Release Notes - SYMBOL TC70 GA2 15-04-00 WITH GMS

Introduction

Work more efficiently and better serve your customers by giving your employees enterprise-class handheld computers that survive life in the field or shop floor, communicate and access information in real time.
The TC70 is the professional-grade Android device built from the ground up for the enterprise.

- Zebra's Mobility Extensions (Mx)
- Mobility DNA,a suite of mobility enabling applications, development tools and utilities
- Most advanced scan engine with longer range date capture capability
- Rugged and ready for every day enterprise use inside and outside the four walls

Description

TC70 GA2 Maintenance Release 15-04 **WITH GMS**

Special Note:

- **Downgrading from GA2 GMS/non-GMS images to GA1 image, please use the following link.**

  https://portal.motorolasolutions.com/Support/US-EN/Resolution?solutionId=101493&productDetailGUID=15e649a272a19410VgnVCM10000001c7b00aRCRD&detailChannelGUID=2202caf8fb16e310VgnVCM1000000389bd0aRCRD

- **Fixed OS installation via internal SD card failure in T70N0KEAAPUEF01504.zip package posted on March 9, 2016.**

Component Description and version

Component / Description	Version
Product Build Number	**TC70GA2-X1-23257-K-G-15-04-00-MV**
Android Version	4.4.3
Linux Kernel	3.4.0
x-loader	
u-boot	
Android SDK Level	19
Platform (TI/MPA/ etc)	QC 8960 Pro
Bluetooth Stack	NA
Partition Table	NA
Flash Size	8GB
RAM Size	1GB
MSP Package	7.08.85
Scanning	5.39.0
SimulScan	2.5 SimulScanEngine 1.11.0
Datawedge	3.1.24
EMDK	Service 3.1.38
Mx / OSX	MXMF: 4.4.3.8 / OSX_QCK_4.4-3
WiFi	Fusion_QA_1.02.0.0.027
PTT	3.1.20
Touch FW	Stylus-80_GLOVE-105, FW:1.2.AA
RxLog	3.0.0.51
Mlog	v06.52 / Service v06.52
B2M	1.0.0.260
Bluetooth Pairing Utility	3.3
DataAnalytics	1.01.2107
File Browser	Ver 1.13
Stage Now	2.1.1.1425
App Gallery	2.1.2
Battery Swap	N/A
Tech Docs	0.6.1 // Revision Ver 1.1 08/2015
WWAN	NA
RIL	NA
TS.25	NA

WLAN	WLAN-1240294.1
GPS	NA
NFC	NFC_NCIHAL_AR2.4.0_KitKat, FW:122
Sensors (Accel, Gyro, Light, Prox)	1.00
Camera	Front1-0.0, Rear1-0.0
MSR	0.94
MobiControl	12.2.0. Build 23469

Features Added/Supported

- **Included rebranding changes for Zebra/Symbol namespace**

- **Included changes for APA v1 feature content**

    - **Storage and non-storage path guidelines**

    - **Navigation Keys**

    - **DHCP Options**

    - **Key remapping guidelines**

    - **Battery Extras**

- **Included**

    - **StageNow client**

    - **B2M Elemez**

    - **Data Analytics**

    - **App Gallery**

    - **SOTI MobiControl Stage**

    - **Zebra Volume Control**

- **Improved Imager scan response**

Component Release Notes:

Wireless LAN:

Details	Description
Wireless LAN Radio	802.11a/b/g/n/d/h/i
Data Rates	5GHz: 802.11a/n — up to 150 Mbps 2.4GHz: 802.11b/g/n — up to 72.2 Mbps
Operating Channels	Chan 36 - 165 (5180 - 5825 MHz); Chan 1 - 13 (2412 - 2472 MHz); Actual operating channels/frequencies depend on regulatory rules and certification agency
Security and Encryption	WEP, WPA – TKIP, WPA2- TKIP, WPA2-TKIP AES EAP TTLS, PAP, MSCHAP, MSCHAP v2, PEAPv0-MSCHAPv2, PEAPv1- EAP-GTC, EAP-TLS, EAP-FAST, LEAP
Multimedia Wi-Fi Multimedia™	(WMM)
Certifications	WFA (802.11n,WMM), WMM-PS, CCXv4, Wifi Direct, WPS2.0
Fast Roam	PMKID caching, Cisco CCKM, OKC, 802.11r
Network Connections	Bluetooth; USB 2.0 OTG Host docking interface; 802.11r and 802.11k for enterprise voice roaming included

MX4.4 Feature List:

Feature	Brief Description
Clear Clipboard	Clearing the data copied into clipboard

Enable/Disable Clipboard	Enable/Disable the clipboard features to cut/copy/paste
Factory Reset	Wipe - Data+Enterprise+Cache
Enterprise Reset	Wipe - Data+Cache
Full Device Wipe	Wipe - Data+Enterprise+Cache+Internal SD+External SD
Enable/Disable Enterprise Reset in Settings App	API to Enable/Disable the Enterprise Reset UI in Settings Application
Display OSX Version	OSX version can be seen in Settings => About Phone => SW Components => OSX version
Enable Disable AppInfo Access	Enabling and disabling , App info from settings
Allow/Disallow App to submit XML	Add/delete/query packages which are allowed to SubmitXML to MxMgtFw
Enable Disable UMS/PTP/MTP	MassStorage,MediaTransfer and PTP modes can be Blocked and Unblocked
Enable Disable External USB Storage	Enable/Disable Mounting of External USB Pen-drive storage with device
Enable/Disable Browser	Enable/Disable Native Browser Address Bar
Enable/Disable access to Applications Section of Settings UI	Hide Apps section of Settings Application
Initiate NTP Sync	Enable/Disable/Initiate NTP
Ethernet Settings	Enable/Disable & TurnOn/TurnOff
Enable/Disable Use of Background Data	Enable/Disable Background data in SIM devices
Auto Correction	Enable/Disable the ability of auto correction of words in soft keyboard
Wifi	Enable/Disable Wifi
Wwan	Enable/Disable Wlan
Safe Mode	Enable/Disable Safe mode
Unknown sources	Enable/Disable Unknown soures UI
Enable/Disable Home Key	Enable/Disable Home Key
BT Pairing Pop up	Enable/Disable BT pairing pop up
Sdcard Usage	Enable/Disable Sdcard Usage
Enable/Disable Power button instantly lock	Enable/Disable Power button instantly lock UI
Turn On/Off Power button instantly lock	Turn On/Off Power button instantly lock
Enable Disable Airplane mode	Enable/Disable Airplane mode UI
Turn On/Off Airplane Mode	Turn On/Off Airplane Mode
Enable/Disable Power button menu items	Enable/Disable menu displayed when power button is long pressed
Hide/unhide Power button menu	Hide/Unhide menu displayed when power button is displayed

PTT Express 3.1.20

1. **Major Features**

    a. After changing the talk-group or changing the status, the PTT Express user interface would be on the fore-ground to facilitate confirmation of the changed talk group and to allow user to continue making PTT calls when CallKeyConfig is 0 (on-screen buttons).

    b. Recovery update procedure : Copy the Recovery update package for PTT Express installation/uninstallation for KK to the internal storage of respective device and perform the recovery update as per the procedures mentioned in the OS recovery update guidelines

    c. To change the settings of the PTT Express client, modify the ptt_settings.xml file located at /enterprise/device/settings/ptt.

    d. To enable Debug Logs, follow below steps:

        1. Pull ptt_settings.xml from /enterprise/device/settings/ptt/ folder.

        2. Edit< setting name="logLevel">Debug

        3. Check for /storage/sdcard0/PTT folder.

        4. Logs will be created with DEVICE_MODEL_MAC_ADDRES_PTT_log.txt

    e. The previous log file is saved as DEVICE_MODEL_MAC_ADDRES_PTT_log.txt.bck.

    f. The default log level is set to 'None' (to avoid issue 74744). Update value of 'log_level' in ptt_settings.xml to enable the logging.

    g. Log file should not be renamed or deleted while logging is active. Copy the log file to PC or other folder if snapshot log file has to be created.

    h. Use 'adb' to copy the logs to PC.

i. CDR log file will be created, if not exist, only when enableCDR is true and the first call happens on channel whose CDR is true or Private call.

j. PTT HEADSET Usage Notes:

k. Group call is initiated by pressing (and holding) headset button. Due to special PC implementation, there will be 600ms delay after user presses the headset button. User shall start speaking only after talk permit tone is played.

l. Private call is initiated by pressing headset button in following sequence: Down, Up and Down (and hold). These 3 clicks shall occur within 600ms. If there are more than 3 clicks within 600ms, then the clicks will be discarded and nothing will happen.

m. Enabling display of call statistics - The PTT Express client provides a toggling option on the settings page to enable/disable the display of toast messages showing call statistics.

n. Mute functionality - The PTT express client allows itself to be muted and un-muted using the mute button on the main dialog, or using the key configured in the ptt_settings.xml or using intents. When the client is muted, it is indicated on the UI and on the status bar. While in Mute state, the client's audio and tones are muted and PTT key events ignored. The Mute functionality is not persistent across the reboots or application restarts. However the Mute functionality is persistent across Enable and Disable of the service.

o. Audio feedback Functionality – The PTT Express client allows voice feedback on Channel and Profile Switch. The configuration "audioFeedback" should be set as Default to enable the Audio feedback. Based on the language value set in the profiles, the audio would be played, in that specific language. The value of the language is set as locale string defined in http://developer.android.com/reference/java/util/Locale.html. Only installed languages are supported and the language list would be listed in accessibility settings on the device.

p. PTT supports Airwatch and SOTI MDM for deploying configuration changes.

q. Full-duplex client co-existence - The PTT Express client supports a configurable option "fullDuplexClientCoexistance" to coexist with full duplex WAN or VOIP client. There is another configurable option "vibrateOnVoiceCall" which allows full duplex incoming calls to vibrate when PTT is in call. The following is applicable when "fullDuplexClientCoexistance" is set to true:

r. When there is an outbound call made or when an inbound call is accepted on the full duplex client, PTT Express enters into co-existence mode by muting itself and showing yellow icon on the status bar. It also stops playing out any tones or calls and ignores key requests for PTT calls.

s. When a full duplex call terminates, PTT Express exits the co-existence mode to resume normal operations.

t. Few full duplex clients allows PTT Express to exit coexistence mode when its call is put on hold and then enter back to coexistence mode when the call moves out of hold state.

2. SPR fixes
   1. SPR 28025 Disabling PTT express via SOTI.

3. Known issues
   a. The coexistence solution is dependent on the announcement of states done by the full duplex client. Few variations mentioned beneath have been observed in which case PTT Express client may not be able to enter or exit from coexistence mode.
   b. While coexisting with few versions of VOIP clients and the WAN client, PTT Express cannot come out of coexistence state when a call is put on hold.
   c. Specific version of Jabber client is not seen to announce MODE_RINGTONE due to which PTT Express cannot honor "vibrateOnVoiceCall" settings.
   d. Certain full-duplex clients are at times seen to fail in announcing their call states which can result in PTT Express not entering/exiting coexistence mode as expected. It can be recovered when a succeeding inbound/outbound established call is terminated. In some cases, a warmboot might be required
   e. After Reset (or) reboot key presses will not be detected for initial 30 secs.

DataWedge 3.1.20

Major Features

1. Added support for RS507 Bluetooth scanner.

2. Added Continuous scanning support.

3. Added Data Capture Panel as a virtual scan button on the screen.

4. Extend the scanner enumeration intent API.

5. Now an application can query the connected scanners as well as supported scanners.

6. Now DataWedge allows to configuration exporting only to DataWedge folder in the internal or external storage.

   a. (i.e /storage/sdcard0/Android/data/com.symbol.datawedge/files)

7. DWDemo now shows the scanner firmware version if the scanners supports the feature.

Issues Fixed

1. Fixed issues related DataWedge configuration auto importing.

2. SPR 23137 – Multiple decodes performed if soft and hardware trigger pressed with the DWDemo.

3. SPR 25359 - DataWedge crashes when string at criteria is set in the ADF configuration.

Scanner Framework 5.39.0

1. **Support for Continuous Read Aim Type**

2. **Scan Beep volume control with ZVC**

3. **Support to turn illumination on/off**

4. **Support for SHIFT_JIS, ISO-9001 character set**

5. **Fixes for SPR 26729 and SPR 26305**

SPRs Fixes:

- **SPR 28366 - Device is not able to connect to VPN.**

- **SPR 27491- Device was turning bluetooth of intermittently and reboot was required to re-enable it.**

- **SPR 28005 - When MX multiuser 3.11 is ON, time does not get updated.**

- **SPR 27905 - Setting for bypassing proxy inside Ethernet Settings causes a crash of settings application.**

- **SPR 27491 - Bluetooth Library causing intermittent crashes of the Bluetooth stack.**

- **SPR 27520 - Unable to scan GS1 barcodes even when it is enabled (in ADF criteria in Datawedge)**

- **SPR 27465 - Issue in DataWedge where we are able to successfully scan the code 128, even if it is disabled in the settings.**

- **SPR 27548 - After Enterprise Reset, the Device Installs Only the first alpha-numeric APK present in /enterprise/usr/persist folder and skips the rest of the apks.**

- **SPR 26972 - Squeal is heard from the mic after a voice call is finished.**

- **SPR 26773 - Memory usage of DataWedge is growing based on log analysis. The opening and closing the scanner was not handled properly because of thread leaks and memory leaks in built-in DataWedge application.**

- **SPR 26522 - OpenSL ES presents lower than Java clients.**

- **SPR 26919 - Video Capture Duration does not take effect.**

- **Vulnerabilities in libstagefright Could Allow Remote Code Execution   CVE-2015-3873, CVE-2015-3872,CVE-2015-3871, CVE-2015-3868,CVE-2015-3867, CVE-2015-3869,CVE-2015-3870, CVE-2015-3823,CVE-2015-6598, VE-2015-6599,CVE-2015-6600, CVE-2015-3870,CVE-2015-6601, CVE-2015-3876,CVE-2015-6604**

- **Vulnerabilities in Sonivox Could Allow Remote Code Execution CVE-2015-3874**

- **Vulnerabilities in libutils Could Allow Remote Code Execution CVE-2015-3875, CVE-2015-6602**

- **Remote Code Execution Vulnerabilities in Mediaserver CVE-2015-6608**

- **Remote Code Execution Vulnerability in libutils CVE-2015-6609**

Exclusions:

- **USB Mass Storage support deprecated in KK**

- **Card Swipe demo application not included OOB**

Contents:

File	Description	Details
T70N0KEAAPUEF01504.zip	SFW: FullPkgUpd,AND,KK,v15-04,RELEASE	Full Software Update
T70N0KEXARExx01504.zip	SFW: EntResetPkgUpd,AND,KK, RELEASE	Wipes all partitions/data except Storage (/sdcard)
T70N0KFXARFxx01504.zip	SFW: FacResetPkgUpd,AND,KK, RELEASE	Wipes all partitions/folders inclu Storage (/sdcard)
T70N0KEXAAUEF01504.apf	SFW: Airbeam FullPkgUpd,AND,KK,v15-04,RELEASE	used by MSP/AW
T70N0KEXAAExx01504.apf	SFW: Airbeam EntResetPkgUpd,AND,KK, RELEASE	used by MSP/AW
T70N0KFXAAFxx01504.apf	SFW: Airbeam FactoryResetPkgUpd,AND,KK,	used by MSP/AW
TC70HWBEEP013V1504.zip	SFW: HWBEEP AND, KK, RELEASE,SVC	Firmware update for Beep Micro

Device Compatibility

This software release has been approved for use with the following Symbol devices.

Device	Operating System
TC700H-GC11ES-NA	Android 4.4.3
TC700H-GC11ES-IN	Android 4.4.3

Installation Requirements

       This Software has to be used with compatible devices listed above

Installation Instructions

1. Plug the TC70 to the USB Cable and then the Cable to the PC. If you have a Cradle with USB connectivity, connect it.

2. You will be connected as a media device.

3. *Download following packages*

     a. **T70N0KEAAPUEF01504.zip (the Full Package Update v15-04),**

     b. **T70N0KFXARFxx01504.zip (Factory Reset Package v15-04),**

     c. **T70N0KEXARExx01504.zip (Enterprise Reset Package v15-04).**

     d. **TC70HWBEEP013V1504.zip (for audio and trigger handle changes)**

4. Now, copy the .zip files (and the Optional files too) to your TC70's storage.

5. You will need to put your device into Recovery Mode.

    a. Hold the "Power Key" until "Reset" option appears and then release

    b. Tap "Reset" and then immediately hold the "Scan Key" until recovery mode is initiated (*Let go after you feel the vibration* ☺)

    c. Once on the Recovery Screen, scroll down using "Volume Keys" +/- to the location where you copied the files and press the "Scan Key"

    d. Scroll down using "Volume Keys" +/- and select T70N0KEAAPUEF01504.zip (the Full Package Update v1504), with the "Scan Key"

    e. Upon completion, you will be back at the Recovery Mode screen.

    f. Note: Since Partition has changed, system by default will not backup user data partition. To end user this is similar to Enterprise Reset.

    g. Next step only if you are switching between GMS and NON-GMS software, otherwise this step is not required.

       • If you are updating device from GMS to NON-GMS or Vice Versa, it is required to either use T70N0KFXARFxx01504.zip (FactoryReset, this will give complete OOB experience) or at Minimum, please do a T70N0KEXXRExx01504.zip (EnterpriseReset).

    h. If you are going to install the optional packages (see 3e above), then do so now with the same procedure used above…

    i. Upon completion of all of the updates, you will be back at the Recovery Mode screen. Select, "reboot system now" with the "Scan Key", you will see it reboot, then you will see "Android is upgrading…" and then you will see the main screen, then...

6. Go to "Settings" and scroll down to "About phone" and look at the "Build number". It should end with "15-04-00-MV". Now… you can either start using the TC70 or if you are not going to install a working SIM (or at least not right away), please manually set the date and time. Go to "Settings" and scroll down to "Date & time" and set the correct date and time by unchecking "Automatic date & time" and "Automatic time zone" and then select "Select time zone" and do that. Then, select "Set date" and do that. Finally, select "Set time" and do that. Lastly, put check marks back in "Automatic date & time" and "Automatic time zone".

7. Please update latest Firmware for Scan Engine

8. Now you are all set to use your updated TC70 WITH GMS.

Part Number and Release Date

Part Numbers
T70N0KEAAPUEF01504
T70N0KEXARExx01504
T70N0KFXARFxx01504
T70N0KEXAAUEF01504
T70N0KEXAAExx01504
T70N0KFXAAFxx01504
TC70HWBEEP013V1504

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