

## Intent based communication on Android (v2.1.x)

### Overview

Beside the cmbSDK it is possible to communicate with MX-1000 and MX-1502 via Intents on Android devices. This page summarizes the different type of intents that can be used for interaction.

As MX Connect provides the connectivity between your Android device and MX mobile terminal, it is necessary that you install the latest MX Connect app on you device.

Introduction to Android intents and their usage is out of scope for this document.

### Request Intents

The following **broadcast** intents can be used in apps to trigger some operation on mobile terminals via MXConnect.

ACTION STRING	PARAMETER (NAME: TYPE)	DESCRIPTION
"com.cognex.mxconnect.action.START_SCANNING"		Starts scanning on mobile terminal.
"com.cognex.mxconnect.action.STOP_SCANNING"		Stops scanning on mobile terminal.
"com.cognex.mxconnect.query.DEVICE_TYPE"		Queries the device type of mobile terminal. Returns "com.cognex.mxconnect.status.READER_NOT_AVAILABLE" if MX mobile terminal is not attached to the phone or it is sleeping.
"com.cognex.mxconnect.query.BATTERY_CHARGE"		Queries the battery charge of mobile terminal.

The following **activity** intents can be used in apps to trigger some operation on mobile terminals via MXConnect.

Action String	Parameter (name: type)	Description
"com.cognex.mxconnect.action.FIRMWARE_UPGRADE"	uriString: String	Device's firmware is going to be upgraded with the file that was passed as parameter in uriString. uriString: http/https:// or file:// address
	verbose: int	Verbose parameter determines whether notifications should be shown during the process. <ul style="list-style-type: none"> <li>1 - information in the status bar</li> <li>0 - no information</li> </ul>
"com.cognex.mxconnect.action.CONFIG_UPLOAD"	uriString: String	Device's configuration is going to be changed according to the file that was passed as parameter in uriString. uriString: http/https:// or file:// address
	verbose: int	Verbose parameter determines whether notifications should be shown during the process.

- 1 - information in the status bar
- 0 - no information

## Response Intents

MX Connect is sending the following intents as response for some action (e.g. information was requested, availability of the device has been changed, etc.)

ACTION STRING	PARAMETER (NAME: TYPE)	DESCRIPTION
"com.cognex.mxconnect.status.READER_NOT_AVAILABLE"		Indicates that the reader device is not attached or disconnected.
"com.cognex.mxconnect.status.READER_AVAILABLE"		Indicates that the reader is connected and ready.
"com.cognex.mxconnect.status.READER_LOCKED"		Indicates that the reader device is exclusively used by an app. (e.g. QSA)
"com.cognex.mxconnect.action.MX_ATTACHED"		Indicates that an MX reader was attached.
"com.cognex.mxconnect.action.MX_DETACHED"		Indicates that an MX reader was detached.
"com.cognex.mxconnect.response.DEVICE_TYPE"	value: String	Response to request for device type intent. Type string is in the 'value' extra field.
"com.cognex.mxconnect.response.BATTERY_CHARGE"	value: String	Response to request for battery status intent. Current charge in percents is in the 'value' extra field.
"com.cognex.mxconnect.status.DOWNLOAD_PROGRESS"	status:int	Provides regular information about download progress during firmware upgrade or config upload.
"com.cognex.mxconnect.response.DOWNLOAD_ERROR"	text: String	Provides information about the failure that occurred during downloading firmware/config file.
"com.cognex.mxconnect.response.FILE_ERROR"	text: String	Provides information about the failure that occurred during opening firmware/config file.
"com.cognex.mxconnect.status.FIRMWARE_UPGRADE_STARTED"		Indicates that MXConnect started the firmware upgrade operation on the device.
"com.cognex.mxconnect.status.FIRMWARE_UPGRADE_FAILED"	text: String	Provides information about the failure that occurred during firmware upgrade.
"com.cognex.mxconnect.status.CONFIG_UPLOAD_STARTED"		Indicates that MXConnect started the config upload operation on the device.
"com.cognex.mxconnect.status.CONFIG_UPLOAD_FAILED"	text: String	Provides information about the failure that occurred during config upload.

## Read Result Intent

Read result is sent with "`com.cognex.mxconnect.action.READ_RESULT_RECEIVED`" action string.

## Parameters (Intent extras)

- `goodread`: boolean  
Indicates whether result contains a successfully decoded barcode.
- `read_string`: String (*in case of good read*)  
Decoded read string. If multicode is set, then data formatting is applied for each code separately and the result is the concatenation of all codes.
- `sybology`: String (*in case of good read*)  
Decoded barcode's symbol type.
- `image`: byte[] (*in case of good read*)  
Captured camera image.  
Only quarter sized JPEG byte data sent due to OS Intent limitations - the app sets this when connected.
- `imagegraphics`: String (*in case of good read*)  
Contains SVG metadata.
- `xml`: String  
Result(s) in XML form.