



M2MD Communications Gateway Demo Guide

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1. Introduction

1.1. Overview

This document provides the necessary information for setting up and conducting demonstrations of the M2MD Communications Gateway. This demo provides the user with visual feedback and supporting data to assist with evaluating the benefits of the M2MD Gateway. Together with the supporting iOS app and the MangOH IoT DEMO board, the user can execute several remote commands and evaluate the response speed and security.

1.2. Communications Gateway Key Features:

- **DEMO Communications Security:**
 - Leverages latest security standards of TLS 1.2.
 - Reduces memory and processor requirements - ideal for telematics control units.
 - Saves processing time resulting in better customer experience.
 - Low overhead security – 23 to 1 server efficiency advantage
 - Highest level of security as recently reported by NSA and NIST
- **Quick Connect:**
 - Instantly triggers a network initiated data session – < 3 seconds vs. >30 seconds
 - Provides a better user experience by providing instant feature access.
 - Digital connection handshake uses less data – 20 to 1 savings
 - Lowers costs by eliminating SMS “shoulder tap” and continuous data pinging.
 - Saves the vehicle battery by allowing DEMO to remain in low power state - yet reachable.

1.3. Demo Scope

- Security – Over the air credential update
- Quick Connect – Speed of remote feature activation

1.4. Document Contents

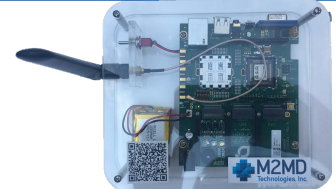
This document contains the procedures required to setup the DEMO, download the iOS application, and execute the demo. Specifically, this document is divided into the following sections:

- DEMO Set-Up
- iOS Application
- Conducting the Demo
- Analysis
- Troubleshooting

2. Quick Start Guide

M2MD Communications Gateway Quick Start Guide

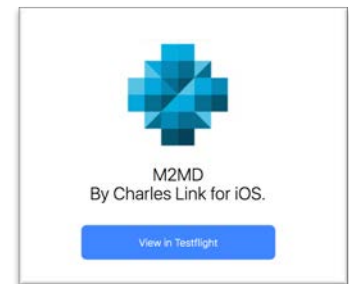
- 1 **Set-up the demo by turning the power to the ON position on the MangOH Green demo board. There is one switch located on the same side of the board as the antenna. Switch up to turn on the power. A green small LED on the board will illuminate.**



- 2 **Download the Testflight app on an iPhone 6 or later running iOS 9.1 or later.**



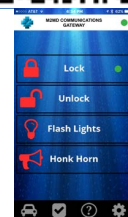
- 3 **Request a link to the iPhone Demo app by sending an email to support@m2mdtech.com. Install the app and launch.**



- 4 **Activate the demo account through the iPhone app by completing the login screen and scanning the custom QR code. (See Appendix for full size QR code that can be printed.)**



- 5 **Upon completing the iPhone activation, press the vehicle icon (bottom left button) and begin using remote features. Watch the execution Speed through the GREEN indicators.**



- 6 **Upon execution of the features on the iPhone mobile app, corresponding lights will illuminate on the MangOH Green board or a horn will sound.**



3. Set-Up

3.1. Demo Kit Contents

Included in the Demo Kit are the following:



Exhibit 1 Demo Kit Contents

Demo Kit Contents:

- ❶ MangOH Green Demo Board
- ❷ Backup Power Supply
- ❸ iOS Mobile App
- ❹ Antenna

3.2. Demo Set-Up

Follow the steps below to setup and power the demo:

- Set-up the demo equipment in an area that has good cellular strength. Make sure the antenna is firmly attached and the battery is connected or the power supply is plugged in.

3.3. iOS Mobile App Set-Up

Follow the steps below to download and install the mobile app on an iPhone model 4 or later and uses iOS version 9.1 or later.

- Locate an iPhone with iOS 9.1 or later. The application will run on earlier models and an iPad however the graphics were designed for iPhone 6 and later. Please note, this application is for demo purposes only. Final distributed applications will be developed and managed by the automaker.
- Make sure the iPhone includes a valid app store account and can download apps from the Apple App store.
- The iPhone should also be capable of sending and receiving emails.
- On the phone, go to the App Store and download Testflight, an application that manages the downloading of applications still in Beta. See Exhibit 2 for the correct Testflight application.



Exhibit 2 – Testflight App

- The M2MD Demo app is not available on the app store. It can only be added to the iPhone through a private link. To receive an invitation to download the app, do the following:
 - Send an email to support@m2mdtech.com and request a link to download the demo app. In the email, include the following:
 - Your Name
 - Company
 - Email (Account must be accessible from your demo iPhone)
 - Within 24 hours, an email will be sent with an invitation to download the app.
 - The email will look like the picture shown in Exhibit 3.
 - Please note that this link will only work once.



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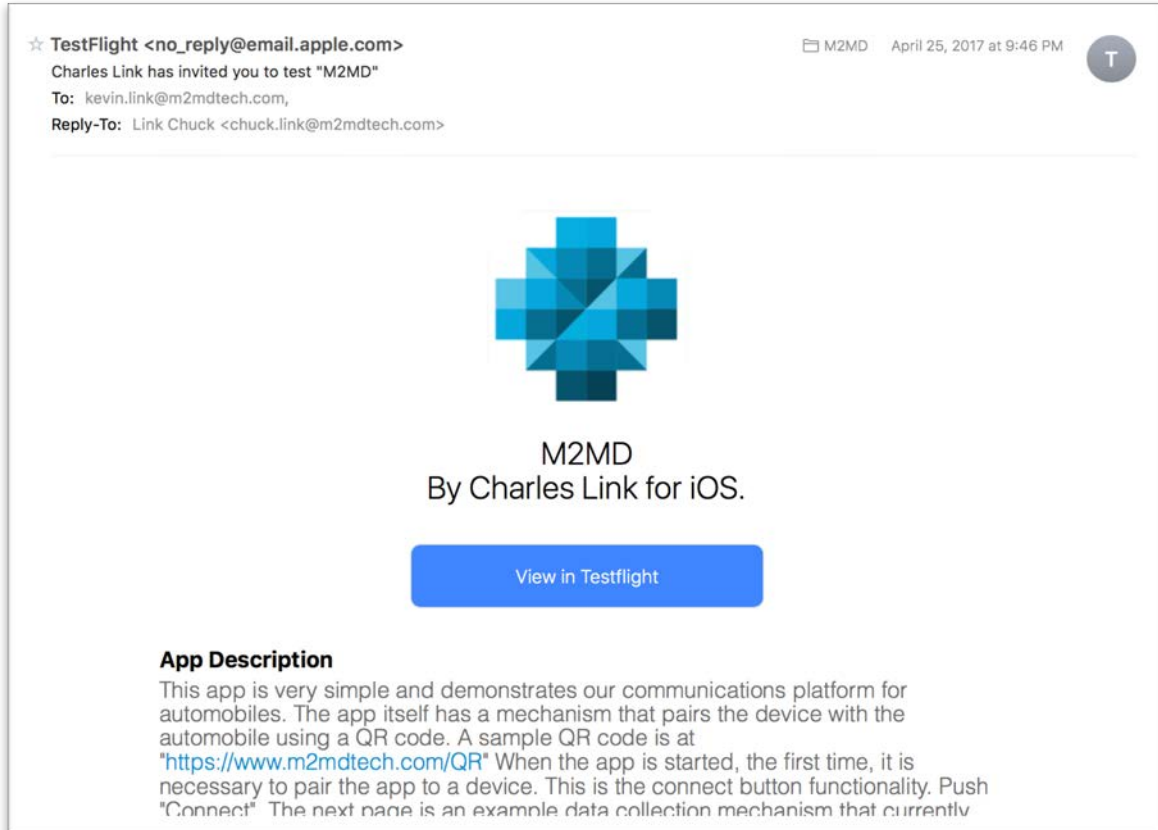


Exhibit 3 Invitation to Download Demo APP

- Retrieve the email from the selected demo iPhone where the app is to be installed.
- Click on the blue link “View in Testflight” and download the app. Click the “Install” button to continue the installation of the demo as shown in the screen in Exhibit 4.



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Exhibit 4 Demo App Installation

- Once complete the application should be loaded on your phone. See Section 4 – Conducting the Demo to begin using the app.
- The Demo can be launched from either the Testflight app or from a separately placed icon on one of the iPhone screens.

4. Conducting the Demo

4.1. Power on the Demo Unit


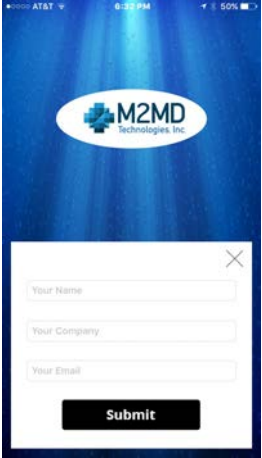

After completing the demo set-up procedures defined in Section 3.2 Demo Set-Up, turn on the power switch or plug in and connect the alternative power supply. After initial powering, the horn will sound while the unit boots and locate a local mobile network operator. Please wait till the unit is attached to the network prior to beginning the demo. If the horn cycles more than once, press the white “reset” button to reset the board boot process until the unit locates a network. The horn provides audible feedback to indicate when it has booted and located a mobile network.

4.2. Load the iOS Mobile App

After completing the iPhone set-up procedures defined in Section 3.3 iOS Mobile App Set-Up, turn on the iPhone and launch the demo app. Follow the procedures below to launch the app, activate the demo, and begin using the application.

Note: Detailed documentation on the mobile app, wireframes, error messages, etc. are available upon request. Contact info@m2mdtech.com and request the Communications Gateway Mobile App Wireframes.

iOS Demo App		
Step	Description	Display
1	Launch App	

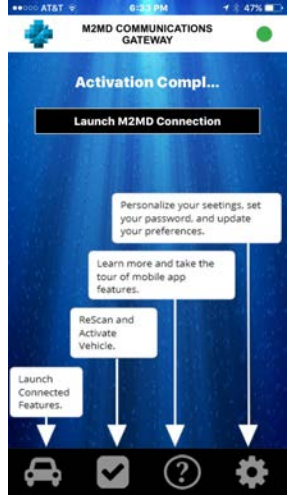

<p>2</p>	<p>App Home Screen</p> <ul style="list-style-type: none"> Press the square button to begin activation. 	
<p>3</p>	<p>Activate Screen</p> <ul style="list-style-type: none"> Complete the required fields and select "Submit". All fields are required. 	
<p>4</p>	<p>QR Code Camera Access</p> <ul style="list-style-type: none"> The app will request access to your iPhone camera in order to take a picture of the activation QR code. Selecting "OK" activates the embedded iPhone camera. 	

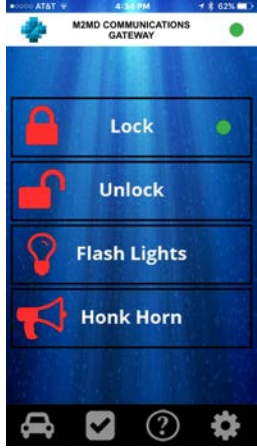




5

QR Code Activation

- The QR code is part of the M2MD Enrollment Solution and is being used as part of both the Communications Gateway and M2MD Enrollment Gateway demo.
- (The M2MD Enrollment Gateway uses a proprietary technique with existing vehicle electronics to positively identify a vehicle owner for telematics services enrollment.)
- The QR code can be dynamically rendered on the vehicle head unit and capture important vehicle information or attached to the vehicle. (See M2MD's Enrollment Gateway for more information: <http://m2mdtech.com/enrollment>)
- The QR code to the right has been customized to include relevant information for a PSA vehicle. By using the Demo app, the following information is captured through this code:
 - VIN: VF3LCBHZ3GS037156
 - IMSI: 310410199999999
 - DEMO ID: 9987654323
 - Date Unix Time: A5A5A5A5
 - Wireless Technology: 4G
 - Voice or No Voice: Y
 - Wi-Fi: Y
 - Wireless Bands Mask: A5A5A5A5
 - POI: Y
 - MAP Version: 17
 - Onboard Map: 1
 - Remote Door Lock: DL
 - Remote Door Unlock: DU
 - Remote Start: ST
 - Remote Environment: ENV
 - Remote Reflash Capable: RF
 - Remote Horn: RH
- The information above is for demo purposes only. The actual data captured would be defined by the automaker and upon activation, passed to the relevant back-end platforms for activation.
- The appendix contains a larger version of the QR code that can be separately printed and distributed for demo purposes.



<p>6</p>	<p>Activation Complete</p> <ul style="list-style-type: none"> Successfully capturing the QR code and activating the vehicle will launch the “Activation Complete” screen providing an overview of the proposed key functionality. <ul style="list-style-type: none"> User can select “Launch Peugeot Connect” and go to “Remote Features” screen as shown in step 7. User can select Car icon at also launch “Remote Features” screen. User can select the checkmark icon and return to login screen to restart activation process beginning with the QR code. User can select Question mark icon and launch “Help” screen. User can select Settings icon and launch sample “Settings” page. Select the vehicle icon at the bottom left of the screen to begin using the remote features. This screen and related functionality is defined by the automaker and included within their own mobile app. This screen is for demo purposes only. 	
<p>7</p>	<p>Remote Features</p> <ul style="list-style-type: none"> This screen represents the core mobile app demo functionality. This mobile app demo shows the speed in which the M2MD Communications Gateway can connect and execute remote control features. The icon in the upper right corner of the screen displays the connection status. A GREEN circle indicates that the app is connected successfully to the M2MD Communications Gateway. A RED circle indicates that the app is not connected to the M2MD Communications Gateway. See Section 5 Troubleshooting for assistance with connectivity of the mobile app. This connection status only verifies that the QR code was successfully captured and the mobile app is connected to the M2MD Gateway. This indicator does not show the status of the DEMO. 	

<p>8</p>	<p>Remote Feature Execution</p> <ul style="list-style-type: none"> By selecting one of the four functions; Lock, Unlock, Flash Lights, Honk Horn, the mobile app sends a command to the Gateway to execute the function. A GREEN indicator will appear when the DEMO confirms the execution of the command. The GREEN indicator will automatically disappear after 10 seconds. The Lock and Unlock green dots will toggle when activated. Waiting 10 seconds will clear all activated functions and the associated GREEN indicators. 	
<p>9</p>	<p>Remote Feature Feedback – Lock and Unlock</p> <ul style="list-style-type: none"> By selecting Lock on the mobile app, the demo unit will light a RED LED on the demo unit. By selecting Unlock on the mobile app, the demo unit will turn off the RED LED on the demo unit. 	
<p>10</p>	<p>Remote Feature Feedback – Flash Lights</p> <ul style="list-style-type: none"> By selecting Flash Lights on the mobile app, the demo unit will flash the WHITE LED lights four times on the demo unit. 	
<p>11</p>	<p>Remote Feature Feedback – Honk Horn</p> <ul style="list-style-type: none"> By selecting Honk Horn on the mobile app, the demo unit will sound the horn four times on the demo unit. 	
<p>12</p>	<p>Other Mobile App Pages</p> <ul style="list-style-type: none"> The mobile app has several other pages that are included for illustration, including Activate, Help and Settings. Selecting the Activate button as represented by the checkmark at the bottom of the page, the Demo can begin from the beginning starting with the QR Code activation. 	



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4.3. Troubleshooting the Mobile App

Try these troubleshooting techniques if you are having difficulty getting the iOS mobile app to connect or operate successfully.

- Make sure you are using an iPhone with iOS version 9.1 or later.
- Make sure you have Testflight downloaded successfully. Look for an icon on your phone that matches the image in [Section 3.3 iOS Mobile App](#).
- Try turning the phone off and then restarting.
- Make sure you are connected either with Wi-Fi or good cellular signal.
- Verify that there is only one instance of the Demo app loaded. Two instances will cause a conflict.
- Remove the Demo app and reload.
- Try launching the Demo app from within the Testflight app.
- If the icon in the upper right corner does not change to GREEN to reflect a connection to the M2MD Communications Gateway, then check your internet access. The only known root cause would be connectivity.
- Contact support@m2mdtech.com if you continue to experience issues or need help resolving technical challenges.



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5. Appendix – QR Code



Communications Gateway



Valid QR Code



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6. Summary of Changes

Summary of Changes		
Date	Revision	Description of Changes
03/7/17	1.0	Initial Release
3/11/17	2.0	Mobile App Updates
3/27/17	2.1	Android App Updates
5/1/17	G3.0	Final Images and Procedures for MangOH Green