



MIDAS

MESH FREE

頻率響應

EX3. 機架式工業電腦

Simple, but Everything.

計算:0~2000Hz 激振

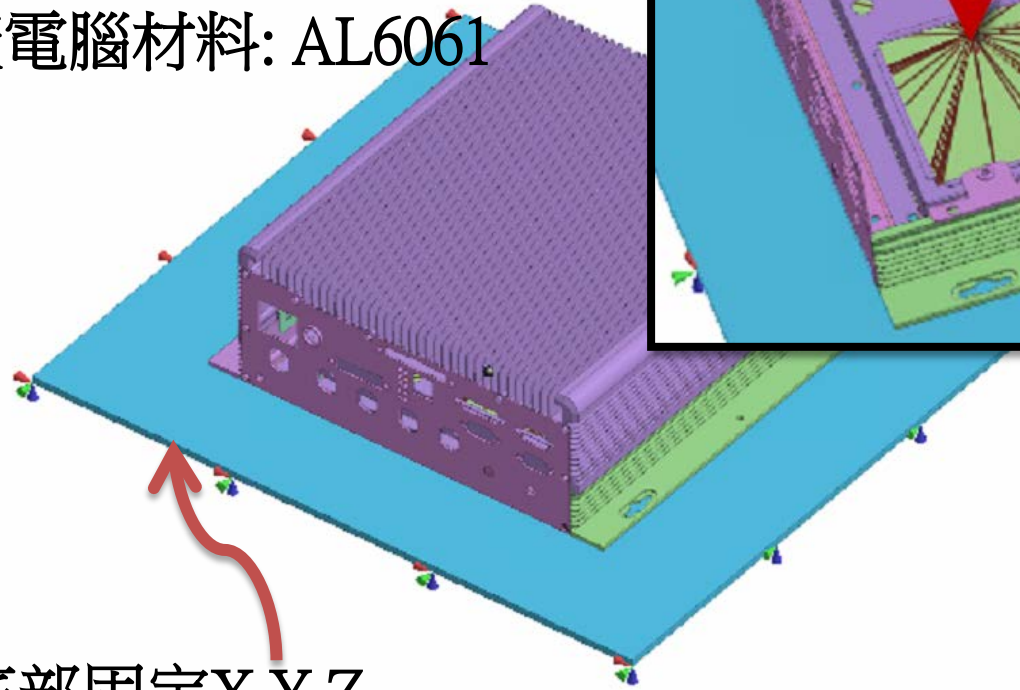
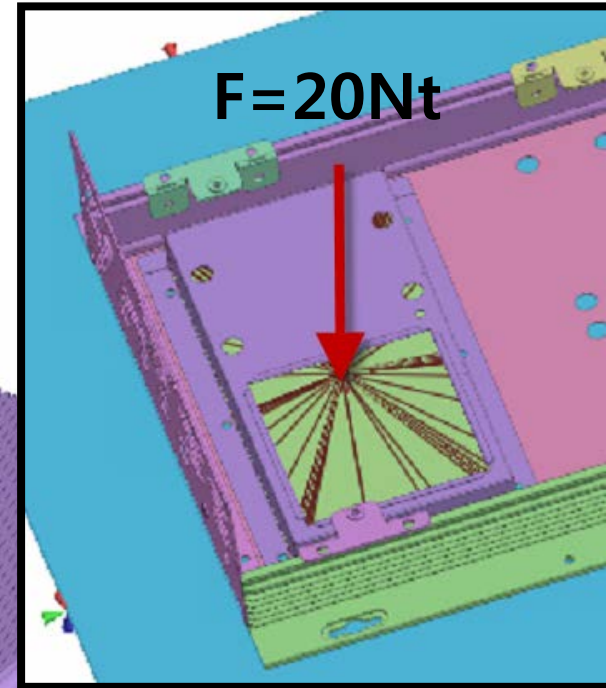
工廠電腦材料: AL6061

底部固定X,Y,Z

底板材料: Alloy Steel



頻率響應-模態法

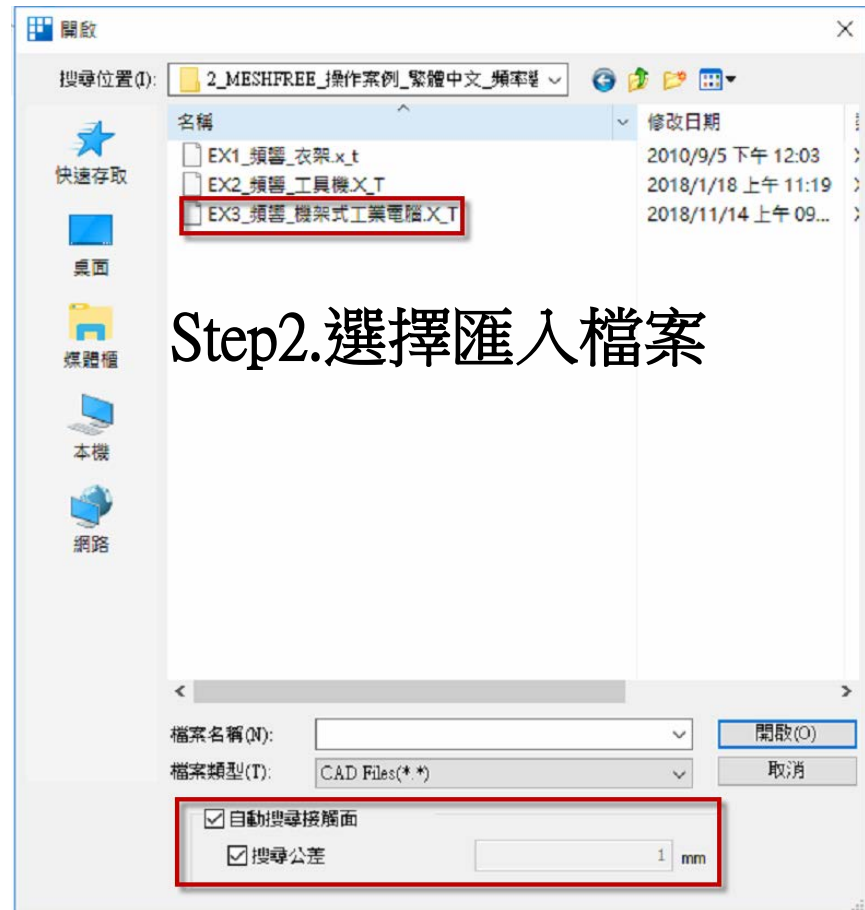




Step1.匯入3D 模型

MeshFree支援各類CAD 格式

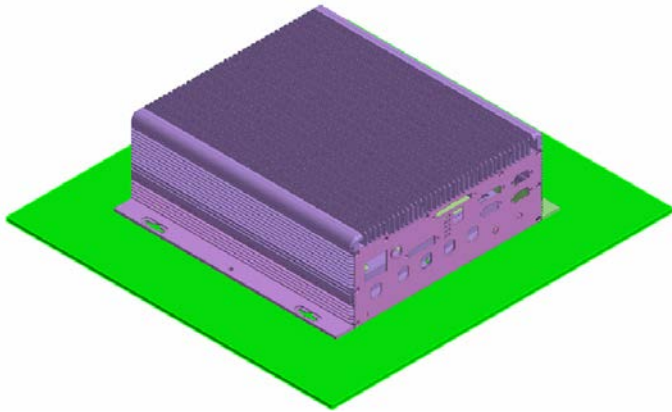
Parasolid (9 - 29) Files (*.x_t;*.xmt_tbt;*.x_b;*.xmt_bin)
 ACIS (R1 - 2017 1.0) Files (*.sat;*.sab;*.asat;*.asab)
 STEP (AP203, AP214, AP242) Files (*.stp;*.step)
 IGES (Up to 5.3) Files (*.igs;*.iges)
 Pro-E (16 - Creo 3.0) Files (*.prt;*.prt.*;*.asm;*.asm.*)
 CATIA V4 (CATIA 4.1.9 - 4.2.4) Files (*.model;*.exp;*.session)
 CATIA V5 (V5R8 - V5-6R2016) Files (*.CATPart;*.CATProduct)
 Solid Works (98 - 2017) Files (*.sldprt;*.sldasm)
 Unigraphics (11 - NX11) Files (*.prt)
 Inventor Part (V6 - V2017) Files (*.ipt)
 Inventor Assembly (V11 - V2017) Files (*.iam)
 Solid Edge (V18 - ST9) Files (*.par;*.asm;*.psm)



Step2.選擇匯入檔案

Step3.開啓自動搜尋接觸面

只選-底板

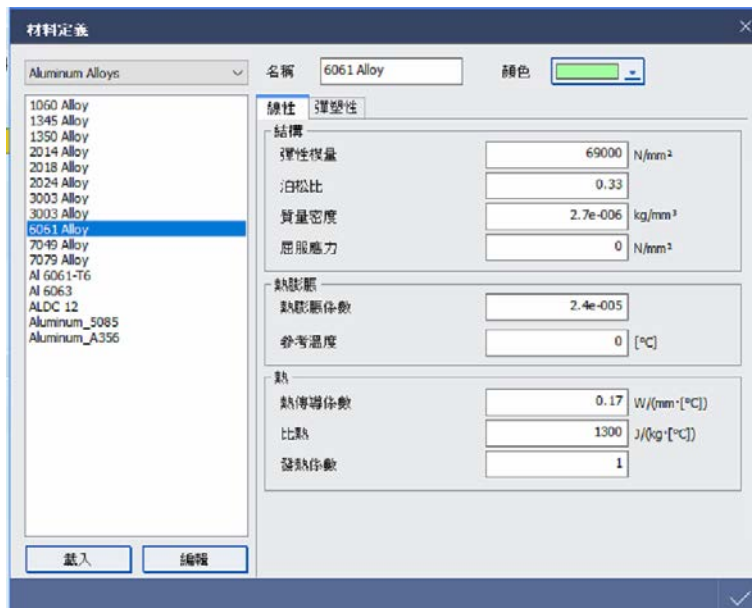
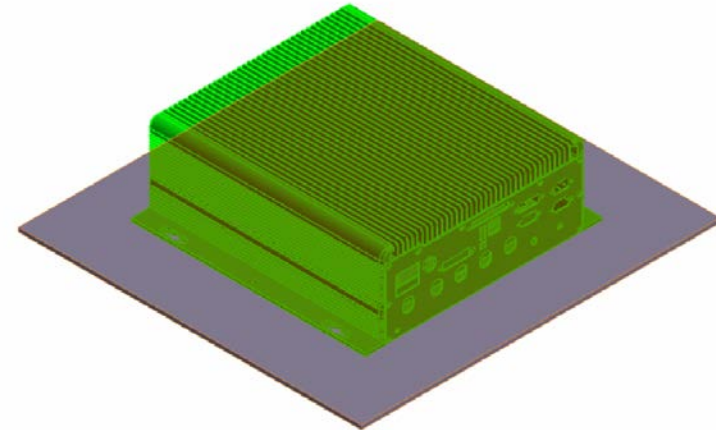


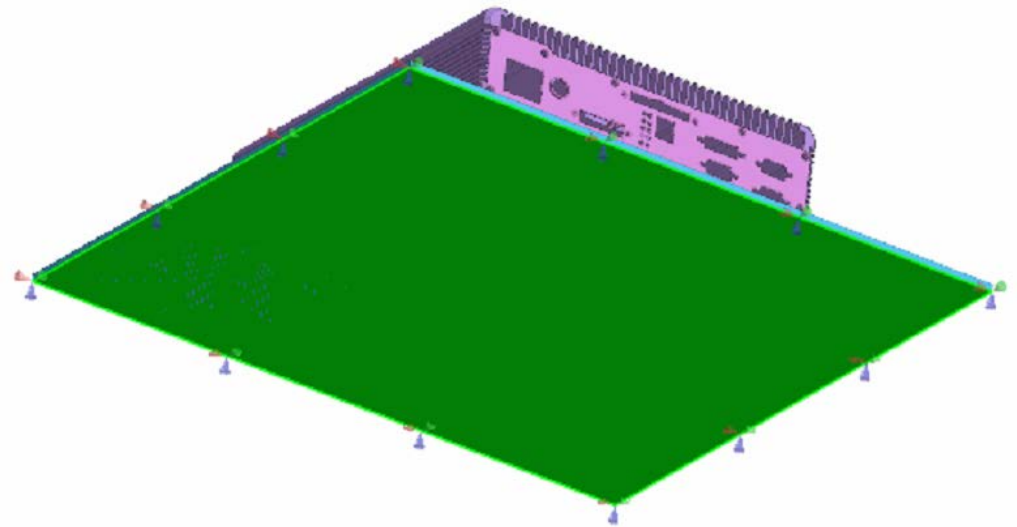
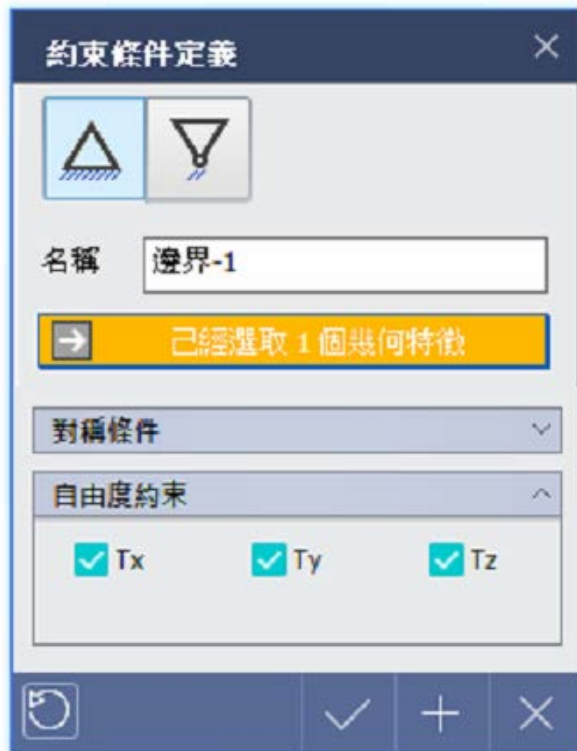
滑鼠右鍵,材料指定Alloy Steel

新增 Aluminum Alloy-6061

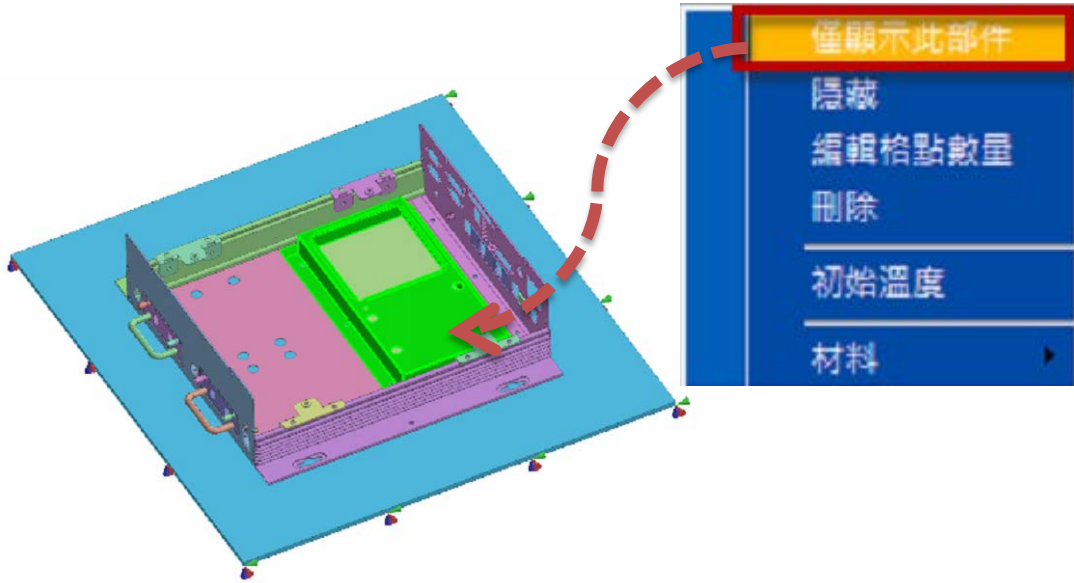


全選(排除底板)



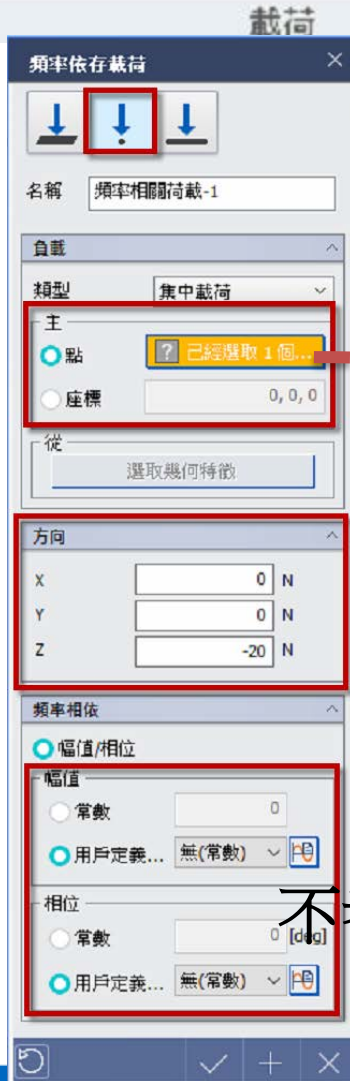


選取底面特徵

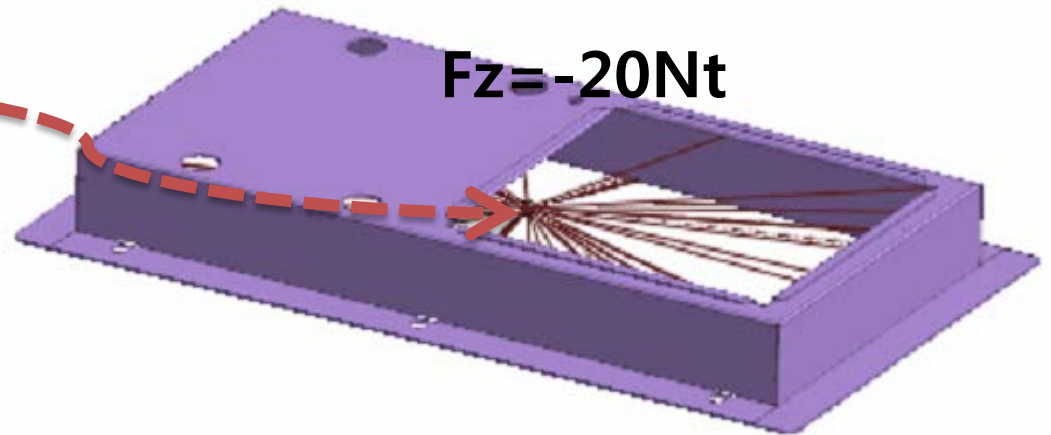


選取硬碟殼內側特徵面

自動產生剛性鏈接



施加剛體中心點



不考慮幅值/相位變化

計算:0~2000Hz 激振

(其中每40Hz計算一次/共計算50次)

分析

分析工況

頻率響應-模態法-1

分析工況控制

- 模型(30)
- 接觸(56)
- 邊界(2)
- 載荷(1)

分析工況控制

阻尼

結構阻尼

均勻結構阻尼係數: 0

模態法

模態數量: 10

頻率範圍

最低: 0 最高: 0 單位: cycle/sec

模態阻尼函數: 無

定義頻率集合

Sturm序列檢查

名稱: FREQ [新增]

頻率表

方式: 線性 [更改] [刪除]

初始頻率: 0 [Cycle]/sec

頻率增量: 40 [Cycle]/sec

增量數量: 50

No.	名稱	方式
1	FREQ	線性



記憶體大小
1.計算速度
2.分析準確性

匯出計算資訊

Export Mec File

49%

匯出幾何數據...

取消

進行求解

The screenshot displays the MIDAS MeshFree software interface during a solution process. A dialog box titled "求解程序 [1/1]" (Solution Program [1/1]) is overlaid on the main window, showing a progress bar at 12%. The dialog includes several options:

- 自動網點計算 (Automatic Meshing Calculation)
- 網點創建 (Mesh Creation)
- 接觸搜索 (Contact Search)
- 設置 (Settings)
- 剛度計算 (Stiffness Calculation)
- 質量計算 (Mass Calculation)
- 特徵值分析 (Eigenvalue Analysis)
- 分析結果 (Analysis Results)

The background interface shows a list of model components (e.g., V2616A_TOP_C, BOI_HDD_DO, LED_ROLDER) and analysis settings. The status bar at the bottom indicates "AUTOMATIC GRID ESTIMATION" and "MEMORY ESTIMATION TRIAL = 1 : TOTAL DOF = 147360". The system tray shows the date and time as 2018/11/14 at 10:24 AM.

The screenshot shows the MIDAS MeshFree software interface. The main window displays a model with a large blue circular progress indicator showing **87%**. A dialog box titled "求解程序 [1/1]" (Solving Program [1/1]) is open, listing various calculation steps:

- 自動網點計算
- 網點創建
- 接觸搜索
- 設置
- 剛度計算
- 質量計算
- 特徵值分析
- 分析結果

Two inset graphs are visible:

Maximum Displacement vs. Frequency

Frequency	Maximum Displacement
0.00e+000	0.00e+000
5.00e+002	~0.50e-006
~6.00e+002	~6.00e-006
~7.00e+002	~1.00e-006
1.00e+003	0.00e+000

Maximum Rotation vs. Frequency

Frequency	Maximum Rotation
0.00e+000	~6.64e-010
5.00e+002	~6.64e-010
~6.00e+002	~6.64e-010
~7.00e+002	~6.64e-010
1.00e+003	~6.64e-010

At the bottom of the interface, the status bar shows: **MAXIMUM TRANSLATION: 6.9942E-007(T3.256539), MAXIMUM ROTATION: 6.6383E-010(R1.1)** and **SOLVING FOR FREQUENCY = 675.000**. The Windows taskbar at the bottom indicates the time is 上午 10:44 on 2018/11/14.



分析結果

操作選項

開始

模型

分析

分析工況

頻率

分析結果數值查詢

顯示	位置	值
<input checked="" type="checkbox"/>	-101, 2.63, 0.7	8.11915e-008

分析步

多分析步結果表

多分析步結果圖

分析步: 結果

- Modal Frequency Response : FREQ=0.0000e+000
- Modal Frequency Response : FREQ=2.5000e+001
- Modal Frequency Response : FREQ=5.0000e+001
- Modal Frequency Response : FREQ=7.5000e+001
- Modal Frequency Response : FREQ=1.0000e+002
- Modal Frequency Response : FREQ=1.2500e+002
- Modal Frequency Response : FREQ=1.5000e+002
- Modal Frequency Response : FREQ=1.7500e+002

結果

座標: -240, -200, 0

結果表

結果圖

Uniform

科學記號

無網點

小數點位數 5

連結關係

特徵線視圖

最大/最小

動畫

刻度顯示

變形

數值顯示

顯示

子形狀 (總)

70.1 mm

速度-模態法 1

ω=1.0000e+003

LACEMENT:XYZ

8.11915e-008

數值。 \n 點擊該點檢查結果。

