

Fall 2009

控制技術專題 Special Topics on Control Technology

Lecture 02 Research Topics

Feng-Li Lian
NTU-EE
Sep09 – Jan10

Research Topics 1: Visual Servo and Control

■ Pan Tilt Unit

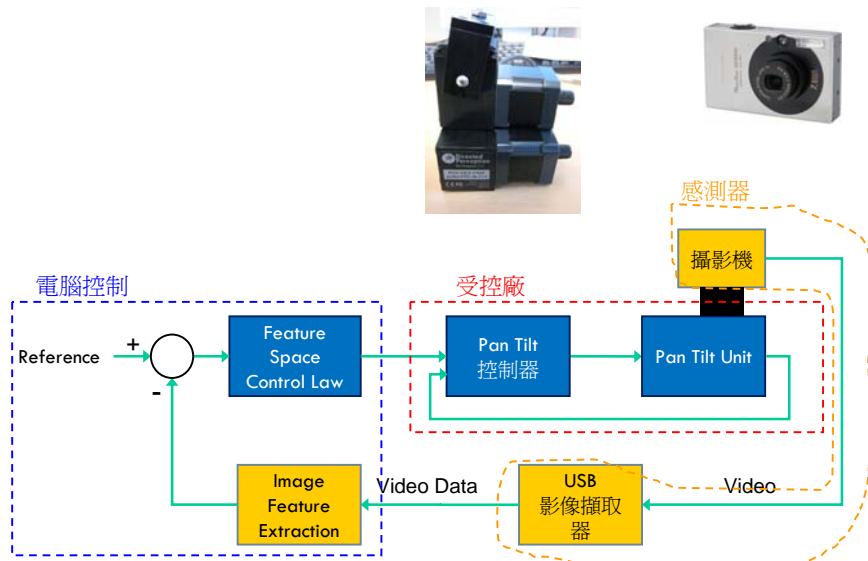
- 型號: PTU-D47-17.5
- 重量: 1.37 kg
- 馬達種類:
 - 步進馬達 (角度解析度: 0.051428 度)
- 最快轉速: 每秒300度
- 額訂載重: 1.81公斤
- Tilt範圍: -47 ~ 31度
- Pan範圍: +159 ~ -159 度



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Research Topics 1: Visual Servo and Control

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NTU-EE-RTCS01-Intro-3



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Research Topics 1: Visual Servo and Control

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Videos adapted from:
Chroust & Vincze,
Automation and Control Institute,
Vienna University of Technology

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Research Topics 2: 3D Mobile Vehicle

Key Specification:

- 外觀： 1140(L) x 635(W) x 1190(H) mm
- 重量： 104 kg
- 控制器： P&G VR2
- 升降高度： 53~83CM
- 馬達： 5100rpm 450W 27.5:1, 2個
- 最大載重： 130公斤
- 轉彎半徑： 550 mm
- 續航力： 30km
- 安靜及堅固的剪式升降系統



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Research Topics 3: Intelligent Car Following

Key Specification:

- 速度： 120 km/h
- 速度誤差： +/- 5 km/h
- 跟車距離： 80 m
- 致動器： 方向盤，油門，煞車
- 測試場景： 橢圓形軌道+轉彎半徑200 m



auto.qq.com/a/20040826/000049.htm



www.ford.com.tw



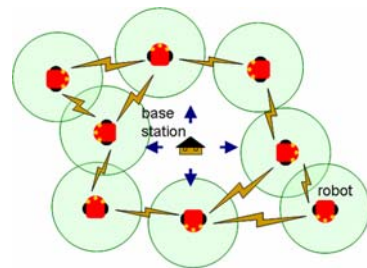
bbs.mychat.to/blog.php?uid=47775&tid=285146

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Research Topics 4: Wireless Sensing and Monitoring

Key Features:

- Sensing, Computing, Communication
- Role
 - Single sensing (individual)
 - Networking sensing (team)
- Mobility
 - Stationary sensing
 - Mobile sensing



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