Ascom d81 DECT Handset, Protector

Features

Alarm
- Push button alarm, with ability to send different alarm types
- Pull cord alarm\(^1\)
- Man-down/No-movement alarm\(^2\)
- Acoustic Location Signal (ALS)
- Automatic call after alarm

Location
- Base station location
- DECT location\(^1\)
- LF location\(^2\)
- Poll location

Messaging
- Priority handling of calls and messages
- Advanced messaging queueing
- Color messaging
- 180 degrees rotation of message/call information
- Interactive messaging
- Broadcast/Multicast messaging

General
- Tough industrial handset
- IP65 classified design
- Easy registration
- Headset connector
- Wide temperature range, -10 to +55 °C
- Loud volume
- Customizable sounds
- Color display
- Enhanced DECT security Step A (ETSI EN 300 444, N.35)

1. License dependent feature
2. Factory option

- Dynamic output power
- Shared phone\(^1\)
- Upgradeable by license
- 18 default languages + 1 customizable
- Application controlled telephony
  - Automation calls
  - Automatic group calls
- Push to talk (PTT)
- Personalized menu
- Advanced user profiles
- System profiles
- Procedure call
- Programmable handset restrictions
- Programmable headset button
- Bluetooth and handsfree as standard
- Bluetooth barcode reader support\(^1\)
Technical Specifications

Physical
Dimensions (l × w × d): 142 × 56 × 25 mm
Weight: 170 g (battery and clip included)
Material: Case: PC/ABS, Key pad: PC, Clip: PA
Color: Handset: Gray/Dark Gray
Front plates: Steel Gray (standard), Dark Gray, Turquoise, Green, and Orange.
Display (w × h): 28 × 35 mm, CSTN display
Clip: Hinge-type (standard) or swivel-type

Battery
Type: Li-Ion
Speech time: 18 h (Bluetooth disabled/Location features disabled)
12 h (with Bluetooth headset in use/Location features disabled)
16 h (Bluetooth disabled/LF location enabled)
10 h (with Bluetooth headset in use/LF location enabled)
Stand-by time: 120 h (Black screen saver activated/Location features disabled)
60 h (Black screen saver activated/LF location enabled)
Charge time: 2 hours - 90% charged; 3 hours - fully charged.
Discharge/charge cycles: >=80% capacity left after 400 full charge/discharge cycles.
Storage temperature: 0°C to +20°C. Cool and dry place. Charged to 40% (3.7V). Even when stored under optimal conditions the battery capacity will decrease over time
1. Note that storing Li-Ion batteries at high temperature dramatically reduces its capacity. For example storage around +60°C reduces capacity with 20% in less than a month, permanently.

Connectors
Multi-purpose connector: For battery charging, software download, connection of headset, and configuration.

User interface
Display (w × h): Multiple colors with high resolution, more than 65000 individual colors. 128 × 160 pixel LCD with white LED backlighting.
Indicator: LED on top for visual indication of incoming call/message. The LED may also be used for visual indication of normal function.
Vibrator: Incoming call/message
Buttons/Keypad:
- Soft keys (3)
- Hook off key
- On-hook and Power On/Off on the same key
- Four-way navigation key
- Numerical keys
- Volume up/down buttons
- Sound off key/Mute button

Specifications are subject to change without notice.
### Audio

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ring signal</td>
<td>Adjustable in 8 steps</td>
</tr>
<tr>
<td>Earpiece</td>
<td>Adjustable in 8 steps</td>
</tr>
<tr>
<td>Maximum sound ring signal level</td>
<td>100 dBspl @ 10 cm</td>
</tr>
<tr>
<td>Loudspeaker</td>
<td>Duplex loud speaking function</td>
</tr>
</tbody>
</table>

### Settings

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Menu and message languages</td>
<td>18 (Czech, Danish, German, Greek, English, Spanish, French, Italian, Magyar, Dutch, Norwegian, Polish, Portuguese (Brazilian), Russian, Slovakian, Finnish, Swedish, Turkish) + 1 customizable</td>
</tr>
</tbody>
</table>

Note: The full set of message languages are supported only if UTF-8 character encoding is used. Other character encodings have limited language support.

### Central Phonebook

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum name and number length</td>
<td>40 characters in a name and 20 digits in a number</td>
</tr>
</tbody>
</table>

### Company Phonebook

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum name and number length</td>
<td>24 characters in a name and 24 digits in a number (1 number per name).</td>
</tr>
</tbody>
</table>

### Local Phonebook

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contacts</td>
<td>- 48 character name</td>
</tr>
<tr>
<td></td>
<td>- 24 digit work number</td>
</tr>
<tr>
<td></td>
<td>- 24 digit mobile phone number</td>
</tr>
<tr>
<td></td>
<td>- 24 digit other number</td>
</tr>
<tr>
<td></td>
<td>- Selectable ring tones per contact</td>
</tr>
<tr>
<td>Entries</td>
<td>1000</td>
</tr>
</tbody>
</table>

### Telephony

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indication</td>
<td>14 ring signals, flashing LED and vibrator</td>
</tr>
<tr>
<td>Answer call</td>
<td>Button press or auto answer</td>
</tr>
<tr>
<td>Call list storage capacity</td>
<td>25 calls (received, dialled and missed) with time stamp</td>
</tr>
</tbody>
</table>

### Messaging

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum message length</td>
<td>Up to 140 characters from handset, depending on language and system settings.</td>
</tr>
<tr>
<td>Storage capacity</td>
<td>30 received/sent messages (&gt; 20 000 characters)</td>
</tr>
<tr>
<td>Maximum number of Multicast Groups per handset</td>
<td>The handset can be a member in maximum 8 different Messaging groups</td>
</tr>
<tr>
<td>Message character encoding</td>
<td>SMS Standard, Latin-1, UTF-8</td>
</tr>
</tbody>
</table>
Radio
Receiver sensitivity: -93 dBm
Automatic DECT protocol detection: Automatic detection and configuration for US DECT and EU DECT at first registration.
Frequency range:
- 1880-1895 MHz
- 1880-1900 MHz
- 1900-1906 MHz
- 1910-1930 MHz
- 1920-1930 MHz
  - Taiwan
  - Europe, Africa, Middle East, Australia, New Zealand, and parts of Asia.
  - Thailand
  - South America
  - North America
Modulation: GFSK
Channel spacing: 1.728 MHz
Antenna: Integral
Dynamic output power:
- EU/LA/BR: 10 mW (maximum average power)
- US: 4 mW (maximum average power)

Bluetooth
Bluetooth radio spectrum: ISM 2.4000-2.4835 MHz

Environmental
Operating temperature: -10°C to +55°C (+14°F to +131°F)
Storage temperature: -20°C to +60°C (-4°F to +140°F)
Charging temperature: +5°C to +40°C (+41°F to +104°F)
Enclosure protection: IP65, IEC EN60529
Immunity to electromagnetic fields: 10 V/m EN61000-4-3
Immunity to ESD: 8 kV contact discharge and 10 kV air discharge (EN61000-4-2)

Accelerated Life Testing
Climate stress
Handset exposed for quick temperature changes (-40° C to 75° C) 25 times. Handset dwelt on each temperature during 40 minutes.

Drop test
Handset dropped 30 times from 1,2 metres

Vibration test
Handset exposed for vibrations during 2,5 hours

Chemical stress
Handset exposed for Oleic Acid

Keypad actuation test
Keys pressed 15 000 times with a force of 13N

Squeeze test
Handset squeezed 1 000 times with a force of 130N.

Free fall test, standard product
IEC 60068-2-32, procedure 1, dropped 12 times, specification extended to 2 metres.
IEC 68-2-32, procedure 2, dropped 1 000 times from 0,5 metre.

Chemical resistance test
3% Hydrochloric Acid
- Alcohol (85% methylated ethanol)
60% Chlorhexidin 0.5mg/ml

Keypad abrasion test
20 NB 0500-B

Specifications are subject to change without notice.
Additional Features
- High quality voice
- Easy access to PBX services
- Easy replacement of handset
- Easy replaceable battery
- Mute button / Sound off key
- Local, central, and company phonebook
- Voice mail
- Sending/receiving messages (SMS)
- Centralized management
- Message acknowledgement
- Loudspeaking function
- Vibrator
- Clear call lists in charger
- Call list with the last 25 calls
- Programmable Soft/Hot keys
- Site survey tool

Accessories
- Hinge-type/Swivel-type clip
- Cover plate for no clip
- Security cord
- Pull-cord
- Leather casing, incl. swivel-type clip
- Desktop charger, Basic
- Desktop charger, Advanced
- Battery pack charger
- Charging rack
- Front plates (5)
- Headset with microphone on boom
- Headset adaptor for Mic on boom
- Peltor hearing protection headset
- ATEX/IECEx-classified headset adaptor for standard and ATEX-classified Peltor headsets

1. Requires the headset adaptor for Mic on boom which is ordered separately.

Verified Bluetooth Headsets and Bluetooth Barcode Readers

Bluetooth Headsets:
- 3M Peltor WS XP
- Jabra EVOLVE 65
- Jabra MOTION
- Jabra STEALTH
- Jabra SUPREME
- Plantronics BlackBeat GO 2
- Plantronics Blackwire 710
- Plantronics M70
- Plantronics M90
- Plantronics ML20
- Plantronics Voyager Edge
- Plantronics Voyager Legend
- Voyager 5200 BT Headset EU
- B825-M Voyager Focus
- Explorer 500 Bluetooth Headset

Bluetooth Barcode Readers:
- Baracoda ScanWear BSW-L
- Baracoda Roadrunners BRR-L
- Baracoda Pencil2
- Opticon OPL-2724

Compliance to US Regulations and Standards

Product marking:
FCC ID: BXZDH5BL, BT QD: B016451
US: 9FWV4NANDHS
HAC

SAR (Specific Absorption Rate):
FCC/OET Bulletin 65 Supplement C and IEEE Std. 1528 / ANSI/IEEE Std. C95.1
Normal operation 0.013 W/kg (1 gram)
Body worn operation 0.016 W/kg (1 gram)

Safety:
UL 60950-1

EMC/Radio:
FCC Part 15 D, and FCC Part 15 C

Hearing Aid:
47 CFR Part 68, Subpart D and TIA-968-A

Specifications are subject to change without notice.
Compliance to Canadian regulations and standards
Product marking: IC: 3724B-DH5BL, BT QD: B016451
EMC/Radio: RSS-213 and RSS-210 (Bluetooth), ICES-003
SAR (Specific Absorption Rate): IEEE Std C95.3
Normal operation 0.013 W/kg (1 gram)
Body worn operation 0.016 W/kg (1 gram)
Safety: CSA 60950-1
Hearing aid: CS-03

Compliance to European regulations and standards
EU directives: 2014/53/EU (RED) and 2011/65/EU (RoHS)
Product marking: BT QD: B016451
Radio: EN 301 406, TBR22
Bluetooth: EN 300 328, EN 301489-17
SAR (Specific Absorption Rate): EN 50360, 0.137 W/kg (10 gram)
EN 50566:2013
Safety: EN60950-1
EMC: EN301489- 6, EN 301 489-1

Compliance to Australian regulations and standards
Product marking: BT ID: B016451
Radio: EN301406
Bluetooth: EN 300 328-2, EN 301489-17, AUS/NZS-4771
SAR (Specific Absorption Rate): EN 50360, 0.137 W/kg (10 gram)
EN 50566:2013
Safety: AUS/NZS 60950-1
EMC: EN301489- 6, EN 301 489-1
DECT: AS/ACIF S004

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