

# UC1500 Unified VoIP Gateway

## Overview

Dinstar Unified VoIP Gateway UC1500 is a core voice gateway of your unified communications (UC) solution. Based on X86 platform, it allows users to install third-party PBX software with simple installation. Equipped with modular & hot swappable interface boards of FXS/FXO/E1/T1 and an open API, users can flexibly connect with SIP trunks, PSTN, legacy PBX, analog phones, fax machines and IP phones according to their needs.

UC1500 is a high reliability gateway with redundant power supplies and hot swappable interface boards. For vertical users who are seeking to make use of their own secure PBX software and to leverage unified communications technology to enhance communication and improve efficiency, while high reliability and availability is also critical, UC1500 is an ideal choice.

## Key Features

- Key Component of IP Telephony & Unified Communications
- Open Hardware Platform based-on X86
- Easy to install 3<sup>rd</sup> party IP PBX such as Asterisk, Freeswitch, 3CX, Issabel, VitalPBX software
- Open API
- Perfect for Vertical markets
- Voice, Fax, Modem & POS
- Up to 4 interface boards, Hot swappable
- Up to 16 E1/T1 ports
- Up to 32 FXS/FXO ports
- Redundant Power Supplies

### UC1500



## Hardware Specification

MCU: 1\* Main Control Unit, Hot plug  
HDX: 1\* Ext. Hard Disk Unit, Hot plug  
SCU: 2\* Switch Control Unit, active/standby  
DTU: 4\* E1/T1 ports, up to 4 boards  
FXS: 8\* FXS ports, up to 4 boards  
FXO: 8\* FXO ports, up to 4 boards  
4S4O: 4\*FXS+4\*FXO, up to 4 boards  
PWR: 1\* 110~220VAC power modular  
FAN: 1\* FAN cooling modular

### MCU(Main Control Unit)

X86 structure control unit with two hardware configuration options:

1) Standard:

CPU: Intel J1900 2.0GHz, 4 cores  
Intel E3845 1.9GHz, 4 cores

RAM: DDR3L 1600MHz 8GB

2) Advanced:

CPU: Intel i5-6300U 2.4GHz, dual cores  
RAM: DDR4 2133MHZ 32GB

Network: 10/100/1000Mbps Gigabit LAN

1\* HDMI video connector

1\* USB 2.0

1\* USB 3.0

128GB SSD hard disk, extendable by HDX

### HDU( Ext. Hard Disk Unit) :

Extend hard disk storage of MCU board

1\* SSD/HDD hard disk space

1\* VGA video connector

4\* USB 2.0

Mic and Speaker

### SCU(Switch Control Unit)

CPU: 1.8GHz, 8 cores

RAM: DDR3 512MB

Flash: 32MB

EMMC: 8GB

Network: 2\* 10/100/1000Mbps

Console: 1\* 115200bps, RJ45

USB 2.0: 1

## Media Processing

Codecs: G.711A/U,G.723.1, G.729AB, iLBC, AMR

Silence Suppression

Comfort Noise Generator(CNG)

Voice Activity Detection(VAD)

Echo Cancellation

Dynamic Jitter Buffer

Programable Gain Value

T.38 and Pass-through FAX

Modem and POS terminal

DTMF: RFC2833/SIP Info/Inband

VLAN 802.1p/q

Layer3 QoS and DiffServ

### FXS

Connector: RJ11

Caller ID: Bellcore Type 1&2,

ETSI,BT,NTT and DTMF

Answer and Disconnect Signaling:

Answer, Disconnect, Busy Tone

Polarity Reversal

Hook Flash

### FXO

Connector: RJ11

Caller ID: FSK, DTMF

Polarity Reversal

Answer Delay

Busy Tone Detection

No Current Detection

### FXS/FXO Features

Port Group/Hunting Group

Digitmap

Flexible Call Routing Rules

Caller/Called Number Manipulation

Rules

## VoIP Protocol

SIP v2.0 (UDP/TCP),RFC3261

SDP,RTP(RFC2833), RFC3262,

3263,3264,3265,3515,2976,3311

RTP/RTCP, RFC2198, 1889

SIP-T,RFC3372, RFC3204, RFC3398

RFC4028 Session Timer

SIP TLS

RFC2806 TEL URI

RFC3581 NAT, rport

NAT Traversal: dynamic NAT, STUN

### DTU

Connector: RJ48C

4\* Port E1/T1 per board

Support ISDN PRI and SS7 signaling

ISDN PRI:

23B+D(T1), 30B+D(E1), ITU-T Q.921,

ITU-T Q.931, Q.Sig

SS7:

ITU-T, ANSI, ITU-CHINA,

MTP1/MTP2/MTP33, TUP/ISUP

E1 Frame : DF, CRC4, CRC\_ITU

T1 Frame: 4-Frame Multi-

frame (F4,FT),2-Frame Multi-

frame (F12, D3/4),Extended Super-

frame (F24, ESF) ,Remote Switch Mode

(F72, SLC96)

Local/Remote Clock Source

### Network

Static IP

IPv4, IPv6, TCP/UDP,TFTP, FTP,

ARP, RARP,ICMP,NTP, SNTP,

DNS,Tracert

HTTP,HTTPS

VLAN(TBD)

## DTU Features

Local/Remote Ringback tone  
Overlap Dialing  
Dial plan up to 2000  
E1 Group/ Timeslot Group  
SIP Trunk/SIP Trunk Group  
Codecs Group  
Caller/Called Blacklist  
Caller/Called Whitelist  
Access Rule List

## Capabilities:

Extensions: 3000  
Concurrent Calls: 100~300  
Register Per Second: 100/s  
Call Per Second: 100/s

## Maintenance

Web GUI configuration and maintenance  
Configuration backup and restore  
PSTN call and release cause statistics  
SIP call and release cause statistics  
HTTP firmware upgrade  
Network capture  
Syslog: Debug, Info, Error, Warning, Notice  
Call history record  
NTP

## Call Feature

Flexible Route Methods  
PSTN-PSTN, PSTN-IP, IP-PSTN  
Intelligent Routing Rules  
Call Routing base on Time  
Call Routing base on Caller/Called Prefixes  
256 Route Rules for each Direction  
Caller and Called Number Manipulation

## Environmental

1+1 Power Supply, hotplug  
Input: 100-240VAC, 50-60 Hz  
Power Consumption:100W  
Operating Temperature:0 °C ~ 45 °C  
Storage Temperature: -20 °C ~80 °C  
Humidity:10%-90% Non-Condensing  
Dimensions(W/D/H): 437\*345\*66mm  
Unit Weight: 7.5kg  
Compliance: CE, FCC

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### About Us

Shenzhen Dinstar Co.,Ltd. was founded in 2011, focusing on developing, manufacturing, and marketing of Next Generation Communication and Networking products, with headquarter in Shenzhen, China and branches in Beijing, Hangzhou, Hong Kong. Now we have more than 180 specialists, most of them coming from top-rank global telecommunication enterprises, who have dedicated themselves to VoIP, unified communication and wireless mobile network etc. for more than 18 years.