



FSC FMC/MCDU Series

Installation / Configuration Manual

Rev. 2.2 - 10/2020

FULL COMPATIBILITY WITH



SKU	PRODUCT
208101	A320 MCDU Multi-Function Control Display Unit
384954	737NG FMC Flight Management Computer
208103	B747-400 FMC Flight Management Computer

ENGLISH

ME155912



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1. INTRODUCTION AND SPECIFICATIONS

Thanks for having chosen FSC FMC. The purpose of this guide is to illustrate how to connect and configure the FMC, including hardware and the most common FMC client software. To know how to actually operate an FMC throughout the flight, please refer to the documentation shipped with the client software you are using.

The main features of FSC FMC are the followings:

- LAN interface not requiring USB and VGA connections. Works with only a power supply and a LAN cable.
- Simple built-in LAN configuration screen
- Upgradable firmware via browser (Firefox or Internet Explorer)
- Color LCD/TFT monitor with adjustable brightness
- Hard touch keyboard with exact layout
- * Adjustable keyboard backlight
- * Brightness potentiometer
- * Built-in photocells allowing automatic brightness adjustment, depending on ambient light (photocells are located on the top of the FMC near the screws)
- Annunciator lights
- Supports multiple units in the same LAN
- Robust construction
- Can be incorporated into real size cockpits or used on a desk
- SDK provided to programmers wishing to add support for the unit into their software

* This feature requires a client software supporting it

The FSC FMC doesn't have any internal logic emulating a real FMC, but it's an hardware device providing keyboard input and monitor output to compatible client software. Therefore, it requires a FMC program like Project Magenta, Prosim or any other supported FMC software.



2. CONFIGURING THE FMC

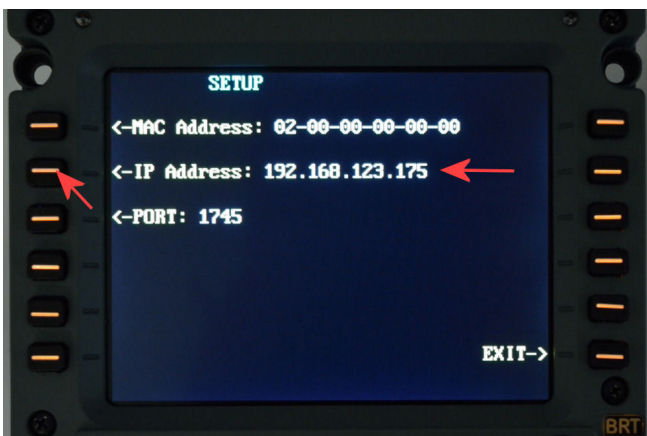
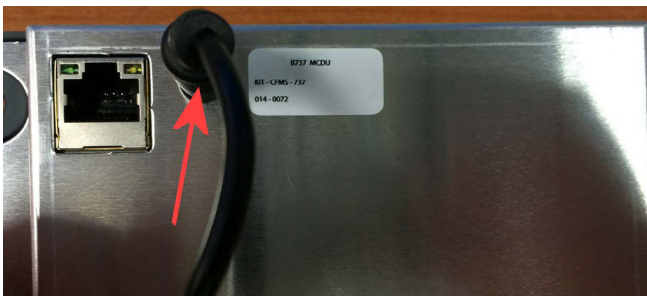
This equipment is interfaced via LAN only and therefore it doesn't require any USB or VGA connection.

Before having the FMC unit recognized by your LAN, you will need to set manually an IP address, accordingly to the base address of your network (the IP address assigned to the FMC must be unique and not used by any other computer or device of your network).

The FMC unit has 12 function Keys, 6 on each side on display. They're called "Left side Keys" (LSK) and "Right side keys" (RSK) numbered from 1 (upper) to 6 (lower).

So the first up on left side is called "LSK1", the second on left side "LSK2" and so on.

Connect the power supply cable to the rear of the MCDU, while pressing and hold pressed the MENU key (737NG CD), FIX key (747 CDU), F-PLN key (Airbus-MCDU).



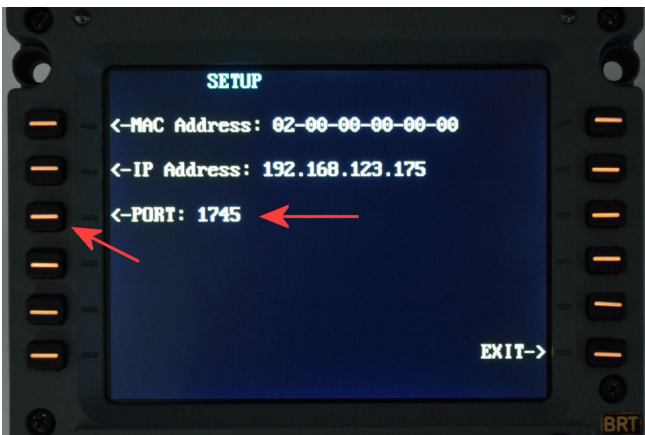
After a few seconds, the "SETUP" screen on the left will be displayed, if not, unplug the power cable and repeat.

Using the FMC keyboard, type a free IP address like for example, 192.168.0.175 or 10.0.0.10, then press LSK-2 as indicated in the picture.

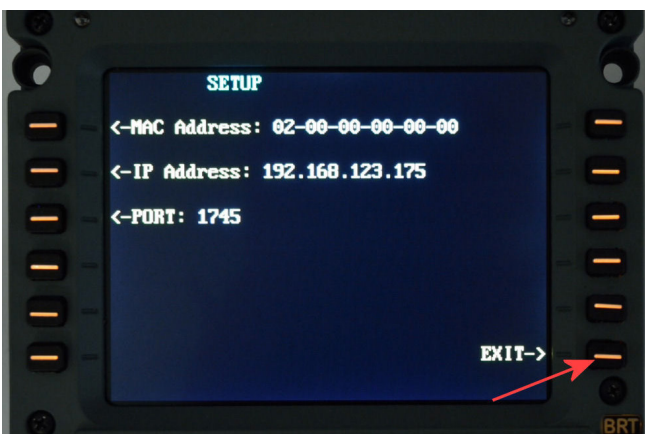
If you don't know a free IP address or you are unsure about the base address of your network, please check your switch/router/computer configuration or ask to a network administrator.



In the same way, using the FMC keyboard, change the MAC address, by adding a single number: 02-00-00-00-01 should be good, because in a networked multi CDU system the mac address of every CDU must be unique, confirm with LSK-1. Please note: the first number of Mac address must remain "02".



If required by avionics software, set also the communication port by typing it from keyboard and by pressing LSK-3 instead. 1745 is the Default used by Prosim and PMDG, but You can change it for specific purposes.



Press RSK-6 to select EXIT, thus confirming and saving the configuration.

If you operate multiple FMC units, repeat the above steps for the additional units, making sure to use an unique IP and MAC address for each unit.



3. CONFIGURING CLIENT SOFTWARE: PROJECT MAGENTA

Before the FMC can be used by a client software, usually you will have to configure such software, enabling FSC FMC hardware support and specifying IP address & port accordingly to FMC setup previously explained. Please consult the documentation shipped with the client software to know how to configure it properly.

In this guide, you can find below a sample configuration for Project Magenta:

Close `cdu.exe` and wait few seconds, or make sure is closed.

Open `cdu.ini` with a text editor (for example Windows Notepad). This file is usually located in the same folder where Project Magenta was installed, in "CDU" subfolder.

In the [Hardware] section, specify the FMC IP address as indicated below:

```

cdu.ini - Blocco note
File Modifica Formato Visualizza ?
[Flight]
LimitMCPSpeed=Off
AutoFlapRetract=Off
AutoFlapExtract=Off
                                     / MCP Speed limits set by MCDU, flap
                                     / retraction auto or manual

[User]
Printer=
PrinterMargin= 0
PrinterWidth= 80
PrinterFont=courier new
PrinterFontBold=Off
PrinterFontSize= 10
                                     / Printer name to target print outputs,
                                     / has to be set
                                     / Current printer is:
                                     / Epson AL-C1100

LastBuild= 505
                                     / Last version of the software run
                                     / on this PC

DeleteCFPFiles=Off
                                     / Automatically deletes binary CDU
                                     / Flight Plan Files (.CFP files)
                                     / when flight plans flushed and program
                                     / exits.

[Hardware]
FSC1=10.0.0.20
FSC2=
EngravityComm= 0
                                     / Serial communication to Engravity
                                     / CDU hardware

SFSCComm=Off
                                     / Simflight Studio Communication
                                     / handling

EHIDComm=Off
EHIDPort=
                                     / UDP communication to FMC hardware,
                                     / do not set it to on if you do not
                                     / have any such hardware connected
                                     / This is for EHID Support

ElanComm= 0
                                     / Serial communication to CDU hardware
                                     / Logs flight path calculation.

Font=pmbcdy
FontNoSerif=Off
FontBold=Off
FontFactor= 1
UseOtherFont=
                                     / Font display parameters
                                     / Override Default Font (unsupported,
                                     / use at your own discretion)

Text=white
  
```

if you are using only one FMC unit, just fill out only the FSC1 line, leaving FSC2 empty as indicated above. If you are using two FMC units, just fill both FSC1 and FSC2 lines with pertinent IP address as already discussed.

Save `cdu.ini` and start Project Magenta `cdu.exe`



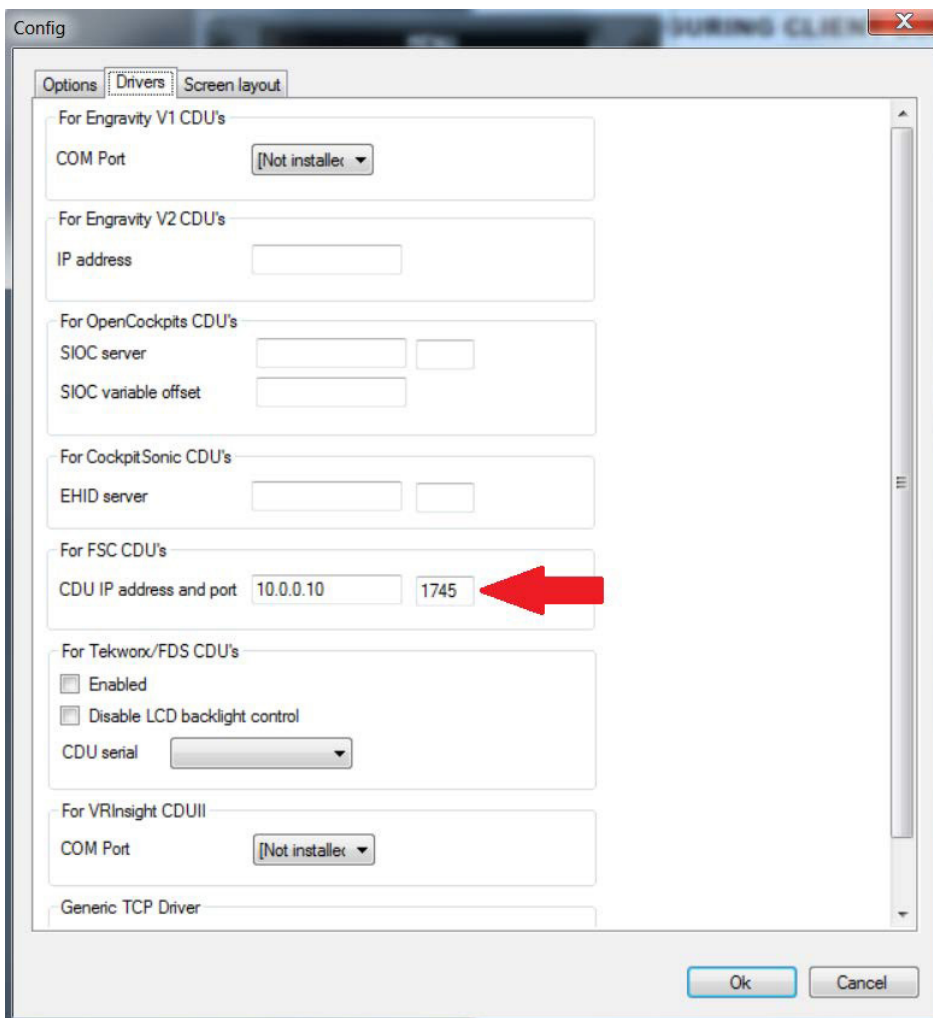
4. CONFIGURING CLIENT SOFTWARE: PROSIM-AR

Before the FMC can be used by a client software, usually you will have to configure such software, enabling FSC FMC hardware support and specifying IP address & port accordingly to FMC setup previously explained. Please consult the documentation shipped with the client software to know how to configure it properly.

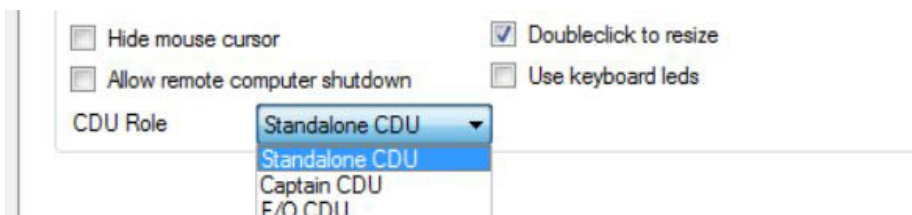
In this guide, you can find below a sample configuration for Prosim:

If You are using 2 CDU's together (CP&F/O) You must have 2 folder with Prosim CDU: for example "ProsimCDU_CP" and "Prosim CDU_FO", because the configuration are different for each side.

Assuming You are running Prosim already connected and configured, start ProsimCDU.exe , right mouse click and "Config", and go to "Drivers" tab:



Insert the CDU ip and port (the port should be 1745) in the field "For FSC CDU's"



Return to "Option" tab, and change the "CDU Role" for Your needs



5. CONFIGURING CLIENT SOFTWARE: PMDG 737NGX*

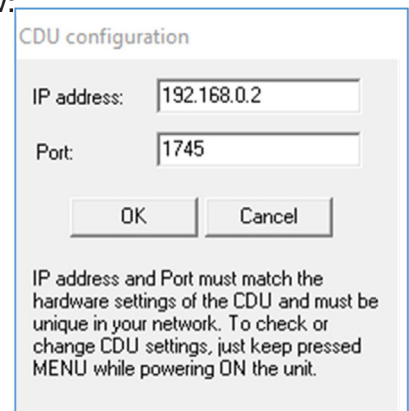
In order for PMDG software to communicate with the CDU driver, it must be configured accordingly. Please follow the steps below:

- Make sure that no flight simulator program is running
- Open PMDG 737 NGX installation folder, typically :
 "C:\Program Files (x86)\MicrosoftGames\Microsoft Flight Simulator X\PMDG\PMDG 737 NGX "
- Double click "737NGX_Options" ini file to edit.
- Ensure that the file contains the lines below:
 [SDK]
 EnableDataBroadcast=1
 EnableCDUBroadcast.0=1
 EnableCDUBroadcast.1=1
- If there aren't such lines, just add them to the top of the file (to exclude any typo error, please copy & paste them from this manual)
- If the file already contains these lines, but the values after "=" are different or some line is missing or different, please make the adjustments needed to get lines identical to those displayed in this manual.

The CDU driver is a small application not requiring any installation procedure: just copy the supplied program on the Windows desktop, or anywhere in the hard drive, and run it by simply double clicking the icon. If needed, it can be run also directly from the DVD or USB pen drive supplied in the CDU package. To use the CDU driver, just follow the steps below:

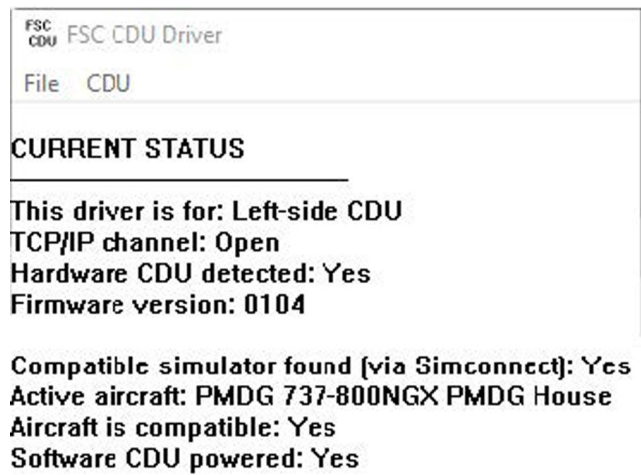
- Make sure the CDU is powered ON and connected to the LAN
- Run a compatible flight simulator and select a supported aircraft, for example PMDG 737-800 NGX
- Run fsc-cdu-left application to control the left-side (captain) CDU
- If using two CDUs, run fsc-cdu-right application to control the right-side (first officer) CDU*

If you own two CDUs and would like to use both, just run fsc-cdu-left and fsc-cdu-right applications, making sure that each CDU has its own unique IP address and Port, as explained in the hardware setup chapter.



Once executed, the application shows a window with various status information. To configure the driver for first time use, select menu CDU->Configure... and enter IP address and Port exactly as previously entered physically in the matching CDU hardware device.

After the setup is complete, in the status window you should get correct status messages indicating that everything is running as expected:



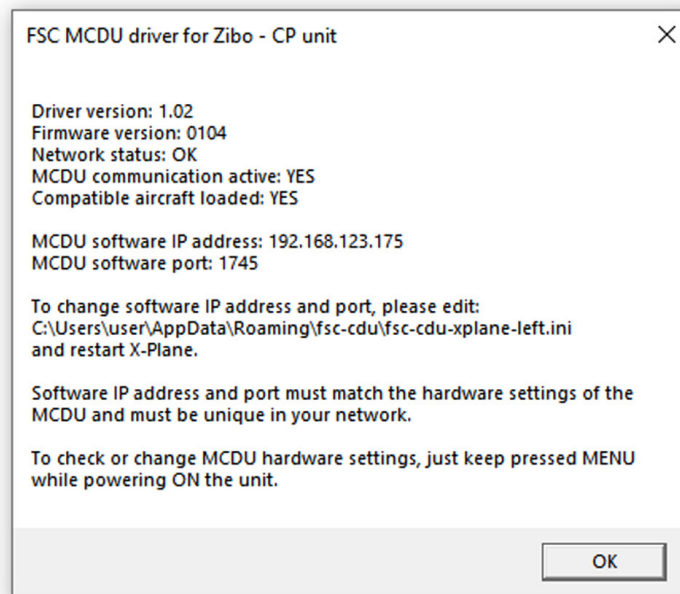
* = For Now only the 737NGX is well supported, we are working for compatibility with other PMDG products, such as 747 and 777



6. CONFIGURING CLIENT SOFTWARE: X-Plane 11 with ZIBO mod

In order for Xplane software to communicate with the CDU , it must be configured accordingly. Please follow the steps below:

- Make sure that no flight simulator program is running
- Open X-plane plugin installation folder , typically:
"X:\X-Plane11\Resources\plugins"
- Copy the file from USB Key provided with CDU "cdu-cp.xml" in this folder, and "cdu-fo.cpl" if You have 2 units
- Start X-plane and select B737-800X aircraft
- Select X-Plane menu Plugins -> FSC MCDU Driver for Zibo – CP (FO) Unit -> Status
- The following window will be displayed:



This window shows the status of the MCDU unit. Please make sure that the IP address and Port is correctly configured (to change it, please follow the instructions provided in the status window).

The CDU is shipped with ip address: 192.168.1.225 , and the same is hard-coded in the plugin for an immediate compatibility, but You can change it if You need.

To do so, see page 3 of this manual for change the ip in the CDU unit, and edit the configuration file in Your Appdata "fsc-cdu" folder.

To discover Appdata, press "win" key and digit: %Appdata% a folder item will be displayed, click on it to open Appdata folder, and enter in "fsc-cdu" folder.

Edit "fsc-cdu-xplane-left.ini" with Notepad:

```
[Network] IPAddress=192.168.1.225
```

```
Port=1745
```

Change the ip if You need.

Repeat this procedure also for the FO unit, if you purchased both CP and FO units, but for FO You must copy also the "cdu-fo.cpl" plugin, they must stay together.



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