FLIGHTDECK
SOLUTIONS

FDS-PRO-Ethernet-CDU

New for **2020**, the FDS-Pro-Ethernet-CDU comes with HDMI compatibility. With most of the latest Graphics cards (GFX) providing DVI-D and HDMI and DisplayPort.

This newest version lets you use the latest GFX cards. As VGA GFX cards are rare these days. Using a DVI-I – HDMI cable will work as well.

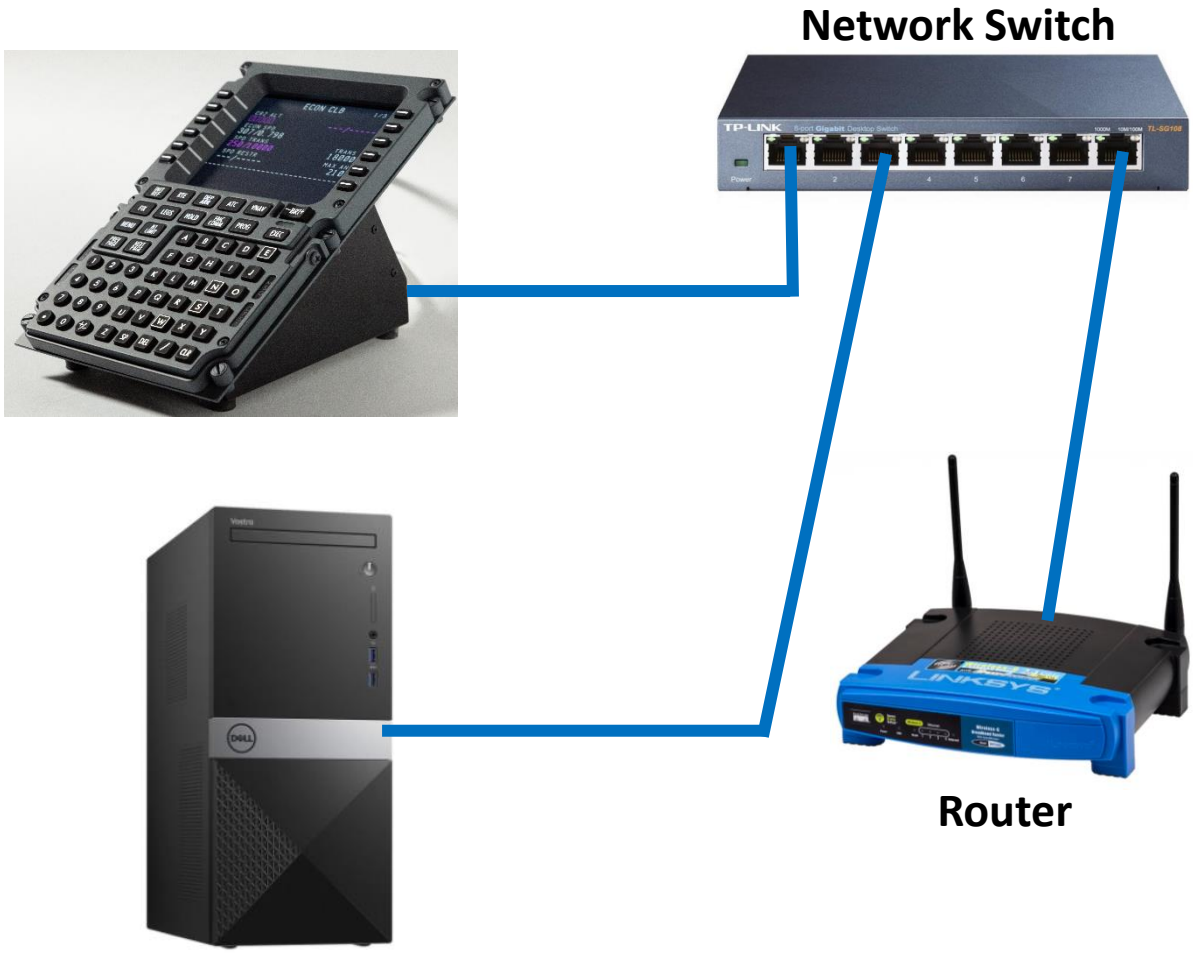
**Minimum requirement for GFX cards and Avionics Suites is a 2 GIG card.*

FEATURES:

- Full-Color LCD Display
- HDMI Input
- All Metal Construction (Bezel and Structural Components)
- Desktop Stand with rubber feet
- Rubberized keyboard with dome type switches. The switches offer millions of cycles and tactical feel matching real aircraft CDU's.
- Third-Party integration using a simple TCP protocol
- Compatible with Sim-Avionics, ProSim 737, PSX and PMDG NGX/NGXu *Zibo Mod via the X-Plane Forum (See page 18)
- Dimmable Key Brightness
- Brightness Keys for Avionics software screen dimming (Subject to Avionics vendors software integration)
- Includes Power Supply and Network Cable (HDMI Cable required)
- Dimensions: 8.95" x 5.75" Footprint (DZUS Compliant)

Connecting the CDU to your Network:

The ethernet version of the CDU requires a network cable connected to a **Network Switch**. The Network switch needs to be connected to a **Router** to provide the IP Address required to assign the CDU in software. **Router** must have the **DHCP** enabled to provide the IP Address. (Default is ON). If your **Router/Modem** allows you connect network cables you can omit the **Network Switch.** Some basic networking knowledge is required.



Ethernet Connection Information:

Doing a factory reset using the reset switch. See #4 on page 8

To reset:

- Power off CDU (Disconnect power plug)
- Push and hold the reset switch (you will feel it click when pressed)
- Power on the device
- Hold the reset switch in for 20 seconds
- Release the reset switch and it will factory reset the networking configuration and reboot.

During boot the device will:

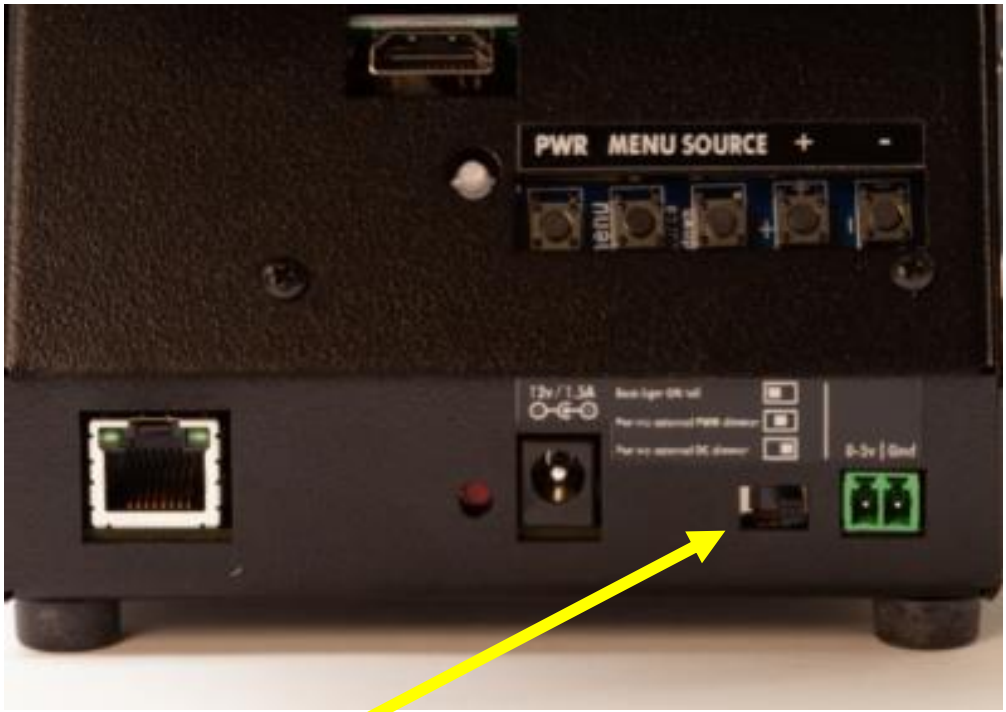
- Assign a static IP address (192.168.1.200)
- Request a DHCP address and listen for an answer
- When an answer is received it will switch to the DHCP assigned address and monitor for changes.

If you have the CDU plugged directly into a **Network Switch** without **DHCP** the CDU will use a default network configuration of IP: 192.168.1.200 GW:192.168.1.1 Mask: 255.255.255.0. This will allow a computer on the same subnet to be able to talk to the CDU without a DHCP server.

Having a Router to provide the DHCP server in your environment (network router does this as you know) makes life easier.

Sim-Avionics shown on the screen


ECON CLB 1/3
CRZ ALT
AT
---/-----
ECON SPD
307/0.798
SPD TRANS
250/10000
TRANS ALT
18000
SPD RESTR
---/-----
MAX ANGLE
210
DUAL FMC OP RESTORED
INIT REF
RTE
DEP ARR
ATC
VNAV
-BRT+
FIX
LEGS
HOLD
FMC COMM
PROG
EXEC
MENU
N1 LIMIT
PREV PAGE
NEXT PAGE
A B C D E
F G H I J
K L M N O
P Q R S T
U V W X Y
Z SP DEL / CLR
1 2 3
4 5 6
7 8 9
• 0 +/-
CALL
FAIL
MSG
OFST



Left to right:

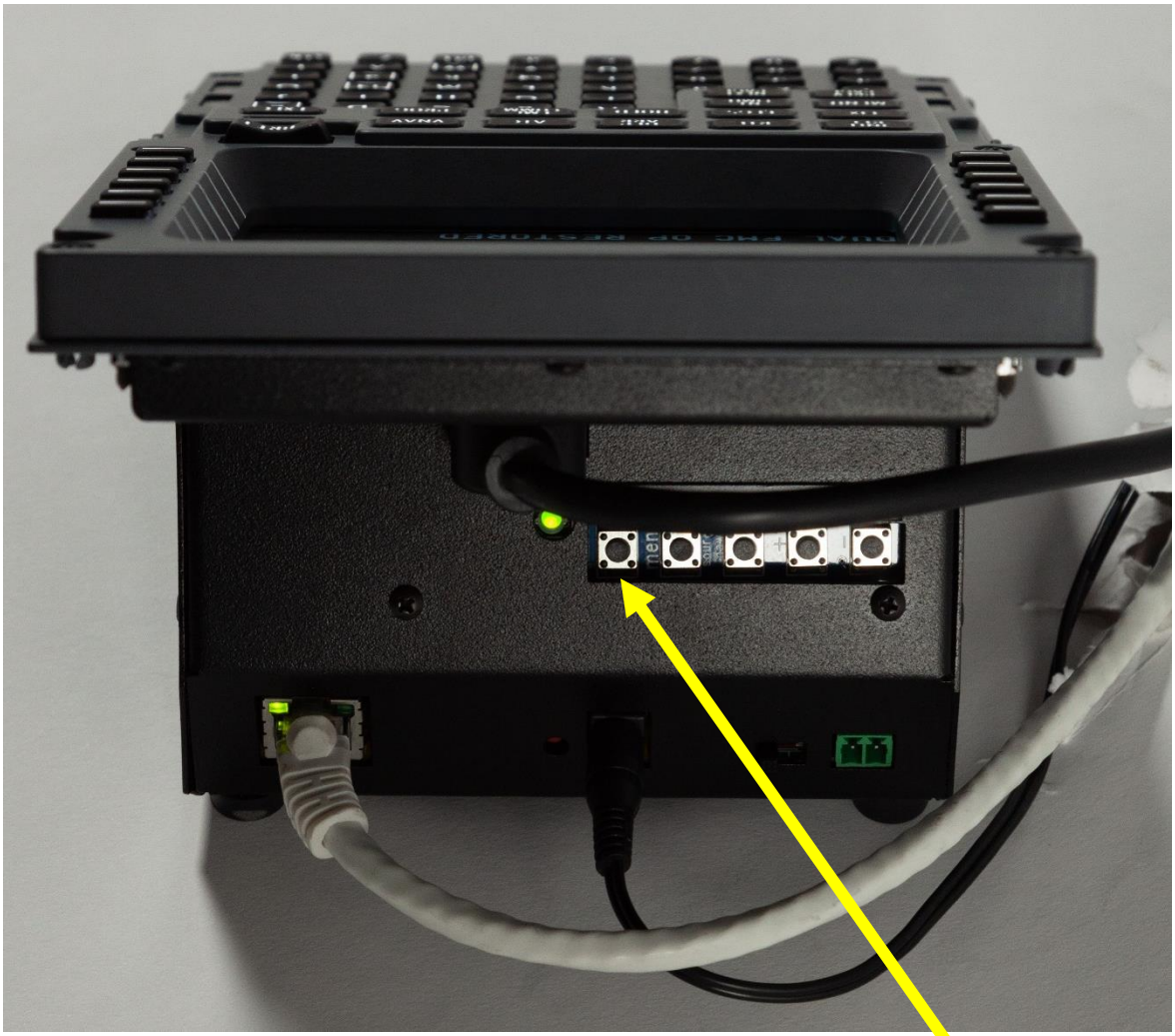
L Position – IBL constantly ON (*set to maximum*) Used on a desktop
C Position – External IBL from PWM dimmer.
R Position - External IBL from DC voltage regulated dimmer.

For IBL with LED lights FDS uses PWM dimmers > B787 and B777 for example.
FDS MX series that have LEDs IBL panels will use it too.

For IBL with incandescent bulbs we are using voltage regulators as dimmers. Their output provides constant voltage that can be adjusted from 0 to 5V trough the dimming pot.

Rear View

1. HDMI port
2. Screen switches w/indicator LED
3. Ethernet jack
4. Reset switch
5. Power jack (12VDC)
6. Backlighting mode switch
7. Backlighting remote IBL jack (keyboard lighting)



Wires connected to the back of the CDU

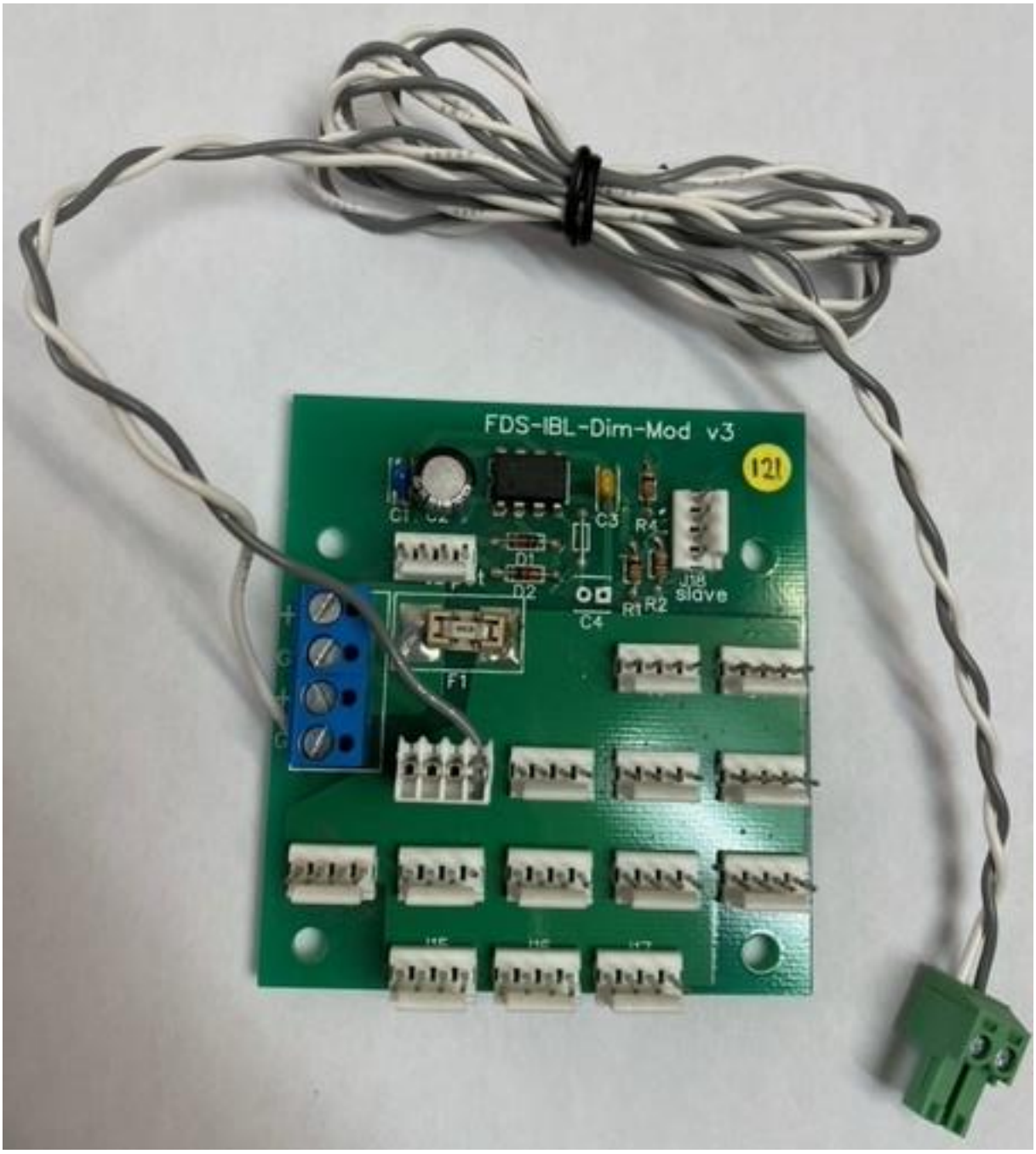
Note: Screen buttons are only for the LCD and the power button doesn't control the whole CDU.

Pin1 – DC voltage from “0 to 5V” from voltage regulated dimmer **OR** “PWM” from PWM dimmer.

Pin2 – GROUND

NOTE: There are several versions of Dimmers and applications, please follow the instructions on the following pages based on your set-up.

Original IBL Dist Boards Only (Includes Expansion Board)



Original IBL Dist Boards Only (Includes Expansion Board)

Note the orientation of the wires.

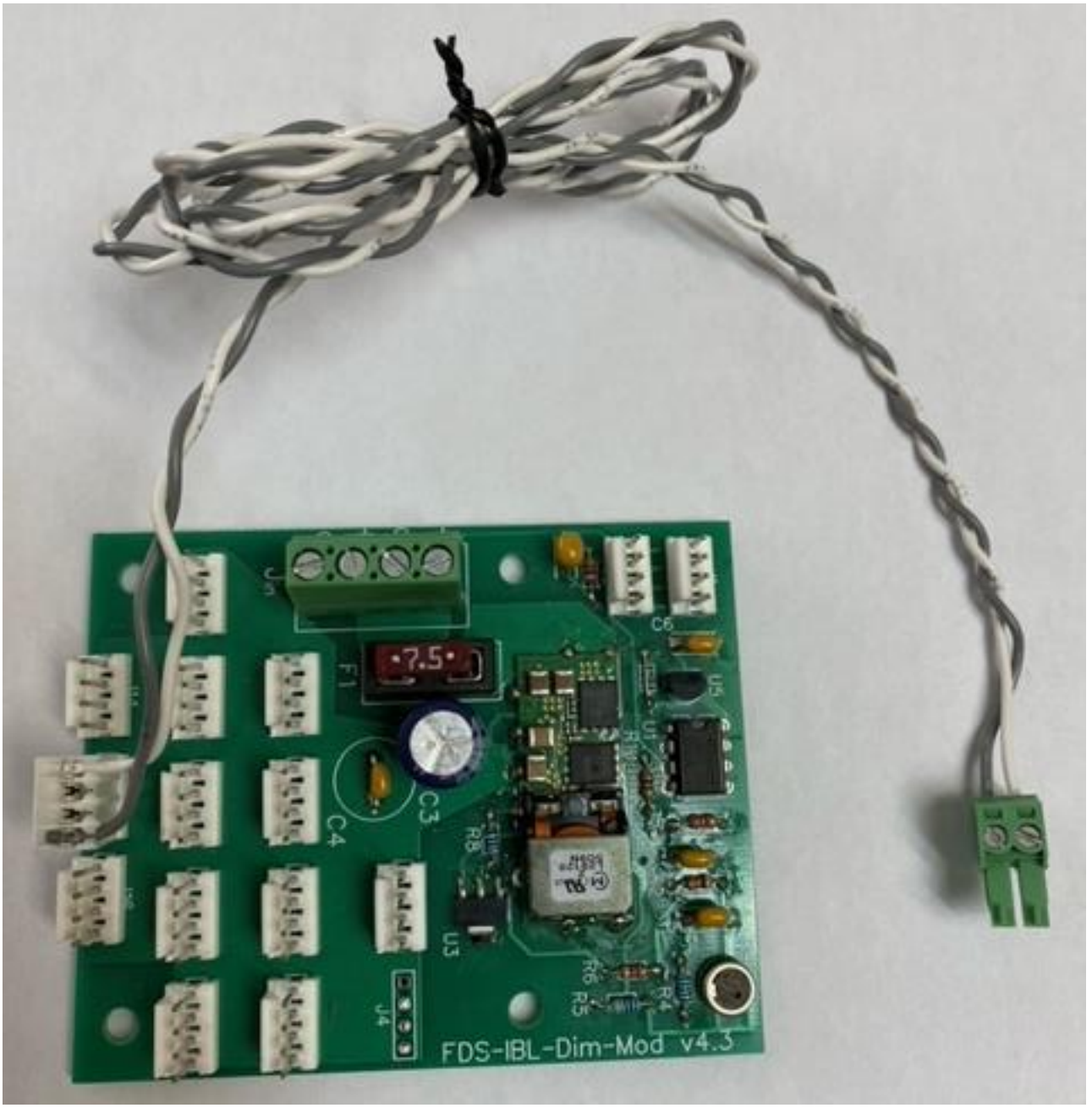
White to GND
Gray to 5V

**Green Connector is attached to the CDU when shipped.*

Remove the White wire from the 4 Pin Connector and strip the wire and connect to the G (GND) on the DIST Board.

This will control the CDU Backlighting when the Selector is on the “C” position.

New 12V IBL Dist Boards (Includes Expansion Board)



New 12V IBL Dist Boards (Includes Expansion Board)

Note the orientation of the wires.

Gray to GND
White to 5V

**Green Connector is attached to the CDU when shipped.*

Connect the 4 Pin Connector to the DIST Board. (Pedestal IBL Dimmer)

This will control the CDU Backlighting when the Selector is on the “R” position.

FLIGHTDECK SOLUTIONS

Stand-Alone CDU Backlighting

Includes:
PMDG
PSX

When using as a desktop Trainer.

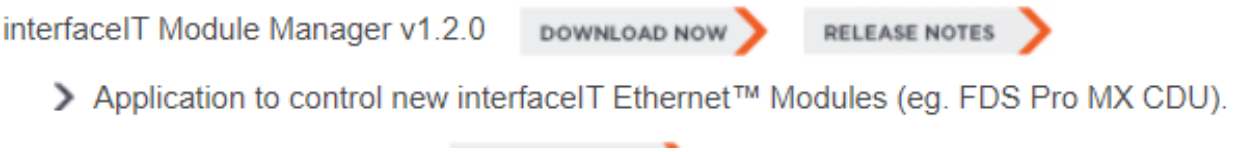
Allows the CDU key backlighting to be on all the time (No dimming)
This will control the CDU Backlighting when the Selector is on the “L” position. Turn off the power to the CDU when not using the CDU.

Desktop feature with rubber feet allowing easy access to the CDU for desk use. 6 x DZUS fasteners for DZUS rail mounting in FDS MIP and Pedestal products.

Power Supply with adapters, Ethernet Cable supplied along with an IBL Cable for CDU Key Backlighting.

Test Module

Drivers located here for the InterfaceIT Module Manager



TEKWORX

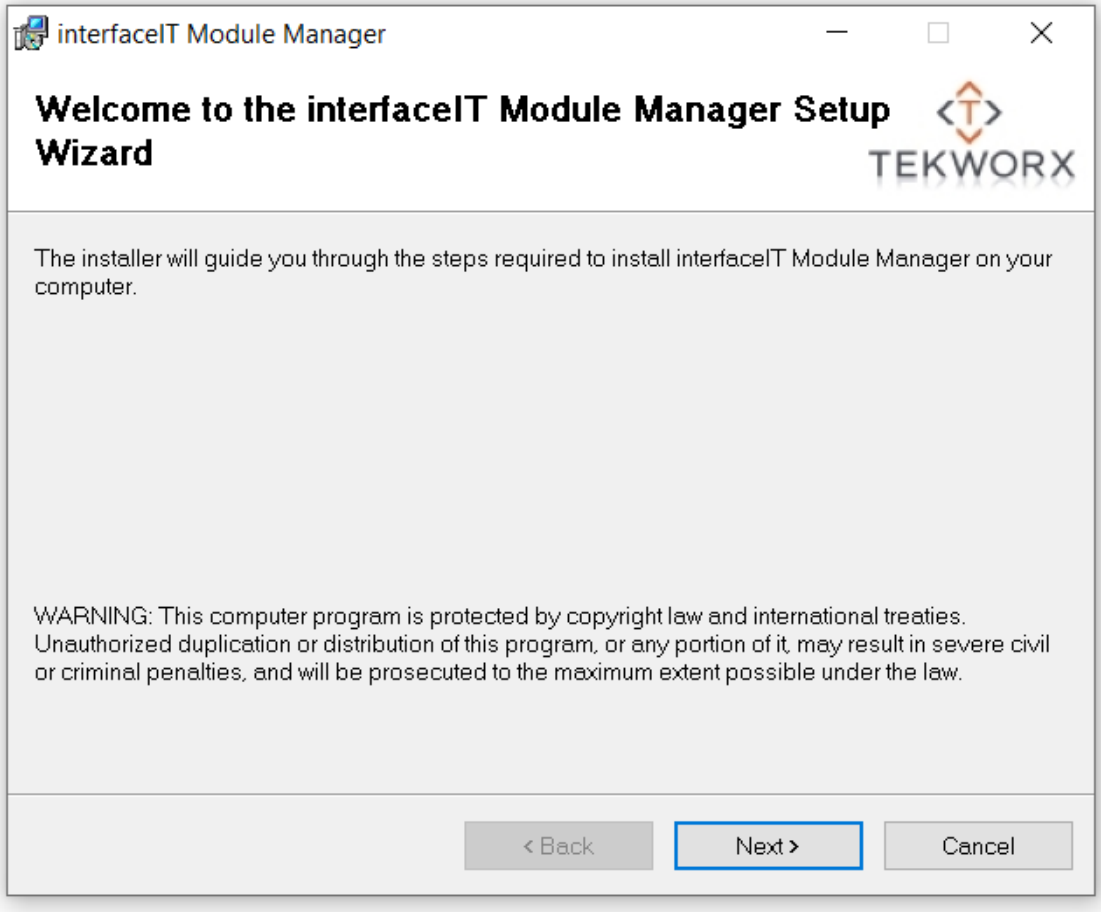
Check the TEKWorx Website for updates and other FDS related drivers here

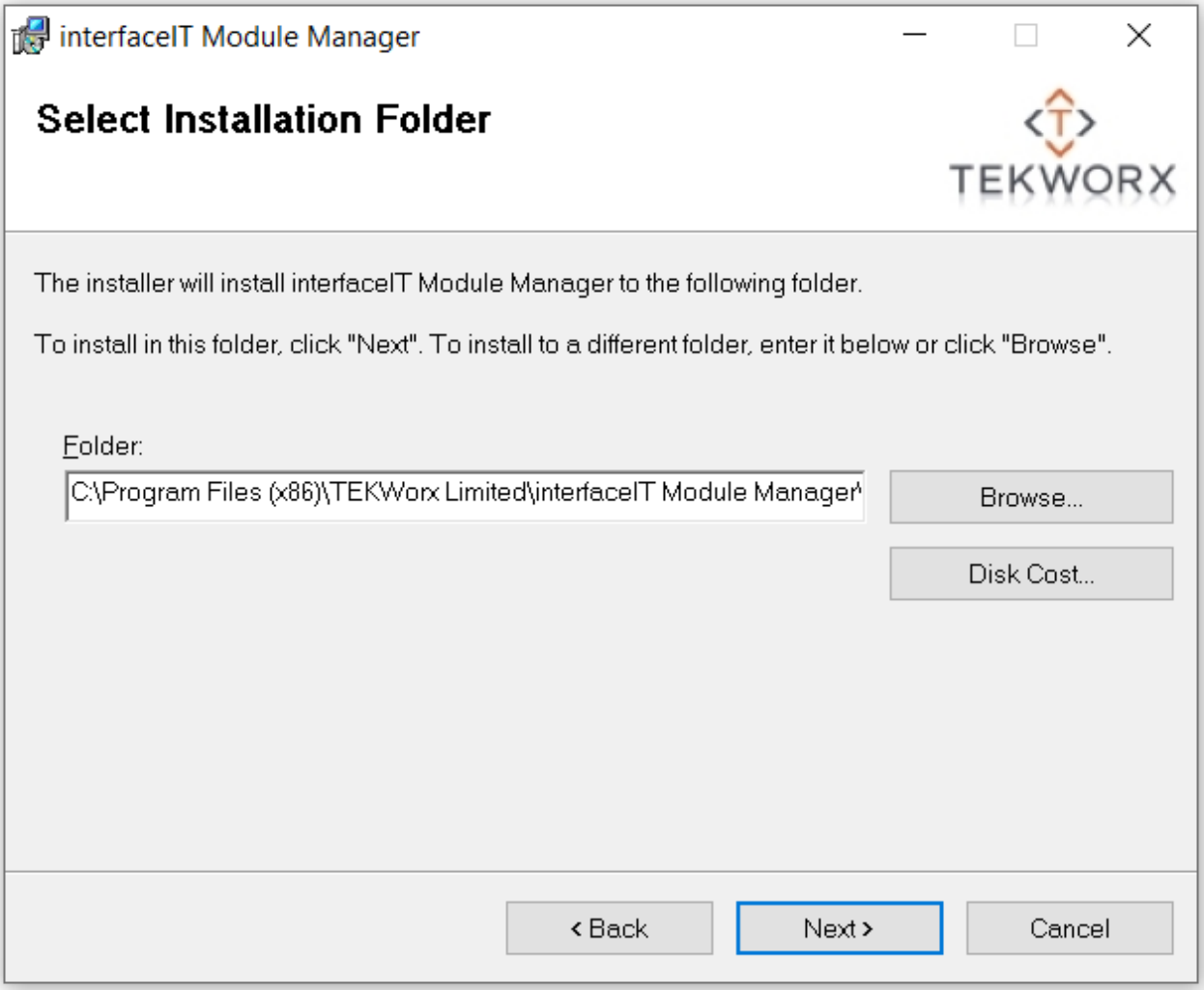
We offer limited support for PMDG software, the following software is designed to use with P3D and at this time it is **NOT** available for MS2020.

Please refer to the FDS Forum/Interface Products here

The CDU Module has a test module that will provide a graphic showing switch presses and LED's. Screen will show up once plugged into a PC and will turn on and then off unless the PC is turned on. You will see your Desktop on the screen.

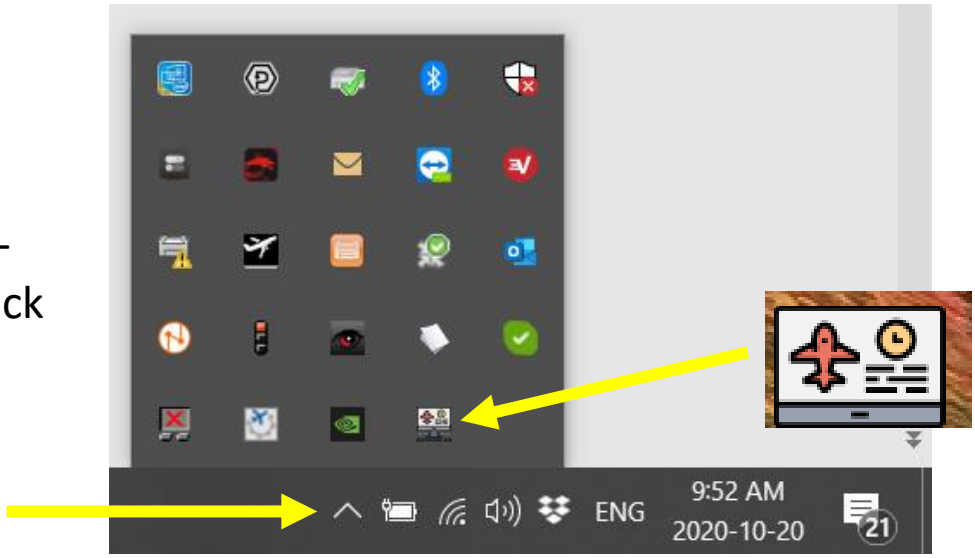
Download and install the InterfaceIT Module Manager, leave the Folder location as selected by the installer. You will want to locate the folder and create a shortcut to your Desktop for easy access. Once started (After configuration) it shows up in the "Hidden Icons" in the Taskbar. Left –click then right-click on the icon. See page 6 and 7.

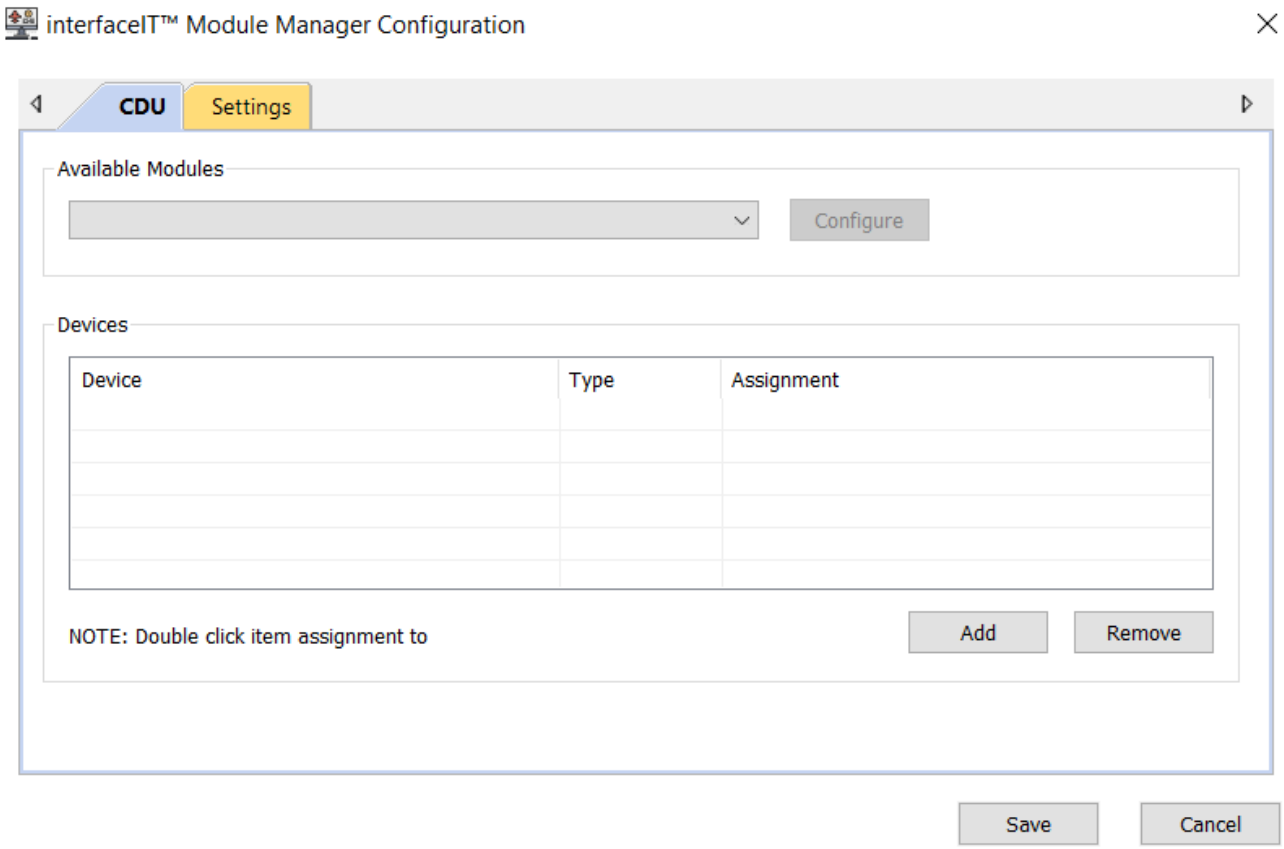


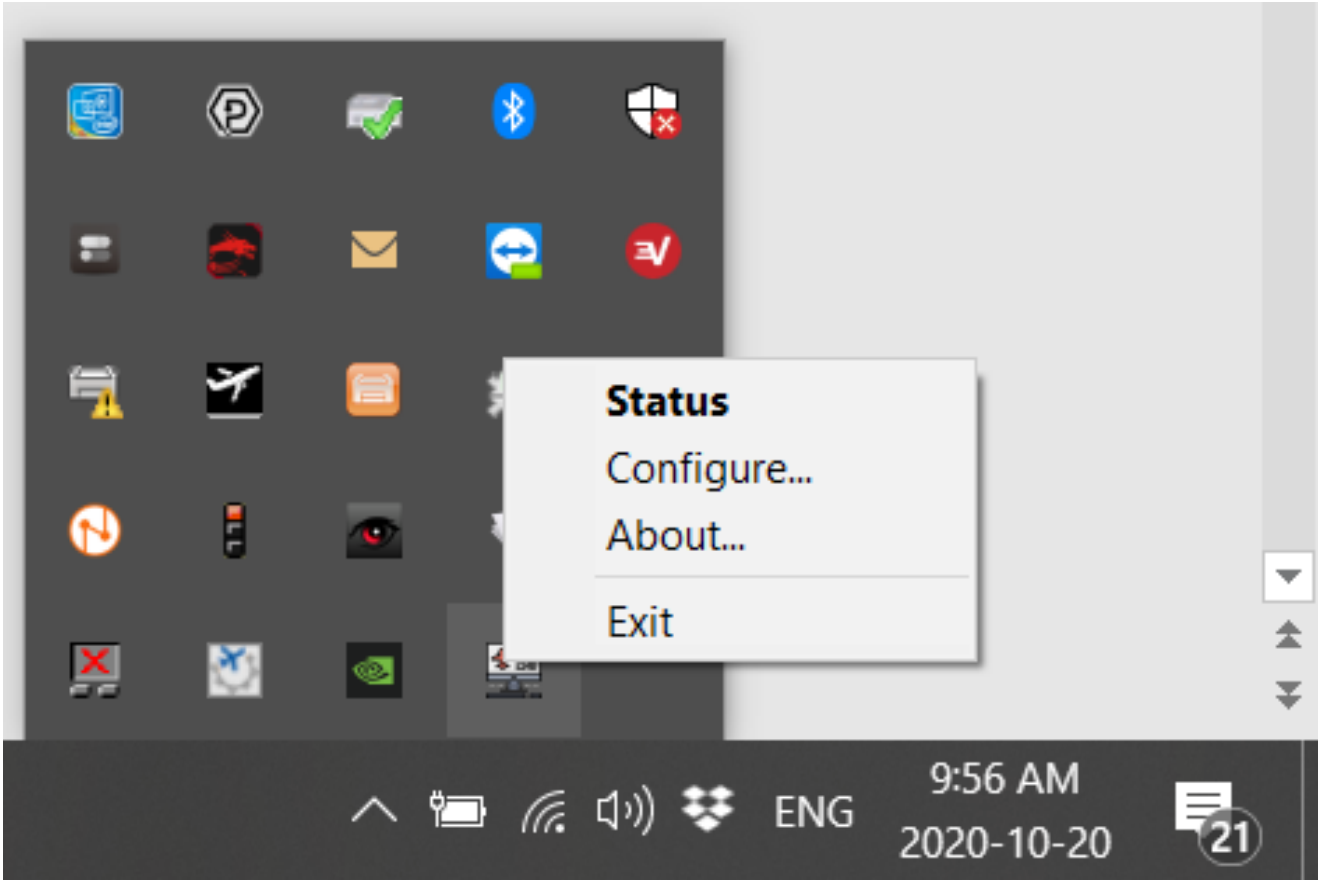


Default Folder installation location in Program Files (x86)

Once started it shows up in the “Hidden Icons” in the Taskbar. Left – click then right-click on the icon.



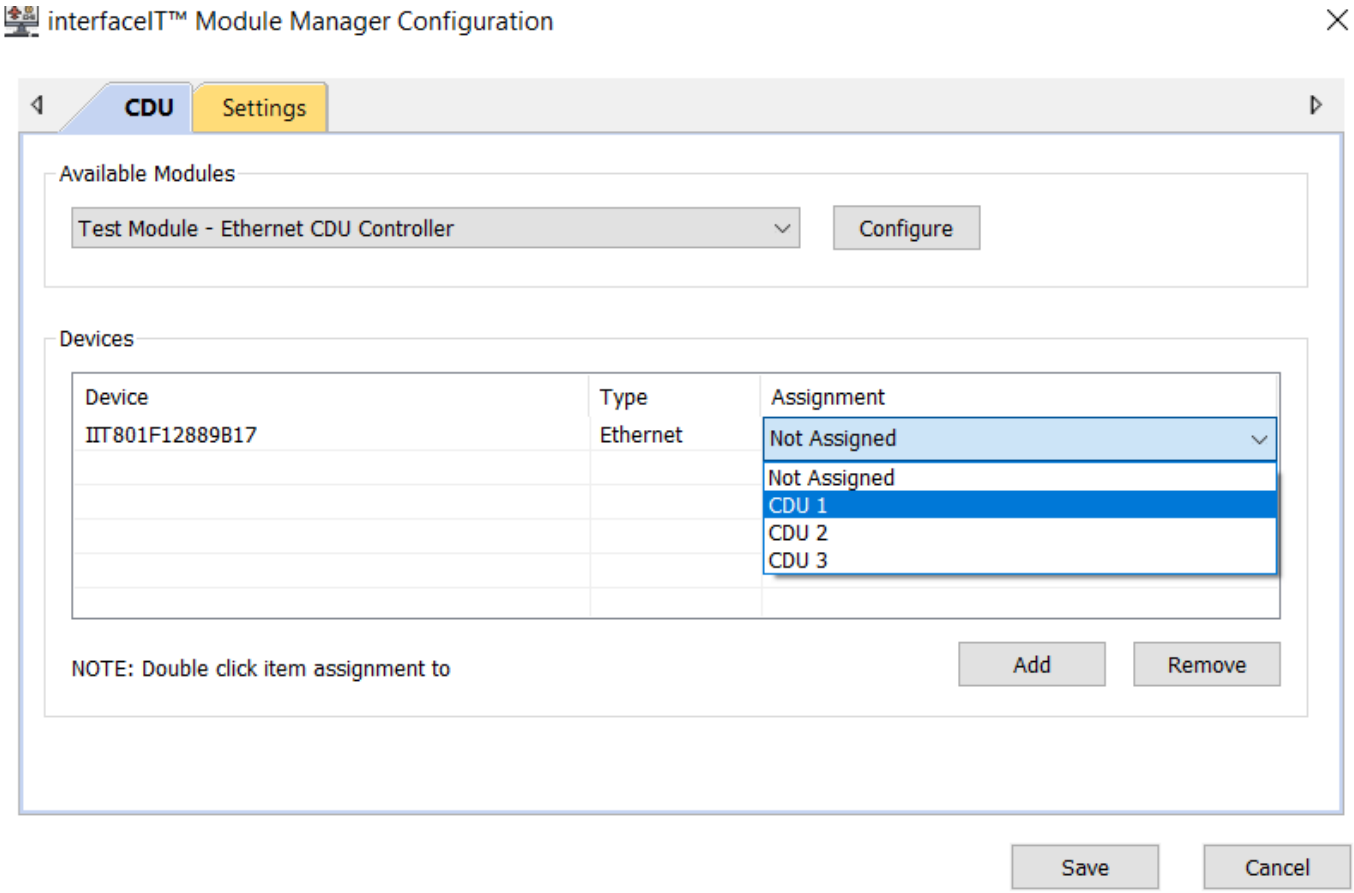




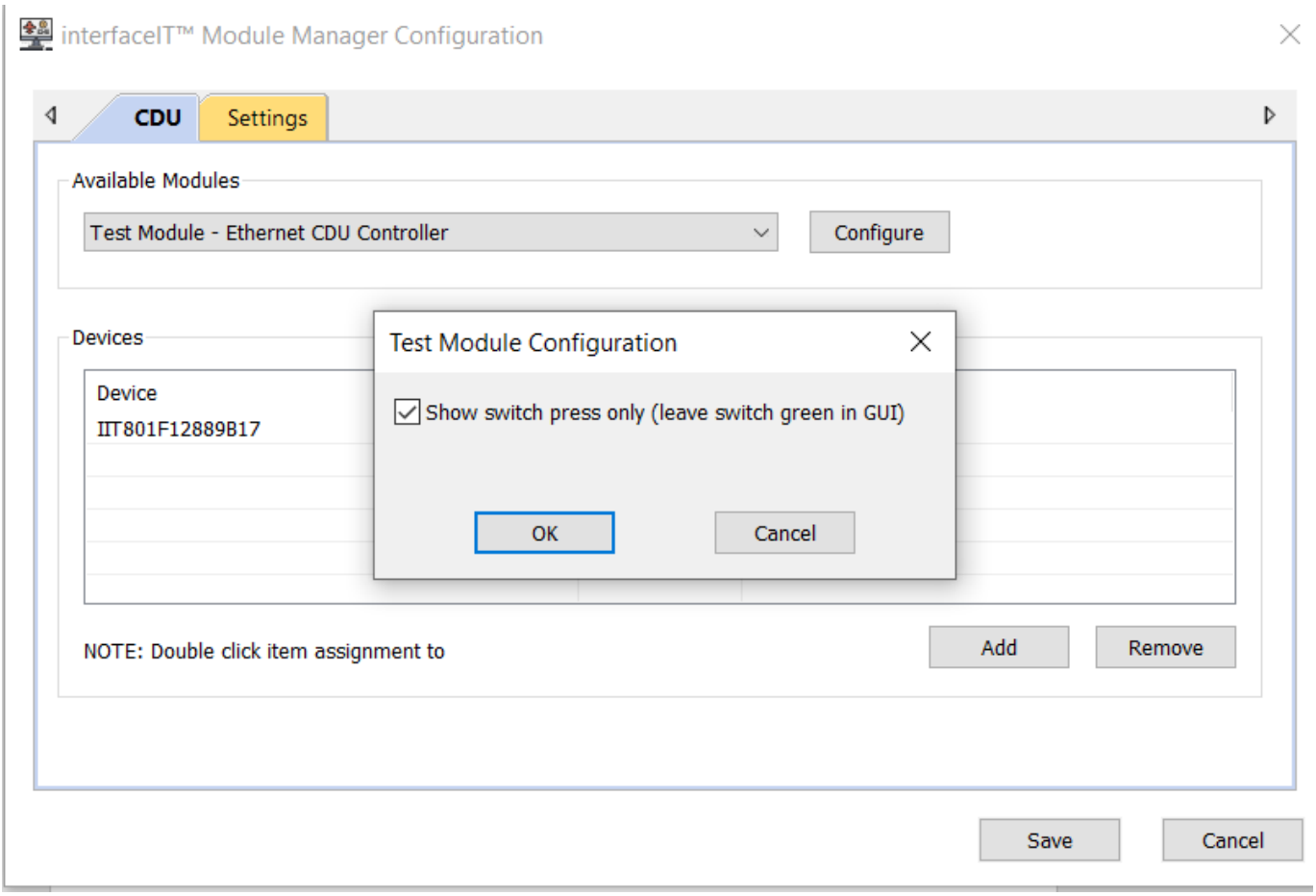
This allows you to access the following pages in the Module:

- Status
- Configure
- About

- Exit

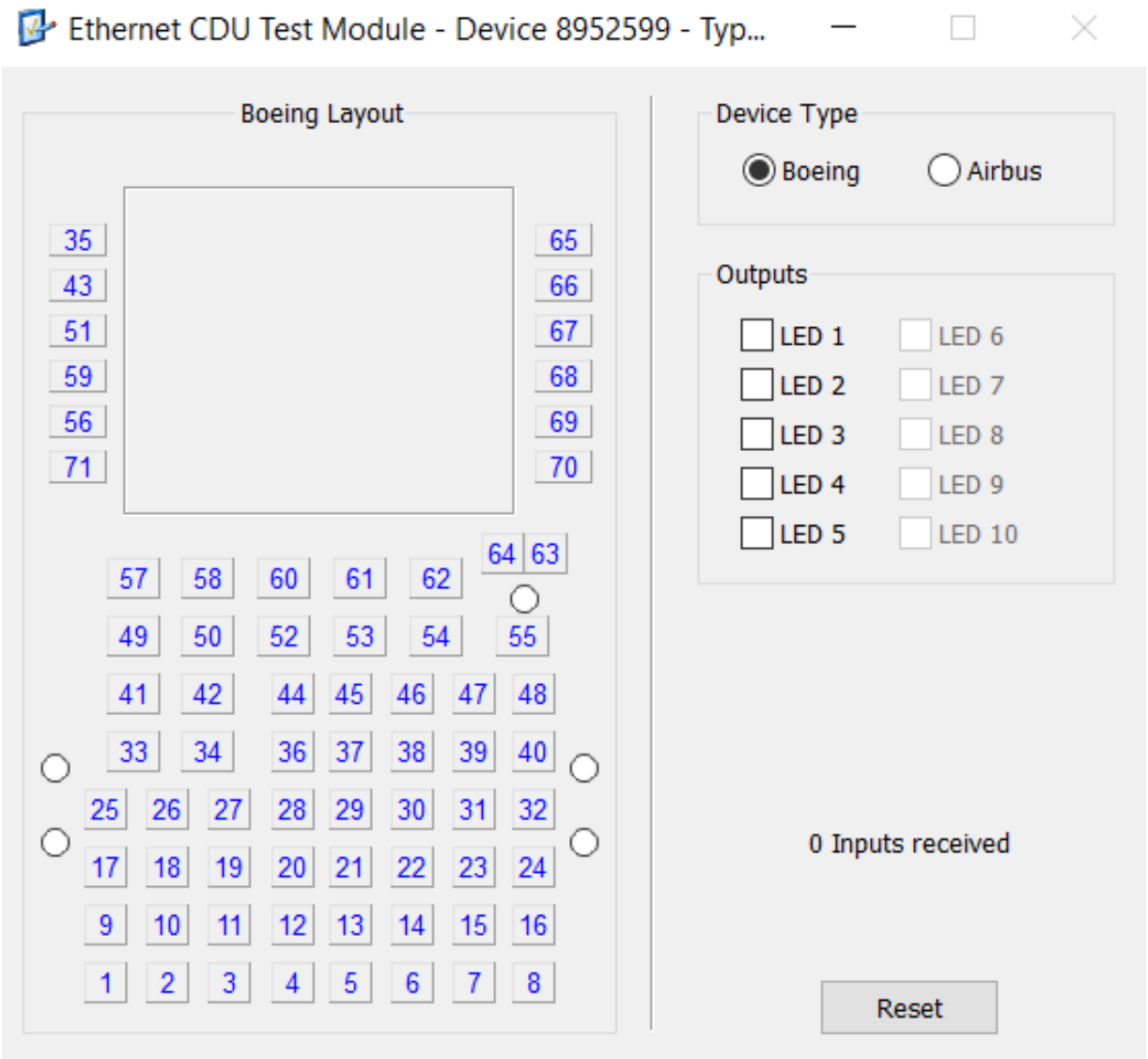


Test Module feature of the software



Checkbox will leave the switch that is pressed Green ON in the CDU GUI. All the switches will be Green when testing the keyboard.

Unchecked will only show the switch that is pressed (will flash)


Ethernet CDU Test Module - Device 8952599 - Typ...
Boeing Layout
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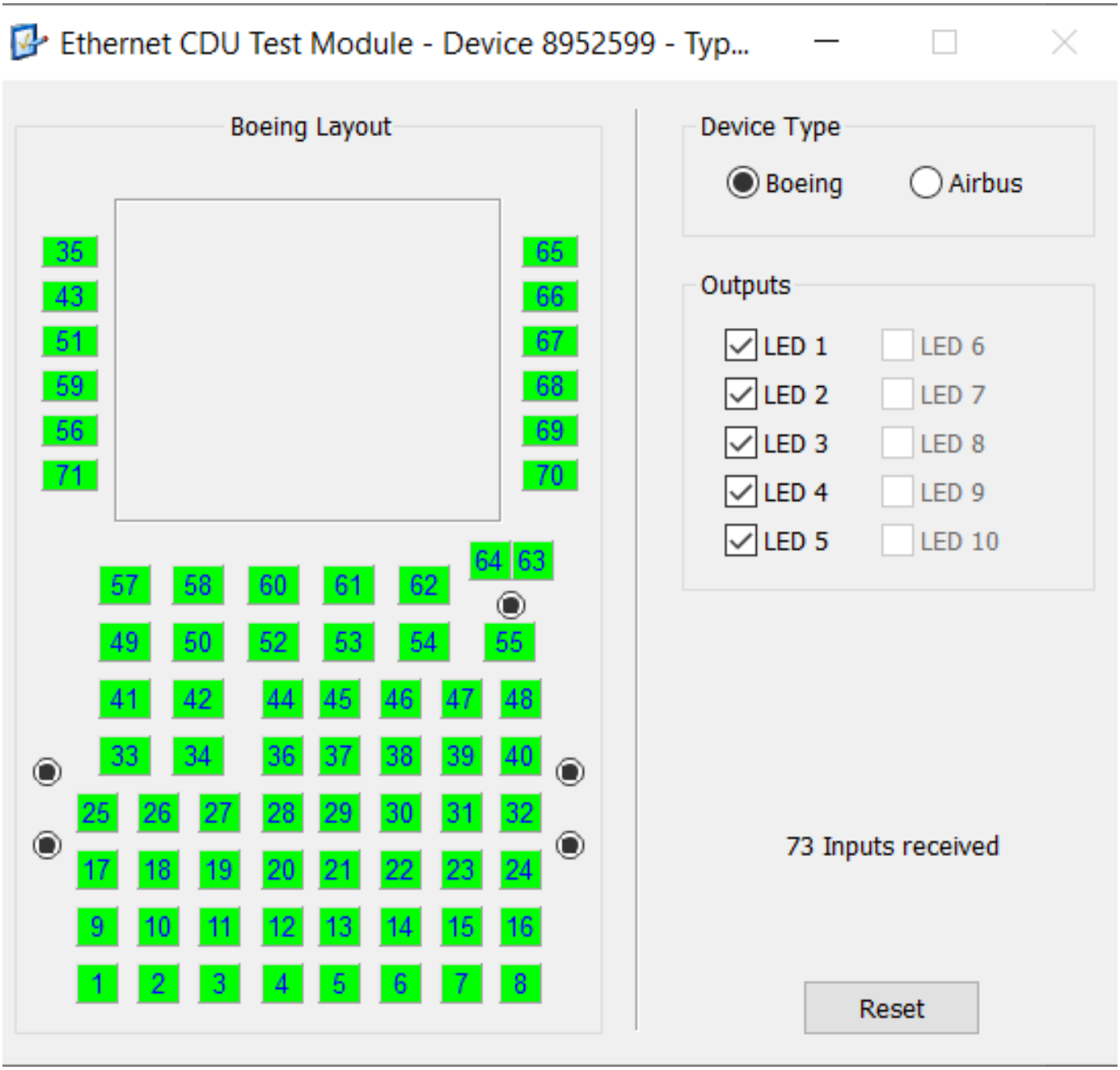
Device Type
Boeing
Airbus
Outputs
LED 1
LED 2
LED 3
LED 4
LED 5
LED 6
LED 7
LED 8
LED 9
LED 10
0 Inputs received
Reset


Ethernet CDU Test Module - Device 8952599 - Typ...
Boeing Layout
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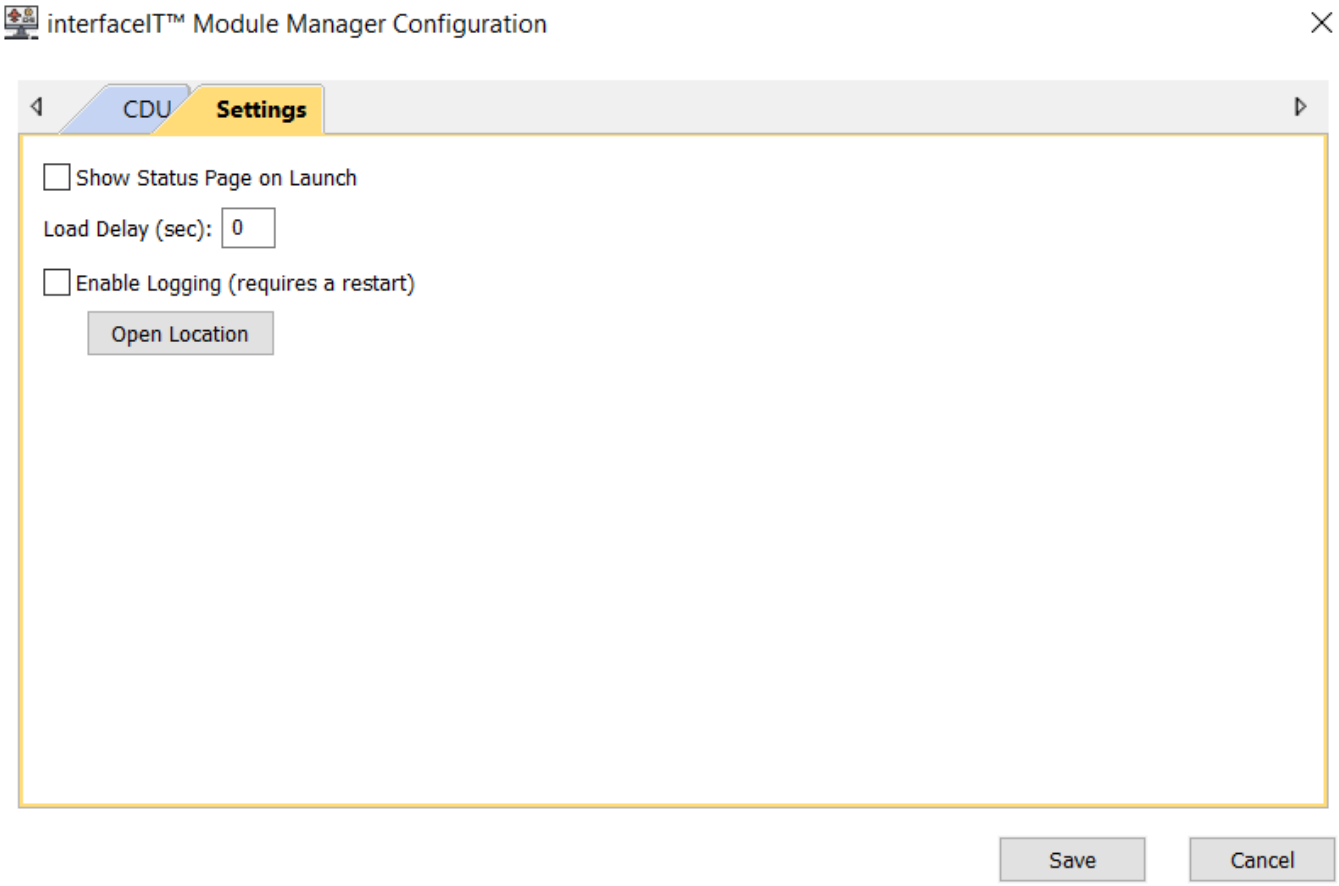
Device Type
Boeing
Airbus
Outputs
LED 1
LED 2
LED 3
LED 4
LED 5
LED 6
LED 7
LED 8
LED 9
LED 10
73 Inputs received
Reset



Advanced Test settings including Load Delay and logging

There are separate manuals available for the following Avionics Suites:

- Sim-Avionics
- ProSim B737
- PMDG

More expected as they become available:

- ProSim A320
- PSX (Same as the USB Version)

Link to the X-Plane B737NG Zibo Mod

Link in the Forum is here

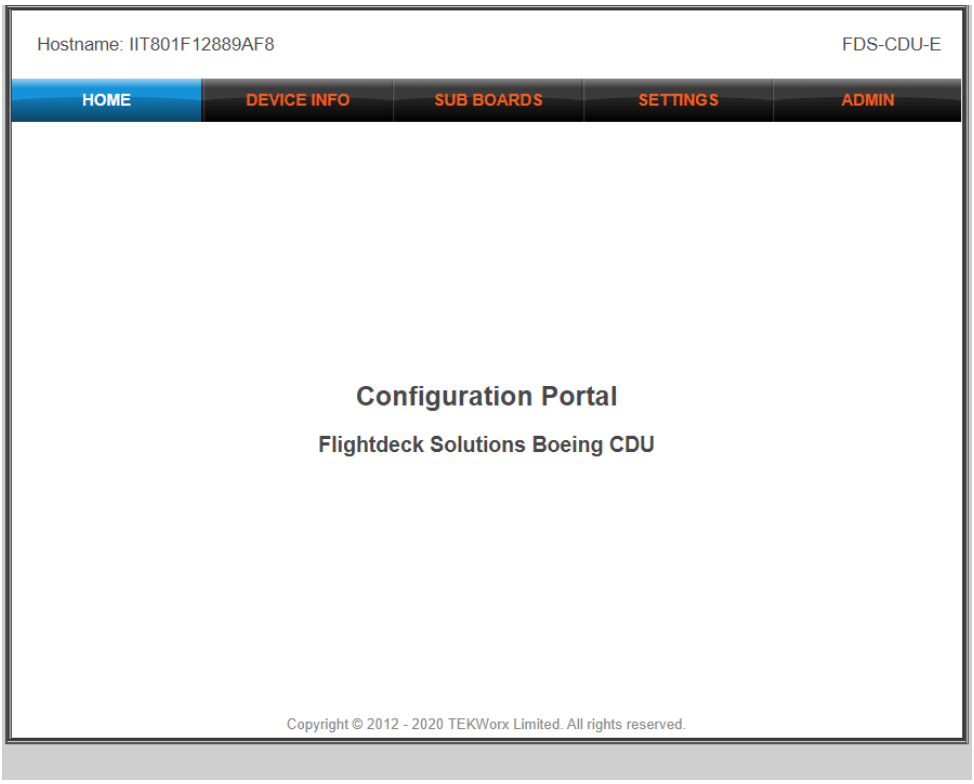
*Support is only in the X-Plane Forum with the Zibo Mod Team.

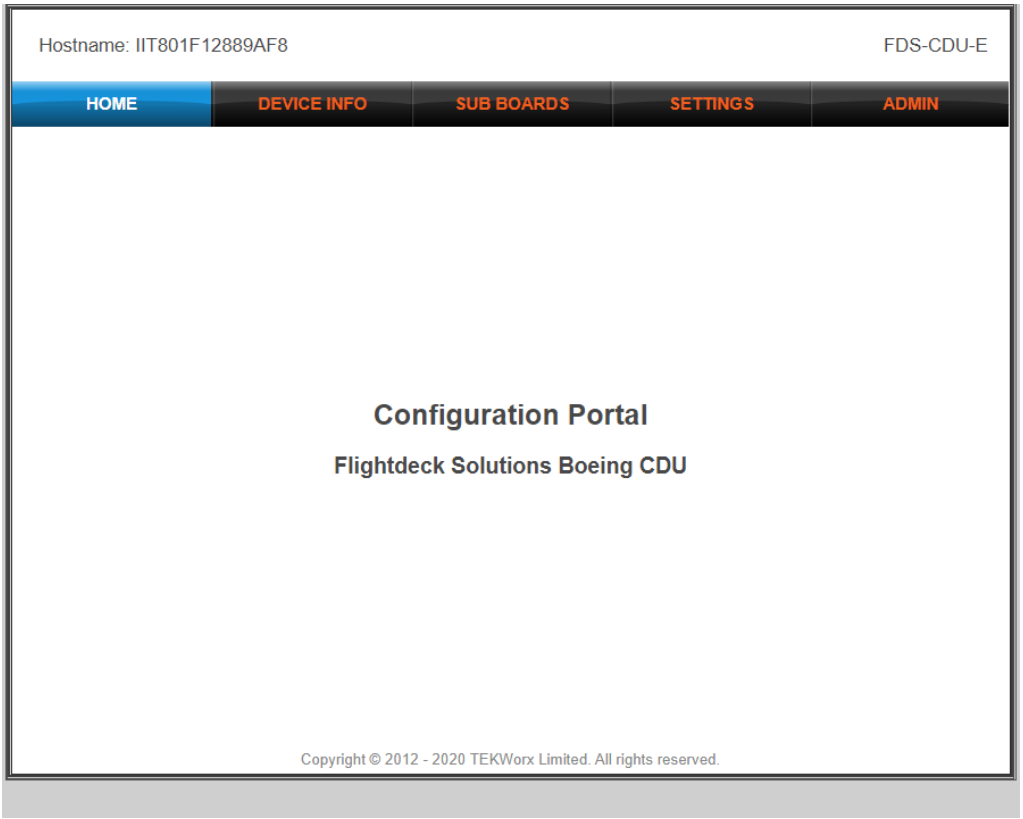
Setting up Static IP Addresses:

When you connect to the web interface of the device you can configure a static IP address. You just need to boot the device and connect with a computer that is on a 192.168.1.0/24 network (ie 192.168.1.10). CDU defaults to 192.168.1.200
Uncheck the Enable DHCP box
Enter the IP Address you wish to use.
***Note be aware that conflicts are possible if the new IP Address is already in use.**

Accessing the CDU in the Web Interface:

Enter the IP Address of the CDU in a web browser.





Multiple Tabs:

Home Device Info Sub Boards Setting Admin

Device Info shows:

- IP Address
- Board Firmware (Can be updated by the customer if required)
- Board Serial Number

Settings:

- Device name can be renamed (NO spaces IE: CA_CDU) to simplify device names. Click “Save Configuration”. A power reboot of the device is required. Unplug power.

Terminology

CDU	**C**omputer **D**isplay **U**nit
LSK	**L**ine **S**elect **K**ey
FDS	**F**light**d**eck **S**olutions Ltd
GFX	Video Graphics Card
IBL	**I**ntegrated **B**ack **L**ighting for FDS Panels
MIP	**M**ain **I**nstrument **P**anel
OH	**O**ver**h**ead
PED	Center Aisle Stand or Pedestal
SBC	**S**YS**B**oard **C**ontroller
TQ	**T**hrottle **Q**uadrant
Ethernet	Technology that connects wired local area networks (LANs) and enables the device to communicate with each other through a protocol which is the common network language. Devices are connected to a Network Switch and each device will have its own IP Address.

Check that you are using the latest version of the manual, version and date are located below at the bottom of the manual pages.