.

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



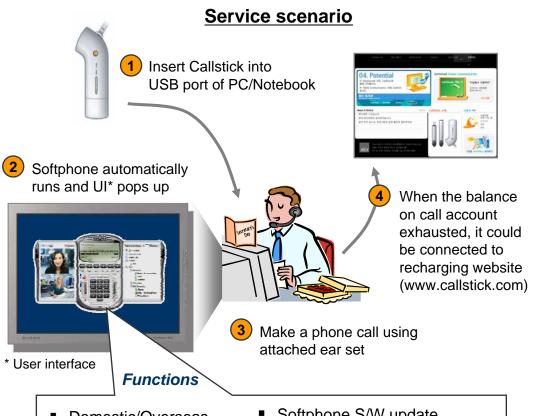
## Callstick H/W major part list

- 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

#### **Issues in web phone Value proposition CALLSTICK** key word Complicate to use web-based phone **Portable Device** By preinstalled softphone on Callstick, due to installation period, remaining customers can use internet calls easily personal information like ID/Password, and securely on any PCs **Personalized Device** call history, call contents, and etc. **Universal Service** Some low-end PCs are not capable enough With high-end sound IC in Callstick, for VoIP phone calls good quality of phone calls can be due to low-quality sound IC guaranteed on most PCs **Ring-tone Service** With additional melody IC on Callstick, Since ring tone sounds through the earset, customers can easily notice it is not easy to notice arrival of phone calls with external ring tone sound **Effective Marketing Tool** Since web-based phone is software, With Callstick's physical identity, it is hard to perform effective marketing can be possible such as offline marketing activities sales promotion item, couple products, etc.

## 3. Service scenario & value proposition



- Domestic/Overseas. Fixed/Mobile phone call
- Call history
- Address book
- Redial

- Softphone S/W update
- Link to dedicated website
- Call recording (in progress)
- Conference call (in progress)
- Video conference (in progress)

### **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**

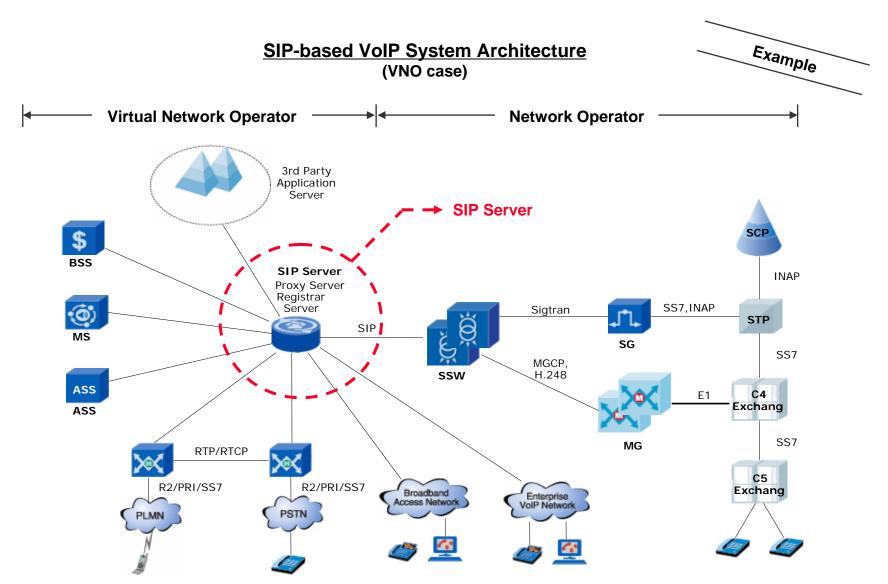
: Additional usage as USB data storage (64/128M)

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



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 FULES.

OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITION:

(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND

(2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED,

INCLUDING INTERFERENCE THAT MAY CAUSE UNDERSIRED

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 of 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.