



PixController, Inc.

M2M Connect Cloud Upgrade Manual



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1. Overview

The PixController, Inc. M2M Connect Cloud is a complete IoT "Internet of Things" web-based cloud solution for all wireless PixController, Inc. wireless products. The cloud provides an easy to manage dashboard interface for all of your remotely deployed systems whether they are security cameras, environmental data loggers, or streaming video cameras. Manage all of your devices from your PC, Mac, Table, and Smart Phone devices with a browser app.

The M2M Connect Cloud dashboard displays all of your connected PixController devices on an easy to manage Google Maps display. Device status information including signal level, battery level, and alarm status are readily available from the dashboard interface. Quick links provide access to device data display and device management.

2. Download the Upgrade Kit

To download the free M2M Connect Upgrade Kit go to:

<http://www.pixcontroller.com/downloads/M2MCloudUpgradeKit.zip>

The upgrade kit contains the following files:

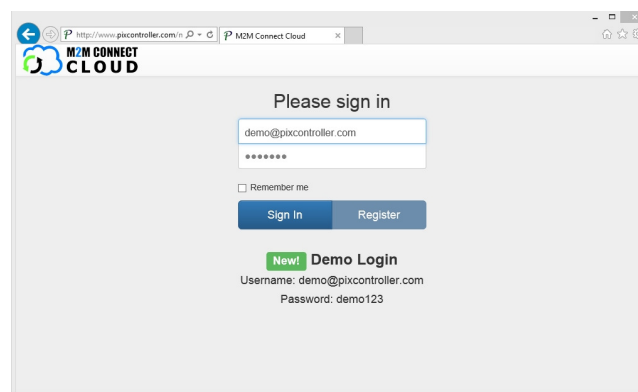
- Raptor.hex firmware
- DS30Loader PC firmware upgrade software
- PC Raptor Config configuration software
- M2M Connect Cloud Upgrade manual
- M2M Connect Cloud Start-Up manual

If you do not feel comfortable upgrading your PixController wireless device please contact sales@pixcontroller.com to send the system to PixController, Inc. for a service upgrade. The cost is \$50 USD plus shipping.

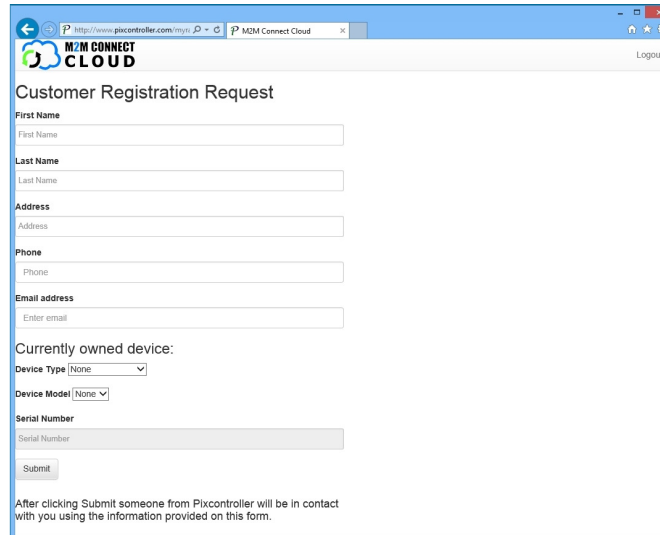
3. Register for a M2M Connect Cloud Account

Before upgrading your Raptor system firmware please register for a M2M Connect Cloud account. You will need your product serial numbers. Visit:

www.M2MConnectCloud.com

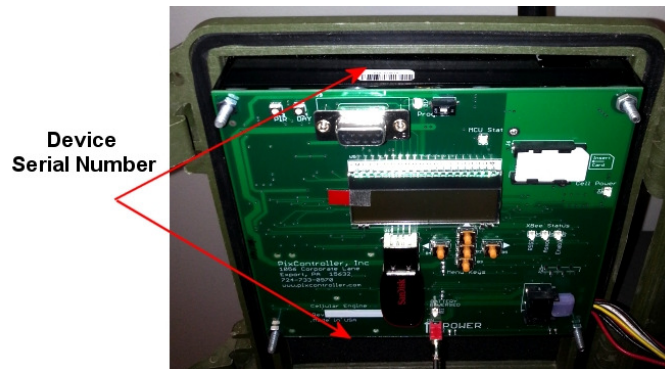


If you would like to register for a M2M Connect Cloud account simply click on the “Register” at the login page.

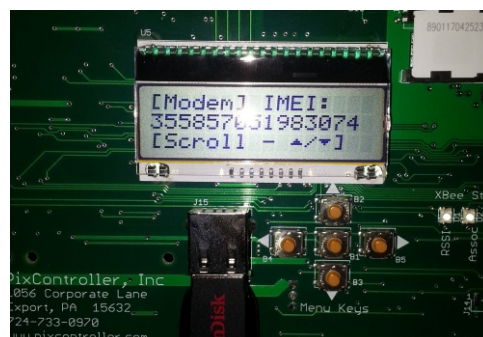


The screenshot shows a web browser window with the URL <http://www.pixcontroller.com/m2m>. The page title is "M2M CONNECT CLOUD" and there is a "Logout" link in the top right. The main heading is "Customer Registration Request". The form includes the following fields: "First Name", "Last Name", "Address", "Phone", "Email address", "Device Type" (a dropdown menu currently showing "None"), "Device Model" (a dropdown menu currently showing "None"), and "Serial Number". A "Submit" button is located at the bottom of the form. Below the form, a note states: "After clicking Submit someone from Pixcontroller will be in contact with you using the information provided on this form."

Enter your name, address, phone, email, and device & serial number information. To locate your serial number open your PixController wireless system and locate the serial number on the circuit board or case interior. The serial number will start with a “P”, example “P10-123456”.



If you cannot locate the PixController wireless system serial number simply send is the modem IMEI or MEID number. To retrieve the modem IMEI or MEID number put the system into diagnostic mode, go to the modem menu, and scroll down.



For help with using Diagnostic Mode see our video in our Tech Tips section:

<http://www.pixcontroller.com/techtips/TechTip-DignosticMode.htm>

4. Updating the Raptor Firmware

The M2M Connect Cloud requires all Raptor system to have Raptor firmware V4.11c or later.

Download the latest Raptor firmware version at <http://www.pixcontroller.com/downloads.htm>

To update the Firmware version on your Raptor Wireless System you will need to purchase a Serial to USB cable. We suggest the Gigware **Model:** 26-949 Serial to USB cable or similar. The Gigware cable can be purchased on-line or at your local RadioShack store.

To update the firmware on your Raptor Wireless Camera follow these steps.

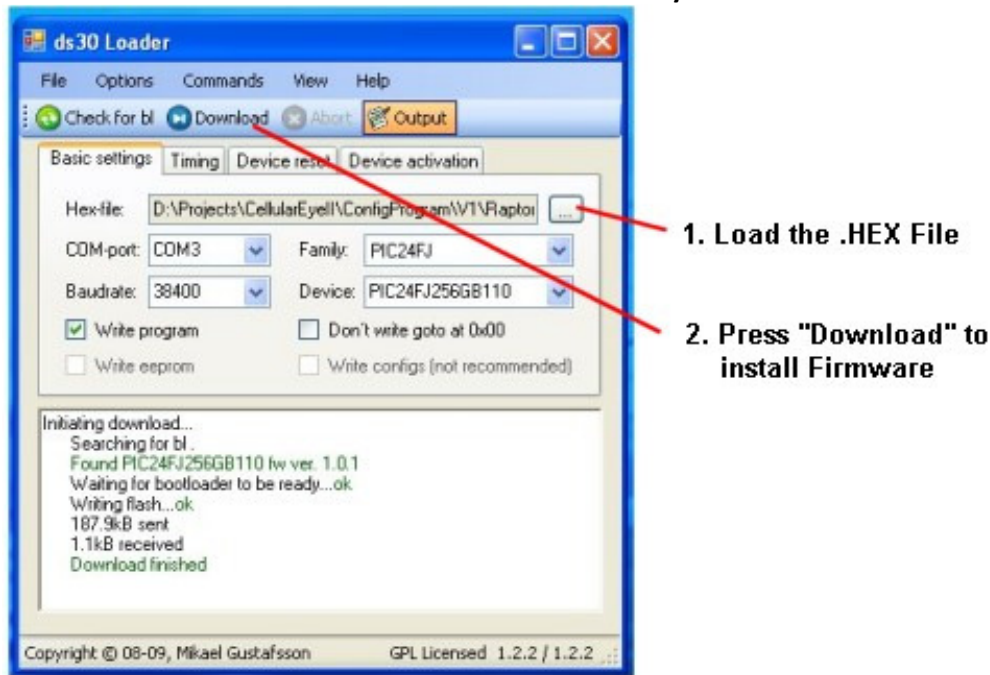
1. Install the ds30 Loader from the Raptor CD on your computer.
2. Connect the Serial to USB cable to your PC. Note, the DB9 Serial cable is connected to the Firmware update port on the Raptor system and USB cable to your computer as shown below.
3. Power up the Raptor system and pressing the “Up” and “Down” menu key buttons at the same time. You should see the following message on the Raptor LCD display:

PIX BOOTLOADER
Firmware update
mode

4. Run the ds30 Loader software and load the .HEX file as shown below. Press the “Download” button to install the Firmware on the Raptor system. The MCU Stat LED will start blinking when the download starts. Do not power down the Raptor system or unplug the cable until the firmware update is complete.



Connect the Serial to USB Cable to your PC



Run the ds30 Loader to install the Firmware update on your Raptor System

ds30 Loader Settings:

Be sure the follow setting are set correctly before uploading the Raptor Firmware update

Hex File: (folder the XXXXXX.HEX file is located, example C:\Raptor200c.hex)

COM port: Com port where the serial cable or serial to USB cable is installed on your computer

Baudrate: 38400

Family: PIC24FJ

Device: PIC24FJ256GB110

Check the "Write program" box

Once you have setup the ds30 Loader settings load the firmware update (.HEX) file by pressing the "..." button by the "Hex File" box. After the .HEX file is loaded press the "Download" button and this will start to program your Raptor system.

5. Installing the PC Raptor Config Software

The M2M Connect Cloud requires all Raptor system to use PC RaptorConfig V2.15V or later when configuring the Raptor USB Flash drive. Download the PC RaptoConfig software from

<http://www.pixcontroller.com/downloads.htm>. Note: The PC RaptorConfig software is only compatible with PC computers.

Once the PC RaptorConfig software has been downloaded extract the ZIP file and drag the RaptorConfig.exe and Graphicgrid.dll files to your PC Desktop. Turn the power off to your Raptor system, remove the USB Flash Drive and place it into an open USB bay on your PC. Next, run the file RaptorConfig.exe by double clicking on the file name.



Insert the USB Flash Drive into your PC during the Software Setup Phase

To run the Raptor PC Software you must install the RaptorConfig.exe and Graphicgrid.dll in the same folder or on your desktop. Place the USB Flash drive from the Raptor System into your PC and double click on the “RaptorConfig” icon.



When the PC RaptorConfig software starts up it will ask you to load the Config file from the USB Flash Drive. Select “Yes”.



After the PC RaptorConfig software loads the config file from the USB Flash Drive click on the “COTA” tab and select the “Use M2M Cloud” check box under the COTA – Configuration update Over The Air box. Next, add your Raptor serial number to the “Device Serial Number” text box. **Note, you must contact PixController, Inc. first to create your M2M Cloud account with your Raptor serial numbers.**

The screenshot displays the 'PixController Raptor Camera Configuration Setup V2.15' window. The 'COTA' tab is selected, showing the 'COTA - Configuration update Over The Air' section. Under 'COTA Update Cycle', the 'Use M2M Cloud' checkbox is checked, and the 'Ten Minutes' radio button is selected. The 'Device Serial Number' field contains 'P12345678'. The 'COTA SERVER SETUP' section includes fields for Address, Username, and Password, with a 'CONNECT' button. The 'COTA Commands For Currently Selected Device' section lists various commands with checkboxes. The 'Flash Drive' section has 'READ' and 'SAVE' buttons. The 'Other Drives' section has 'READ COPY' and 'SAVE COPY' buttons. An 'EXIT' button is located at the bottom right. A URL 'http://www.pixcontroller.com' is visible at the bottom left.

From the drop down “Select Device Type” menu select the type of Raptor system you have then click on the “SAVE” button under the Flash Drive box.

PixController Raptor Camera Configuration Setup V2.15

General | E-Mail | Camera | Schedule | SMTP/FTP/UDP | Cellular | WiFi | COTA

COTA - Configuration update Over The Air

COTA Update Cycle
☐ Disabled
☐ Daily
☐ Hourly

Use M2M Cloud ☒
☒ Ten Minutes
☐ Ten Minutes/SMS

COTA SERVER SETUP
 Address:
 Username:
 Password:
 CONNECT

Select Device Type: Remote Cam
 Device Serial Number: P12345678

Remote Cam
 Remote Trigger Cam
 UndercoverEye Cam
 Remote Stream
 Remote Stream Covert
 Remote Stream Alarm
 Remote Stream Trap
 RemoteMonitor
 RemoteMonitor CH4
 RemoteMonitor Weather
 RemoteMonitor Water

COTA Commands For Currently Selected Device
☐ Send Config Settings
☐ Retrieve Error Log
☐ Retrieve Latest GPS Fix
☐ Trigger Photo
☐ Retrieve Device Status
☐ Peripheral Reboot
☐ Peripheral On
☐ Peripheral Off
☐ Trigger Device

TRANSMIT COMMANDS TO DEVICE

VIEW:
 COTA Status GPS
 Error Log Device Status

About
<http://www.pixcontroller.com>

Flash Drive
 READ
 SAVE

Other Drives
 READ COPY
 SAVE COPY

EXIT

The final step in setting up your M2M Connect account is entering the proper APN for the cellular carrier. If you have a WiFi system you can skip this step. Select the "Cellular" tab and enter the APN under the "Address" text box.

PixController Raptor Camera Configuration Setup V2.15

General | E-Mail | Camera | Schedule | SMTP/FTP/UDP | Cellular | WiFi | COTA

APN SETUP (Cellular Internet Access Point)

Address: WAP.CINGULAR
 Username:
 Password:

About
<http://www.pixcontroller.com>

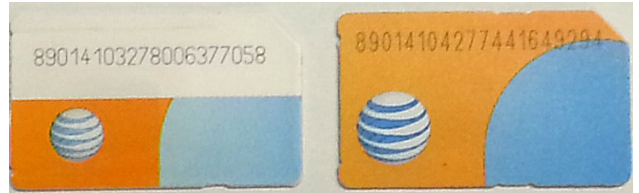
Flash Drive
 READ
 SAVE

Other Drives
 READ COPY
 SAVE COPY

EXIT

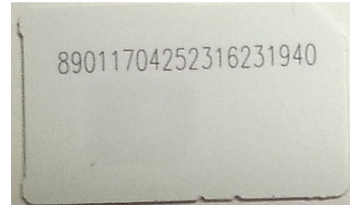
For PixController customers with the AT&T blue and orange SIM's use:

"WAP.CINGULAR" for the APN address



For customers with the White AT&T PixController managed cellular service use:

"orbcomm01.com.attz" for the APN address



For customers with the White T-Mobile PixController managed cellular service use:

"orbcomm.t-mobile.com" for the APN address

