



Newland

SCANNING MADE SIMPLE



MT655X-XW

SDK handbook

Revision History

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About This Manual

This manual is applicable to NLS-MT6550-XW portable data collectors (hereinafter referred to as “**the MT65**” or “**the terminal**”).

Development Environment

All APIs are built based on standard Android broadcast mechanism, so there is no need for additional SDKs. The MT65 application development environment is the same as Android application development environment.

Obtain Product Model Number

To get the product model number, use `android.os.Build.MODEL`, for example, MT65.

Barcode Scanner

Scan Barcode

To activate the MT65 to scan barcode, application should send the following broadcast to the system.

- Broadcast: `nlscan.action.SCANNER_TRIG`
To trigger the scan engine.
- Extra scan timeout parameter: `SCAN_TIMEOUT` (value: int, 1-9; default value: 6; unit: second)
To set scan timeout, i.e. the maximum time a scan attempt can last.
- Extra scan type parameter: `SCAN_TYPE` (value: 1 or 2; default value: 1)
To set scan type: Value = 1, read one barcode during a scan attempt
Value = 2, read two barcodes during a scan attempt (This feature is **NOT** available)

Example 1:

```
Intent intent = new Intent ("nlscan.action.SCANNER_TRIG");  
mContext.sendBroadcast(intent);
```

Example 2:

```
Intent intent = new Intent ("nlscan.action.SCANNER_TRIG");
intent.putExtra("SCAN_TIMEOUT", 4);// SCAN_TIMEOUT value: int, 1-9; unit: second
intent.putExtra("SCAN_TYPE ", 2);// SCAN_TYPE: read two barcodes during a scan attempt
mContext.sendBroadcast(intent);
```

Note: When a scan and decode session is in progress, sending the broadcast above will stop the ongoing session. When scanning barcode by pressing the Scan key, it is processed at the bottom layer, thus application does not need to listen for Scan KeyPress event or send the broadcast.

Get Barcode Data

There are three ways to get barcode data:

1. Fill in EditText directly: Output scanned data at the current cursor position in EditText.
2. Simulate keystroke: Output scanned data to keyboard buffer to simulate keyboard input and get the data at the current cursor position in TextBox.
3. Output via API: Application acquires scanned data by registering a broadcast receiver and listening for specific broadcast intents.
 - Broadcast: nlscan.action.SCANNER_RESULT
To get barcode data.
 - Extra scan result 1 parameter: SCAN_BARCODE1
To get the data of the first barcode.
Type: String
 - Extra scan result 2 parameter: SCAN_BARCODE2
To get the data of the second barcode. (valid only when scan type is read two barcodes during a scan attempt)
Type: String
 - Extra scan state parameter: SCAN_STATE (value: fail or ok)
To get the status of scan operation: Value = fail, operation failed
Value = ok, operation succeeded
Type: String

Example:

Register broadcast receiver:

```
mFilter= newIntentFilter("nlscan.action.SCANNER_RESULT");
mContext.registerReceiver(mReceiver, mFilter);
```

Unregister broadcast receiver:

```
mContext.unregisterReceiver(mReceiver);
```

Get barcode data:

```
mReceiver= newBroadcastReceiver() {
    @Override
    publicvoidonReceive(Context context, Intent intent) {
        finalString scanResult_1=intent.getStringExtra("SCAN_BARCODE1");
        finalString scanResult_2=intent.getStringExtra("SCAN_BARCODE2");
        finalString scanStatus=intent.getStringExtra("EXTRA_SCAN_STATE");
        if("ok".equals(scanStatus)){
            //Success
        }else{
            //Failure, e.g. operation timed out
        }
    }
};
```

Change the Scanner Settings

Application can set one or more scanner parameters, such as enable/disable scanner, by sending to the system the broadcast ACTION_BAR_SCANCFG which can contain up to 3 parameters.

Parameter	Type	Description (* indicates default)
EXTRA_SCAN_POWER	INT	Value = 0 Disable scanner = 1 Enable scanner* Note: When scanner is enabled, it will take some time to initialize during which all scan requests will be ignored.
EXTRA_TRIG_MODE	INT	Value = 0 Level mode = 1 Continuous mode = 2 Pulse mode*
EXTRA_SCAN_MODE	INT	Value = 1 Fill in EditText directly* = 2 Simulate keystroke = 3 Output via API
EXTRA_SCAN_AUTOENT	INT	Value = 0 Do not add a line feed* = 1 Add a line feed
EXTRA_SCAN_NOTY_SND	INT	Value = 0 Sound notification off = 1 Sound notification on*
EXTRA_SCAN_NOTY_VIB	INT	Value = 0 Vibration notification off* = 1 Vibration notification on
EXTRA_SCAN_NOTY_LED	INT	Value = 0 LED notification off = 1 LED notification on*

Example 1: Disable scanner

```
Intent intent = new Intent ("ACTION_BAR_SCANCFG");
intent.putExtra("EXTRA_SCAN_POWER", 0);
mContext.sendBroadcast(intent);
```

Example 2: Output via API, add a line feed

```
Intent intent = new Intent ("ACTION_BAR_SCANCFG");
intent.putExtra("EXTRA_SCAN_MODE", 3);
intent.putExtra("EXTRA_SCAN_AUTOENT", 1);
mContext.sendBroadcast(intent);
```

Reserved Keys

The MT65 provides 4 reserved keys: F1, F2, F3 and F4. Application can define the functions of these 4 keys as per actual needs.

Example 1: Process the KeyDown event of reserved key

```
public boolean onKeyDown(intkeyCode, KeyEvent event) {
    switch (keyCode)
    {
        case KeyEvent.KEYCODE_F1:
            showInfo("F1 KeyDown\n");
            break;
        case KeyEvent.KEYCODE_F2:
            showInfo("F2 KeyDown\n");
            break;
        case KeyEvent.KEYCODE_VOLUME_DOWN:
            showInfo("F3 KeyDown\n");
            break;
        case KeyEvent.KEYCODE_VOLUME_UP:
            showInfo("F4 KeyDown\n");
            break;
    }
}
```

Example 2: Process the KeyUp event of reserved key

```
public boolean onKeyUp(intkeyCode, KeyEvent event) {
    switch (keyCode)
    {
        case KeyEvent.KEYCODE_F1:
```

```

showInfo("F1 KeyUp\n");
break;
case KeyEvent.KEYCODE_F2:
showInfo("F2 KeyUp\n");
break;
case KeyEvent.KEYCODE_VOLUME_DOWN:
showInfo("F3 KeyUp\n");
break;
case KeyEvent.KEYCODE_VOLUME_UP:
showInfo("F4 KeyUp\n");
break;
    }
return super.onKeyDown(keyCode, event);
}

```

Other APIs

Expand the Status Bar

To set the status bar to be expandable/not expandable, application should send to the system the broadcast `nlscan.action.STATUSBAR_SWITCH_STATE` with the value of Extra parameter `ENABLE` set to be true/false.

Example: Set the status bar to be not expandable

```

Intent intent = new Intent("nlscan.action.STATUSBAR_SWITCH_STATE");
intent.putExtra("ENABLE", false);
context.sendBroadcast(intent);

```

Press the Home Key to Switch to Desktop

To enable/disable the feature of switching to desktop by pressing the Home key, application should send to the system the broadcast `nlscan.action.HOMEKEY_SWITCH_STATE` with the value of Extra parameter `ENABLE` set to be true/false.

Example: Disable the feature of switching to desktop by pressing the Home key

```

Intent intent = new Intent("nlscan.action.HOMEKEY_SWITCH_STATE");
intent.putExtra("ENABLE", false);
context.sendBroadcast(intent);

```

Set the System Time

To set the system time, application should send to the system the broadcast `nlscan.action.SET_TIME` with the value of Extra parameter `TIME_MS` set to be a string represented as the number of millisecond.

Example:

```
public long getTimeMillis(){
    Calendar c = Calendar.getInstance();
    c.set(2016, 0, 1, 0,0,0);
    return c.getTimeInMillis();
}
Intent it = new Intent("nlscan.action.SET_TIME");
long mills = getTimeMillis();
it.putExtra("TIME_MS", String.valueOf(mills));
mContext.sendBroadcast(it);
```




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