Alcatel-Lucent Enterprise 8158s/8168s WLAN Handsets

Provide customers with an exceptional experience with Alcatel-Lucent Enterprise 8158s and 8168s robust, quality WLAN wireless handsets. A large backlit color screen lets you easily manage your calls with access to all the ALE telephony features.

A Bluetooth headset lets you make secure, hands free, calls. You can be reached at any time, even in expansive industrial and hospital environments. The Alcatel-Lucent Enterprise 8158s and 8168s handsets are water resistant, as well, dust and water drops and are easy to clean. Communicating as a team is instantaneous with the "Push-to-Talk" button.

The alarm button and integration with notification and geolocation solutions can save precious seconds when initiating emergency calls.

Save money with a single WLAN network for your internet traffic and your business communications. Both handsets are compatible with Wi-Fi 6 technology and Alcatel-Lucent OmniAccess® Stellar Access Points. The handsets provide secure, excellent voice quality in "wideband audio" over ALE and third-party providers' WLAN and communications networks.

Stellar Access Point

8158s-8168s front and back view

Features	Benefits
DUAL stack NOE and SIP protocols	The 8158s and 8168s can be deployed in any business environment on ALE communications servers, from on-premises PBX, to cloud deployment
Wi-Fi® interoperability	A wide range of Wi-Fi® infrastructures supported
Wideband voice quality (8168s)	More comfort with excellent wideband audio even in hands-free mode
Alarm features	8158s and 8168s features push-button alarm compatible with ALE alarm server and interoperable with third-party alarm solutions
Bluetooth (8168s)	Bluetooth headset support and BTLE ready for Location-based Services (LBS)
Push-to-talk (8168s)	Enable workers to easily set-up group discussions
Retro-compatibility	Compatibility with Alcatel-Lucent Enterprise 8118 and 8128 Handsets protects your investments.

Datasheet
Alcatel-Lucent Enterprise 8158s/8168s WLAN handsets

Technical Specifications

Physical characteristics
- Color: Black
- Material:
  - ¬ Case: Polycarbonates (PC)
  - ¬ Keypad: Coated vulcanized silicone
  - ¬ Clip: Polyamide (PA)
- Belt clip: Hinge-type; optional swivel clip

Dimensions
- Height: 137 mm (5.39 in.)
- Width: 52 mm (2.04 in.)
- Depth: 21 mm (0.82 in.)
- Weight: 135 g (4.8 oz) excl. clip

Display
- 31 × 41 mm (2.0 in), TFT color display
- 240 × 320-pixel LCD
- Display backlight: White

Keys and indications
- Top: alarm button
- Right-side:
  - ¬ Jack port
- Left-side:
  - ¬ + and - volume control keys
  - ¬ push to talk (8168s)
- Front:
  - ¬ 3 contextual keys
  - ¬ Answer, Hang-up/Off keys
  - ¬ 4-way navigation, OK button
- Keypad:
  - ¬ Backlight
- Illuminated display on:
  - ¬ Incoming call
  - ¬ Message
  - ¬ Charging
- Vibrator on
  - ¬ Incoming call
  - ¬ Message
- Audio signals
  - ¬ 14 ring signals
  - ¬ Aggressive ring signal
  - ¬ 5 beep signals
  - ¬ 3 user-defined custom sounds
- Answer call:
  - ¬ Phone button press
  - ¬ Headset button press
  - ¬ Auto answer

Connectors
- Multi-purpose connector:
  - ¬ Fast software download
  - ¬ Configuration
  - ¬ Battery charging
- Headset connector: Standard 3.5 mm jack (4 pole)

Battery pack
- All battery times are based on optimal conditions (no roaming or handover and black display)
- Easy to replace battery
- Li-polymer 3.7 V 920 mAh
- Speech time: Up to 10 h
- Standby time: Up to 100 h
- Charge time: Less than 4 h

Protocol specifications
- ALE communications servers protocol (NOE)
- Supports SIP protocol:
  - ¬ RFC1889, RFC2327, RFC2833, RFC3261, RFC3264, RFC3265, RFC3515, and RFC3842
  - ¬ Encryption: SRTP and TLS 1.0, 1.1, 1.2, 1.3

Audio
- Voice codecs:
  - ¬ 8168s: Opus Wideband, G.722
  - ¬ Opus narrowband,
  - ¬ G.711 A-law (EU), G.711 u-law (US)
  - ¬ G.729, G.729A, G.729B, G.729AB
- Customizable sounds
- Ring signal:
  - ¬ Maximum sound level 88 dBA SPL @ 10 cm
  - ¬ Adjustable in 8 steps
- Earpiece: Volume adjustable in 8 steps of 3 dB each
- Loudspeaker (8168s): Duplex loudspeaker function
- Comfort noise: Constant noise level enhancing the quality of a call
- Sound pressure level range for medium priority alarm (one beep):
  - ¬ Measured according to IEC 60601-1-8
  - ¬ 44 dB–80 dB, adjustable in 8 steps
- Sound pressure level range for high priority alarm (siren):
  - ¬ Measured according to IEC 60601-1-8
  - ¬ 46 dB–81 dB, adjustable in 8 steps

Directory
- Central directory (system dependent)
- Local directory (250 entries in SIP mode)
  - ¬ Selectable ring signals per contact

Messaging (only 8168s in SIP mode)
- Maximum message length:
  - ¬ 160 characters from VoWiFi Handset
  - ¬ Message length to VoWiFi Handset is system dependent
- Storage capacity: 30 received/sent messages

Location
- Associated WLAN access point (AP)
- Cisco MSE (applicable to 8168s only)
- AiRISTA Flow RTLS (applicable to 8168s only)
- BLE location (applicable to 8168s only)

Alarms types (supported)
- Interoperability with several alarm servers (system dependent)
- Push button alarm

Languages
- Menu and message languages (21): Arabic, Chinese (simplified), Czech, Danish, Dutch, English, Finnish, Flemish French, German, Greek, Hungarian, Italian, Norwegian, Polish, Portuguese (European), Russian, Slovak, Spanish, Swedish, and Turkish

Desinfection and Cleaning

Liquid Disinfection Solution
- Ethanol 85%: Sporadic & daily disinfection
- Virkon S 1 %: Daily disinfections
- Actichlor Plus 0,1% Chlorine: Daily disinfections
- Aseptix (H2O2): Daily disinfections
- Chlorhexidin 0.5 mg/ml: Sporadic disinfection
- Chlorhexidin 0.5 mg/ml: Daily disinfections

Cleaning Wipe
- PDI Super Sani-Cloth (Purple)
- PDI Sani-Cloth Plus (Red)
- PDI Sani-Cloth Bleach (Orange)
- PDI Sani-Cloth HB (Green/blueish)
- PDI Sani-Cloth AF3 (Gray)
- PDI Sani-Cloth AF (White)
- Certol Prospray
- Clorox Hydrogen Peroxide (Green)
- Clorox Disinfecting Wipes
- CaviWipes and CaviWipes XL
- Cal Tech Dispatch (With bleach)

Radio specifications

- Receiver sensitivity:
  - ¬ –87 dBm (802.11a, 6 Mbps)
  - ¬ –93 dBm (802.11b, 1 Mbps)
  - ¬ –87 dBm (802.11g, 6 Mbps)
  - ¬ –86 dBm (802.11n, MCS0)
- Frequency range EU (ETSI):
  - ¬ 802.11b/g: 2.400–2.483 GHz (Ch 1–13)
  - ¬ 802.11a: 5.17–5.33 GHz (Ch 36–64), 5.49–5.71 GHz (Ch 100–140), 5.735–5.835 GHz (Ch 149–165)
- Frequency range USA (FCC):
  - ¬ 802.11b/g: 2.4–2.473 GHz (Ch 1–11)
  - ¬ 802.11a: 5.17–5.33 GHz (Ch 36–64), 5.49–5.73 GHz (Ch 100–144), 5.735–5.835 GHz (Ch 149–165)
- Frequency range Canada (IC):
  - ¬ 802.11b/g: 2.4–2.473 GHz (Ch 1–11)
  - ¬ 802.11a: 5.17–5.33 GHz (Ch 36–64), 5.49–5.59 GHz (Ch 100–116), 5.65–5.73 GHz (Ch 140–144), 5.735–5.835 GHz (Ch 149–165)

  Note: The 5.60-5.65 GHz frequency band is disabled for use.
- Maximum output power: 100 mW/20 dBm
- Modulation speed:
  - ¬ 802.11b: 1, 2, 5.5, 11 Mbps
  - ¬ 802;11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
  - ¬ 802.11n: MCS-0–MCS-7
  - ¬ 802.11ac: MCS-0–MCS-9
- Bluetooth 5.0 inc. Bluetooth Low Energy (BLE),
  - ¬ radio spectrum: ISM 2.4-2.4835 Ghz
  - ¬ Profiles: headset and handsfree
  - ¬ Output power: class1, maximum 8 dBm
  - ¬ BLE beacon: iBeacon

WLAN

- Number of networks: Four systems, auto selection and manual selection
- Quality of Service (QoS): WMM, TSPEC-based CAC
- Supported networks: 802.11 a/b/g/n/ac (MCS0-7)

Wireless security

- Security standard: 802.11i, 802.11w
- Encryption method: AES-CCMP
- Authentication methods:
  - ¬ Open
  - ¬ WPA/WPA2/WPA3-Personal
  - ¬ WPA2/WPA3-Enterprise (PEAP-MSCHAPV2, EAP-TLS)

  Note: Optional WPA3-Enterprise 192 bit is not supported
- certificate enrollment standard : SCEP

Roaming enhancement

- 802.11r, 802.11k
- Opportunistic Key Caching
- PMKSA caching

Serviceability

- Site survey tool
- Software update over the air
- Configuration cradle
- Centralized management:
  - ¬ Built-in management in ALE communications servers
  - ¬ Optional IMS3 Gateway for mass deployment

Regulations and Standards compliance

Europe

- Directive 2015/863 (RoHS) amending 2011/65/EU
- Regulation (EC) 1907/2006 (REACH)
- Directive 2006/66/EC amending 2013/65/EU (Battery Directive)
- Directive 94/62/EC (Packaging Directive)
- Directive 2012/19/EU (WEEE)
- Directive 2014/53/EU (RED)
- Product marking: CE, UKCA, WEE
- Radio: EN 300 328, EN 301 893
- Bluetooth: EN 300 328, EN 301 489-17
- SAR (Specific Absorption Rate): EN 50360, 0.637 W/kg (10 gram)
- Safety: EN 62368-1
- EMC: EN 301489-01, EN 301489-17, EN 60601-1-2

United Kingdom

- RoHS in Electrical and Electronic Equipment Regulations 2012
- The REACH Enforcement Regulations 2008
- The Batteries and Accumulators (Placing on the Market) Regulations 2008 and the Waste Batteries and Accumulators Regulations 2009
- The Packaging (Essential Requirements) Regulations 2015
- The Waste Electrical and Electronic Equipment Regulations 2013
- Radio Equipment Regulations 2017

United States

- Product marking:
  - ¬ FCC ID: BXZWH2
  - ¬ HAC
  - ¬ US: 9FVIPNANWH2
- SAR (Specific Absorption Rate):
  - ¬ FCC/OET Bulletin 65 Supplement C and IEEE Std. 1528

  - ¬ Normal operation 1.108 W/kg (1 gram)
  - ¬ Body worn operation 1.586 W/kg (1 gram)
- Safety: UL 62368-1
- EMC/Radio: FCC Part 15 E, FCC Part 15 C (Bluetooth), and FCC Part 15 B
- Hearing Aid: FCC 47CFR part 68

Canada

- Product marking: IC: 3724B-WH2
- SAR (Specific Absorption Rate):
  - ¬ RSS-102, Issue 5
  - ¬ Body Worn 1.586 W/kg (1 gram)
  - ¬ Left Head 1.108 W/kg (1 gram)
- Safety: CAN/CSA-C22.2 NO. 62368-1-14
- EMC/Radio: RSS-GEN and RSS-247
- Hearing Aid: CS-03 Part V, Issue 9, Amendment 1

Australia and New Zealand

- Product marking: R-NZ
- Radio: Radiocommunications (Short Range Devices) Standard 2014, AS/NZS 4268
- Bluetooth: AUS/NZS-4771
- SAR (Specific Absorption Rate): EN 62209-1, 0.637 W/kg (10 gram)
- Safety: AS/NZS 62368:2018
- Audio: AS/CA S004
- EMC: Radiocommunications (Electromagnetic Compatibility) Standard 2008

Operating environment

- Operating temperature: –5°C to +45°C (+23°F to +113°F)
- Storage temperature (1): –20°C to +60°C (–4°F to +140°F)
- Charging temperature : 0°C to +45°C (+32°F to +113°F)
- Immunity to electromagnetics fields: 10V/m (IEC 61000-4-3)
- Immunity to ESD : 8 KV contact discharge and 15 KV air discharge (IEC 61000-4-2)
- Enclosure protection: Ingress Protection IP44, IEC 60529
- Free fall test:
  - ¬ IEC 60068-2-32, procedure 1, dropped 12 times from 1 m;
  - ¬ IEC 60068-2-32, procedure 2, dropped 1000 times from 0.5 m
- The following chemicals have shown no harmful effect:
  - ¬ 3% Hydrochloric Acid M-alcohol (70% Methylated Ethanol)
  - ¬ 60% Chlorhexidine 0.5 mg/ml

Ordering Information
- 3BN78421AA 8158s WLAN handset
- 3BN78422AA 8168s WLAN handset

Accessories
- Desktop charger, 3 models:
  - ¬ 3BN78403AA 81X8 Desktop charger Europe
  - ¬ 3BN78403AB 81X8 Desktop charger US-UK-AUS
- 3BN78423AA 8158S/8168S Belt clip
- 3BN78424AA 8158S/8168S Carrying case
- 3BN78425AA 8158S/8168S Swivel clip
- 3BN78426AA 8158S/8168S Batteries rack charger
- 3BN78427AA 8158S/8168S Li-Ion battery pack
- 3BN78406AA 81X8 Rack charger
- 3BN78414AA 81X8 Configuration cradle
- 3BN78415XX Central management IMS3 Gateway

WLAN handsets accessories

3BN78403AA 8158s/8168s
Desktop charger Europe

3BN78424AA 8158s/8168s
Carrying case

3BN78406AA 8158s/8168s
Rack charger

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