Microsoft Teams Telephony

SPECIFICATION OVERVIEW

Four hundred (400) Microsoft Teams Certified Internet Protocol ("IP") phones /speakerphones that deliver crystal-clear sound quality so that every employee can be heard in every meeting or conversation with an option to add other modules as required. Compatible accessories needed include: One Hundred (100) power adapters, fifty (50) devices will need the ability to have speed dial contacts with presence indicators and pictures on an expansion screen, one hundred fifty (150) compatible wireless headsets, and one hundred fifty (150) compatible wired headsets.

Shall include the following:

- The IP Phone must include all cables, cords, handset, etc. out of the box.
- Shall be a Microsoft Teams Certified phone with compatible provisioning and deployment software for existing and future functionality of Microsoft Teams.
- These devices shall have all IRS Security protocols for encryption.
- Shall be Compatible with Microsoft Intune or Device Management software for Administrative purposes for applying updates and Firmware upgrades.
- Dual GBE Ports (Network ports)
- 1 Year or more device warranty
- Work from home capability, office-quality devices for wherever the worker is located.
- The option to use a speaker/hands free, a headset (either wired or wireless) or a handset for privacy.

Unified Communication IP Phone – Four hundred (400) complete Microsoft Teams Certified IP Phones / Speakerphones meeting the following minimum requirements:

Hardware device:

- Handset
- Physical Buttons and Touch screen dialing capability
- 5" Color touch screen or higher with multi-lingual support
- Operating System based on Android 7.0 or higher
- Dual GBE interface
- Built-in Wi-Fi, Bluetooth, and/or USB headset support
- Ability to add an additional module such as high-quality camera
- Fifty (50) of the devices will require additional modules with extended graphical display for additional call routing, call parking, and speed dialing features
- Full HD audio experience built in microphone. HD voice includes both microphone and speaker.
- One hundred (100) of the devices require a power adapter. The remaining three hundred (300) devices require integrated Power over Ethernet.
- One hundred fifty (150) wireless and one hundred fifty (150) wired Headsets that are compatible with the IP Phone / and or computer. Color black or grey, adjustable headband
- Quick start guide, either paper or electronic.

IP Phone Protocol Support Minimum Requirements

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, BLF1 (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 and 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

Telephony Features Minimum Requirements

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.

Enhanced VoIP Processing Capabilities Minimum Requirements

Packet loss concealment, high definition quality wideband, wideband acoustic echo canceler, low-delay adaptive jitter buffers

Media Processing

Wideband Voice Coders G.722, OPUS2, SILK2
Narrowband Voice Coders G.711μ/a, G.729A/B, OPUS2, SILK2
Additional Media Features Acoustic echo cancelation (AEC) - multiple path, wideband acoustic EC, packet loss concealment, silence suppression, voice activation detection, adaptive jitter Buffer.

General Specifications

Power Requirements – One hundred (100) devices require a +12V DC, 1A power adapter (450HD: +12V DC, 2A) AC 100V-240V. The remaining three hundred (300) devices require integrated Power over Ethernet - IEEE 802.3af

IP Phone Examples: Yealink M56, Yealink M58, and Audiocodes C450HD Series or equivalent

Wired Headset Minimal Requirements:

Certification Microsoft Teams (Teams version only)
Audio Characteristics Bandwidth – 150 Hz to 6800 Hz Maximum acoustic output, Noise Cancelling Microphone
Weights and Dimensions Weight – USB 74 g/.16 lbs ,
Cable Length – 785 mm/30.9 in
Warranty Limited 1 year

Wired Headset Examples: Plantronics Encore 520 and YeaLink UH36 or equivalent

Wireless Headset Minimal Requirements:

Certification Microsoft Teams (Teams version only)
Audio Characteristics Bandwidth – Active noise canceling technology, wideband (voice), hi-fi stereo,
Talk/Listen time Talk time: Up to 12 hours (10 ANC on) Listening time: Up to 15 Hours
Connections a USB adapter, Bluetooth-enabled desk phones, mobile phones
Accessories Stand battery Charger (if required)
Roaming range Up to 98 feet (30 meters)
Weights and Dimensions Weight 155 grams
Warranty Limited 1 year

Wireless Headset Examples: Plantronics Voyager Focus UC and Yealink WH62 or equivalent