# 400HD IP PHONES SERIES

The AudioCodes **400HD series of IP phones** includes a range of easy-to-use, feature-rich products for the service provider, hosted services, unified communications, enterprise IP telephony and contact center markets. Based on the same advanced, field-proven underlying technology as our other VoIP products, AudioCodes high quality IP phones enable service providers, systems integrators and end-customers to build end-to-end VoIP solutions.

## Powerful Set of Common Features

- High-definition voice quality
- AudioCodes Auto-provisioning
- Robust security mechanisms
- Power over Ethernet (PoE)
- Multiple language support
- Integration with voice quality monitoring
- Full duplex speakerphone and headset connectivity
- Full SIP protocol support with extensive interoperability
- Out of the box global redirection sever support

## Unified Communications

AudioCodes provides diverse solutions tailored for the unified communications (UC) market. AudioCodes' offering for UC includes media gateways, E-SBCs, call recording solutions, mobility and IP phones which, in addition to high quality voice calls, also support presence features.

## Enterprise IP Telephony

AudioCodes IP phones offer reliable, high quality communications for users of on-premises, open source and hosted IP-PBXs. Their wide range of essential business features, reliability and proven interoperability makes them the perfect choice for any SIP-based environment, from SOHO up to large enterprises.

## IP Contact Centers

AudioCodes IP phones provide the perfect solution for IP contact center agents. Combining excellent voice quality for contact center agents, with a compact and robust enclosure design and headset integration, AudioCodes' IP phones offer several essential features required in the growing contact center market including fully certified VoIP interoperability with leading contact center solution providers.

## C450HD IP Phone

The C450HD IP phones is an high-end, native Microsoft Teams executive IP phone with a large, color 5” touch screen, integrated **bluetooth and **WI-Fi, and optional connectivity to color touch screen expansion modules.

- Full duplex speakerphone and headset connectivity
- Graphical 5” color touch screen (1280 X 720)
- Multi-lingual support
- Dual GbE support
- PoE or external power supply
- 2xUSB headset support
- Integrated **Blutooth and **Wi-Fi
- Expansion module support

## C448HD IP Phone

The C448HD IP phone is is a Microsoft Teams-native entry level/common area phone with a large, color 5” touch screen. Recommanded for hot desking enviroment.

- Full duplex speakerphone and headset connectivity
- Graphical 5” color touch screen (1280 X 720)
- Multi-lingual support
- Dual GbE support
- PoE or external power supply
- 1xUSB headset support

## 450HD IP Phone

The 450HD IP phone is an executive high end business IP phone with a large, color 5” main touch screen and optional connectivity to color touch screen expansion modules.

- Large 5” Color TFT main screen (800 X 480)
- Multi-lingual support
- Touch oriented user interface allowing up to 8 programmable soft keys
- Expansion module (optional) with 5” Color TFT screen (480 X 854)
- Full duplex speakerphone and headset connectivity
- 8 lines
- Dual GbE support
- USB headset support
- PoE or external power supply

## 445HD IP Phone

The 445HD IP phone is an advanced, high-end business IP phone with a large, color 4.3” main display, integrated to **bluetooth and **WI-Fi with a dedicated LCD displaying contacts and their presence (integrated sidecar).

- Color 4.3” high resolution screen (480x272)
- Full duplex speakerphone and headset connectivity
- 6 multi-function keys
- 4 soft keys
- Dedicated LCD (370 X 60) for 12 contacts display with (BLF)
- Dual GbE support
- USB headset support
- Integrated **Blutooth and **Wi-Fi
- PoE or external power supply

*** Bluetooth and Wi-Fi is supported in specific regions such as the USA, Canada, the European Union, Switzerland and Israel, and requires a specific CPN with a “BW” suffix when ordering. For an updated list of supported regions please contact AudioCodes.*

## 440HD & 430HD IP Phones

The 440HD/430HD IP phones are advanced, mid-range business IP phones. Built for ease-of-use and convenience, the 430HD boasts a large LCD and 12 programmable speed dial keys. The 440HD includes a dedicated LCD displaying contacts and their presence (integrated sidecar).

- Full duplex speakerphone and headset connectivity
- 6 lines
- Graphical multi-lingual LCD (256 X 128)
- 6 multi-function keys
- 4 soft keys
- 12 programmable speed dial keys with presence monitoring (BLF)
- Dedicated LCD (370 X 60) for contacts display (440HD only)
- Dual GbE support
- USB headset support
- PoE or external power supply

## 420HD IP Phone

The 420HD IP phone is an entry-level, feature-rich enterprise IP phone. Its flexibility and robust design make it extremely suitable for demanding enterprise and contact center deployments.

- Full duplex speakerphone and headset connectivity
- 2 lines
- Graphical multi-lingual LCD (128 X 48)
- 4 programmable soft keys
- Dual GbE support
- PoE or external power supply

## 405HD & 405 IP Phones

The 405HD and 405 IP phones are a cost-effective, entry-level IP phones designed to offer the essential everyday features that the modern business environment demands.

- Full duplex speakerphone and headset connectivity
- 2 lines
- Graphical, backlit multi-lingual LCD (132 X 64)
- 4 programmable soft keys
- PoE or external power supply
- Dual GbE support (supported only on the 405HD)
- USB headset support (supported only on the 405HD)

# Technical Specifications for the 400HD Series

| | |
|---|---|
| **Telephony Features** | |
| **Supplementary Features** | Call waiting, call hold, call transfer, call forward, 3-way conference (local mix) and network conferencing, hot line, DND, mute, speed dial, dial plan, CWRR, call logs, auto answer via TALK event, call pickup, multiple Boss Admin, shared line appearance, call park |
| **Signaling** | Caller ID, MWI, DTMF relay – RFC2833, DTMF via SIP INFO, configurable call progress tones |
| **VoIP Applications** | |
| Unified communications, IP contact centers, open-source IP-PBX, hosted IP-PBX and IP centrex | |
| **Enhanced VoIP Processing Capabilities** | |
| Packet loss concealment, high quality wideband, wideband acoustic echo canceler, low-delay adaptive jitter buffers | |
| **Media Processing** | |
| **Wideband Voice Coders** | G.722, OPUS[2], SILK[2] |
| **Narrowband Voice Coders** | G.711µ/a, G.729A/B, OPUS[2], SILK[2] |
| **Additional Media Features** | Acoustic echo cancelation (AEC) - multiple path, wideband acoustic EC, packet loss concealment, silence suppression, voice activation detection, adaptive jitter buffer |
| **Protocol Support** | |
| **VoIP and Signaling** | SIP – RFC 3261, SDP – RFC 2327, SIP over TCP/UDP/TLS, DNS_SRV (redundancy), digest authentication, PRACK, early media, SIP subscribe notify, BLF (busy lamp field), presence, MWI (message waiting indication) |
| **Data Protocols** | IPv4, TCP, UDP, ICMP, ARP, RTP, SRTP, RTCP-XR, 802.1x, static IP/DHCP IP assignment, IEEE 802.1p/Q, QoS/ToS, HTTP/HTTPS/DHCP, NTP, FTP/TFTP, CDP/LLDP VLAN configuration, LDAP |
| **Security** | 802.1x, HTTPS, SIP over TLS and SRTP, configuration file encryption, PC port disable option |
| **Provisioning & Management** | Web server for configuration and management, configuration update via FTP, TFTP, HTTP, HTTPS, DHCP options (66,67,160,12,60,77), mass deployment provisioning with global redirection server, provision URL via SIP SUBSCRIBE and NOTIFY, RFC6035 SIP publish for QoE reporting |
| **General Specifications** | |
| **Language Support** | English (default), Spanish, Italian, Portuguese (with feature key), German, Russian, Ukrainian, French, Polish, Hebrew, Finnish, Korean, Simplified and Traditional Chinese, Turkish, Japanese (Kanji, Hiragana, and Katakana input modes), Hungarian, Slovak, Czech |
| **Telephony Interface** | RJ-9 headset jack X 1, USB port for headset[1], DHSG[1] |
| **Network Interface** | 2 LAN RJ-45 10/100/1000 Base-T for PC and LAN connectivity |
| **Power Requirements** | +12V DC, 1A power adapter (C448HD, 450HD, C450HD, HRS: +12V DC, 2A)<br>AC 100V-240V and/or integrated Power over Ethernet - IEEE 802.3af (see price list for ordering options) |
| **Storage/Operation Temperature** | -20° to +70°C / 0° to +40°C (-4 to +158°F / 32 to +104°F) |
| **Homologations & Approvals** | FCC Part 15 Class B, ICES-003 Class B, EN55032 Class B, EN61000-3-2, EN61000-3-3, UL-60950-1, EN60950-1, IEC-60950-1 (CB), CE mark, cTUVus |
| | RCM, KC, Anatel, CCC, ICASA, EAC, IC, ACTA, VCCI, BSMI |

*The homologation list can change from model to model, please contact AudioCodes for up to date model specific information.*

# Physical Specifications

| | C450HD/C448HD/450HD | 445HD | 440HD/430HD | 420HD | 405HD/405[4] |
|---|---|---|---|---|---|
| **Unit Dimension** (WxDxH) | 234 x 190 x 170/195 mm[3] (9.21 x 7.48 x 6.69/7.67 in.) | 250 x 168 x 163 mm (9.84 x 6.61 x 6.42 in.) | 250 x 168 x 163 mm (9.84 x 6.61 x 6.42 in.) | 188 x 157 x 163 mm (7.40 x 6.18 x 6.41 in.) | 191 x 180 x 153 mm (7.52 x 7.09 x 6.02 in.) |
| **Unit Weight** | 1.284Kg (2.83 lb) | 1.05Kg (2.31 lb) | 1.05Kg (2.31 lb) | 0.82Kg (1.81 lb) | 0.68Kg (1.5 lb) |
| **Unit Box Dimension** (WxDxH) | 275 x 245 x 110 mm (10.82 x 9.64 x 4.33 in.) | 316 x 255 x 95 mm (9.84 x 6.61 x 6.42 in.) | 316 x 255 x 95 mm (9.84 x 6.61 x 6.42 in.) | 262 x 236 x 95 mm (7.40 x 6.18 x 6.41 in.) | 210 x 200 x 100 mm (8.27 x 7.87 x 3.94 in.) |
| **Unit Box Weight** | 1.722kg (3.79 lb) | 1.49Kg (3.28 lb) | 1.49Kg (3.28 lb) | 1.2Kg (2.65 lb) | 0.9Kg (1.98 lb) |
| **Master Carton Dimension** (WxDxH) | 579 x 467 x 293 mm (22.79 x 18.38 x 11.53 in.) | 530 x 495 x 340 mm (20.87 x 19.49 x 13.39 in.) | 530 x 495 x 340 mm (20.87 x 19.49 x 13.39 in.) | 540 x 495 x 260 mm (7.40 x 6.18 x 6.41 in.) | 495 x 395 x 237 mm (19.49 x 15.55 x 9.33 in.) |
| **Master Carton Weight** | 16.07 Kg (35.42 lb) | 16.07 Kg (35.42 lb) | 15.8Kg (34.83 lb) | 13.1Kg (28.88 lb) | 10.1kg (22.27 lb) |

[1] *USB port not supported on 405, 420HD | DHSG not supported on 405/405HD and 420HD*

[2] *OPUS and SILK supported on 405HD, 420HD 430HD, 440HD, 450HD and HRS*

[3] *C448HD, 450HD and C450HD supports two desktop positions: Low position: 170mm | High position: 195mm*

[4] *GbE and USB are available on 405HD (not supported on 405)*


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