Intercom

Your Atom XL is not only a smartphone, but also a walkie-talkie that allows to communicate with other intercom devices without network connection.

⚠ When using the intercom application, all other USB interface functions will be disabled except charging. Only when the intercom application is completely exited and the charging device is unplugged will all of USB interface functions be restored.

⚠ Before using intercom, make sure your Atom XL has installed an intercom antenna. Using intercom without an antenna may damage the intercom module.

⚠ The intercom app is a high power consumption function. After you opened this app, even if you don′t send the intercom or install an antenna and just let it run in the background, it will also greatly affect the battery life of your phone.Please completely exit this function if you don't use it. Whether the intercom antenna is installed will not change the standby power consumption of the device.

Brief introduction of intercom function:

The Atom XL intercom function adopts TDMA (dual time slot) technology, it supports full-duplex, half-duplex voice, data communication and simultaneous interpretation services, and also DMR digital intercom which can be used as a complete DMR digital intercom. Atom XL is also compatible with analog intercom.

Intercom features:

Frequency range: 400~480MHz

Frequency interval: DMR digital 12.5KHZ; analog 12.5KHZ, analog 25KHZ

Transmitting power: 0.5~2W

Antenna impedance: 50Ω

High receiving sensitivity: -121dBm

Support AMBE3000, WT3000, AMBE1000, SELP, AVDS and other vocoders

Support DMR (ETSI TS102 361 (DMR) Tier Ⅰ/Ⅱ) protocol and compatible with traditional analog intercom mode

Note:Atom XL does not support C4FM, D-Star, P25, NXDN, DPMR and other intercom protocols.

The following services are supported in DMR mode:

- Support group call, individual call, all call

- Support confirmation, non-confirmation SMS communication, support status SMS

- Support 4.8Kbps and 9.6Kbps data transmission

- Support calling/called detection

- Support call prompt

- Support remote monitoring

- Support voice and SMS applications in direct and relay mode

The following services are supported in the analog intercom mode:

- Support CTCSS/CDCSS sub-tone squelch

- Support monitoring

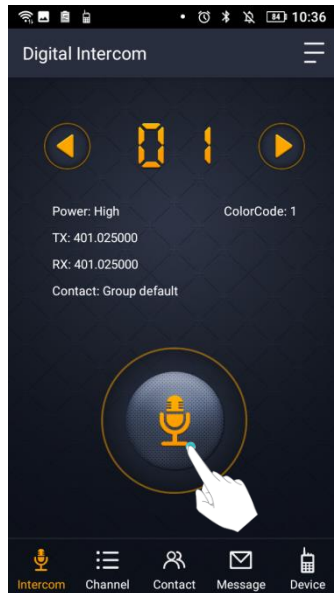Intercom recording and playback

Turn on/off intercom

After entering the intercom program, press the home button or the return button, the intercom will run in the background,

Open &close Intercom
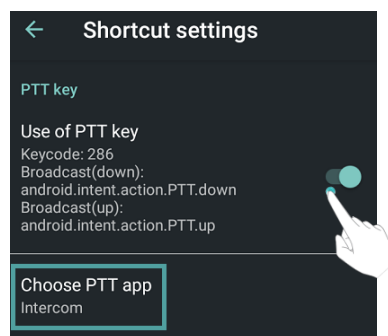
Tap icon on home page to start.

When you tap the home button or the back button, the intercom will still run in the background. To exit, touch at the bottom of the screen, choose **Exit App** to exit the application, or touch the return key on the main interface of the intercom application, then exit according to the prompts to turn off the intercom completely.

Use the intercom function

● Tap and speak to the phone, then the devices within the effective distance and on the same channel will hear from you, release to end Intercom.

You can set the red button(PPT key) on the left side of the phone as the Intercom key. The PPT key will have the same function as icon once the setting is successful.

How to set PTT key as : **Settings**> **Smart Assistant**> **Shortcut settings**. Turn on the PTT key switch, and choose Intercom as PTT app.

Switch channel

● Touch ▷ on the top of the screen to switch the channel.
● Press the volume key of the phone to adjust the volume of the intercom module.
ⓘTo avoid interference, it is recommended to keep a certain distance between the two intercom devices.

Device setting

Tap 📱**Device** > **Setting** to go to the following settings.

1. Device settings

Local Number: Set your device ID. This device will be used for the other device to identify your device when calling. Don't set a same ID for different devices.

Limit send time: After selecting the time limit, the intercom will stop automatically after the sending exceeds the time limit.

Auto exit time: Select the length of time the intercom runs in the background. The intercom module will exit automatically when the system reaches the setting time after the system sleeps.

PTT start tone: Turn on the switch, then when you tap the 🎙️icon, there will be a prompt tone. Turn off the switch to turn the tone off.

PTT end tone: Turn on the switch, then when you release the 🎙️icon, there will be a prompt tone. Turn off the switch to turn the tone off.

PTT record: After the switch is turned on, the communication will be recorded during the intercom. You can tap ≡ on the upper right corner at the first page of Intercom App to view and listen.

Busy Channel Lock-out: when receiving the intercom, there will be prompts when pressing the intercom key.

Temperature detection: Since the intercom function generates a lot of heat when beaming, the system will automatically monitor the internal temperature of the device after turning on this switch. When the temperature reaches 55℃, a high temperature warning prompt will pop up. At this time, please stop the intercom transmission function immediately and let the device cool down. If you continue to use, and the system detects that the internal temperature of the device is higher than 59°C, the operating system will shutdown automatically without any prompt.

When the Intercom is completely turned off, the high temperature warning prompt will not pop up. If there is a forcefully shutdown due to high temperature, please restart the device after cooling down.

2. **Device information:** display the intercom APP and the intercom hardware versions.

3. **Channel area:** Set the default U-band frequency in different countries.

4. **Factory Reset**: Restore to default settings.

5. **Exit App**: Exit Intercom App.(After exited Intercom in the background, the intercom monitor also exited synchronously).

Contact

Person contacts: Tap 👤 and then ＋ on the top right corner to edit the contact name and number. The name will be used to select a contact number; the number is the number of the other intercom device used for pairing. Tap ✓ on the top right corner to save.

Group Contacts: Tap 👤 and then ＋ on the top right corner to edit the group name and number.The name will be used to select group contacts; the group number is the group ID, only members in the same group can communicate with each other. Tap ✓ on the top right corner to save.

Channel

1.Channel operation: The switching of the intercom channel is completed by switching the preset channels. The system defaults to 16 channels, it is able to create up to 48 channels.

2. New channel: Tap ＋ on the upper right corner to enter the add channel interface:

a Channel name:Enter any name you want.

b Channels: It allows up to 48 channels.Click the ✉ icon on the right to select the channel.

c Channel type: Digital Channel and Analog Channel.

1) Digital channel

Ⅰ Sending frequency & receiving frequency (full U band frequency, range from 400~480MHz): when there is no repeater, the sending frequency and receiving frequency must be the same; if there is a repeater, please set according to the rules of using repeater (The RX of the repeater must be the same as the TX frequency of Atom XL, and the TX of the repeater must be the same as the RX frequency of Atom XL).

Ⅱ Power: high power at 2W for long distance communication; low power at 1W for short distance communication.

Ⅲ Color code: use to increase the capacity of the channel, ranging from 0 to 15. Frequencies in the same group can be separated by setting the color code.

Ⅳ Contact type: individual call (one-to-one call); group call (call within the group); all call(Devices with the same frequency, color code and encryption can call by intercom).

Ⅴ Contact number: According to the type of contact (personal call, group call), select the stored contact in the contact interface.

Ⅵ Encryption switch: this allows you to encrypt the voice. Only devices with the voice encryption switch set to off can use the intercom function.

2) Operation of analog channel

Ⅰ Send frequence & Recv frequence: To use it as a walkie-talkie, the pairing device should be set to the same frequency. If there is a repeater, please set according to the rules of using as repeater.

Ⅱ Bandwidth: broadband and narrowband available.

Ⅲ Power: The highest power is 2W, the lowest power is 1W, the higher the power, the longer distance it allows.

Ⅳ Squelch level: Can be set from 1 to 9. The higher the level, the stronger the squelch suppression ability, and the less likely it is to receive weak but useful

signals. Conversely, the lower the level, the weaker the ability to suppress noise, the easier it is to receive weak but useful signals.

Ⅴ Receiving sub-tone type: sub-tone can increase the capacity of the channel, only devices with the same sub-tone settings can use the intercom function. The options such as carrier, CTCSS, forward CDCSS, and reverse CDCSS have similar functions, but the encoding and decoding methods are different.

Edit Channel

Tap on an existing channel to use, edit or delete the channel.

ⓘ The USB function of the phone will be disabled when using intercom.

ⓘ If the phone is under charging, the charging speed will be slower when using intercom.

Message

ⓘ The message function in Intercom APP is only applicable to digital channels.

Create message

Switch to digital channel, select the contact or group you want to send the message to in the contact list, long press the contact and select "Use", then go to Message, click ＋ on the upper right corner, enter the message in the edit box at the bottom of the screen , and then tap the Send button.

Reply message

If there is a right-pointing arrow on the right of the message records, that means you can directly talk with the one you are messaging.

To switch the conversation with another contact, you need to go to the contact list to enable the contact.

Delete message

Delete a message: Press and hold the message you want to delete, and then select Delete.

Clear the message list: Tap the message of the contact you want to delete, long-press a message, and then select Empty.

Use Intercom function with 3.5mm headsets:

The intercom function of Atom XL can support earphone monitoring and external microphone, but does not support external PTT button. Since the headset plug of the mobile phone uses the 3.5mm CTIA standard, the compatible buttons above cannot be compatible with the PTT buttons. That is, the CTIA standard headset cannot realize the external PTT button. If you need to use the external transmission voice in the headset mode, you need to use the transmission button on the intercom application interface or the red PTT button of the device to realize the function.

Use intercom function with Bluetooth headset:

The intercom function of Atom XL can support Bluetooth headsets. Currently due to tight development time, only the same function as the 3.5mm headset is realized currently. We will try to realize the function of the PTT button on the Bluetooth headset in the near future to make it more convenient to use.

Use intercom function with Bluetooth handheld microphone:

Due to the wide variety of dedicated Bluetooth handset brands on the market and the inconsistent specifications, we will gradually improve the compatibility in the future based on market feedback.

ⓘ The intercom function is only available in Atom_XL, Atom_L does not support this feature.