

# **How to Build Quadra Copter?**

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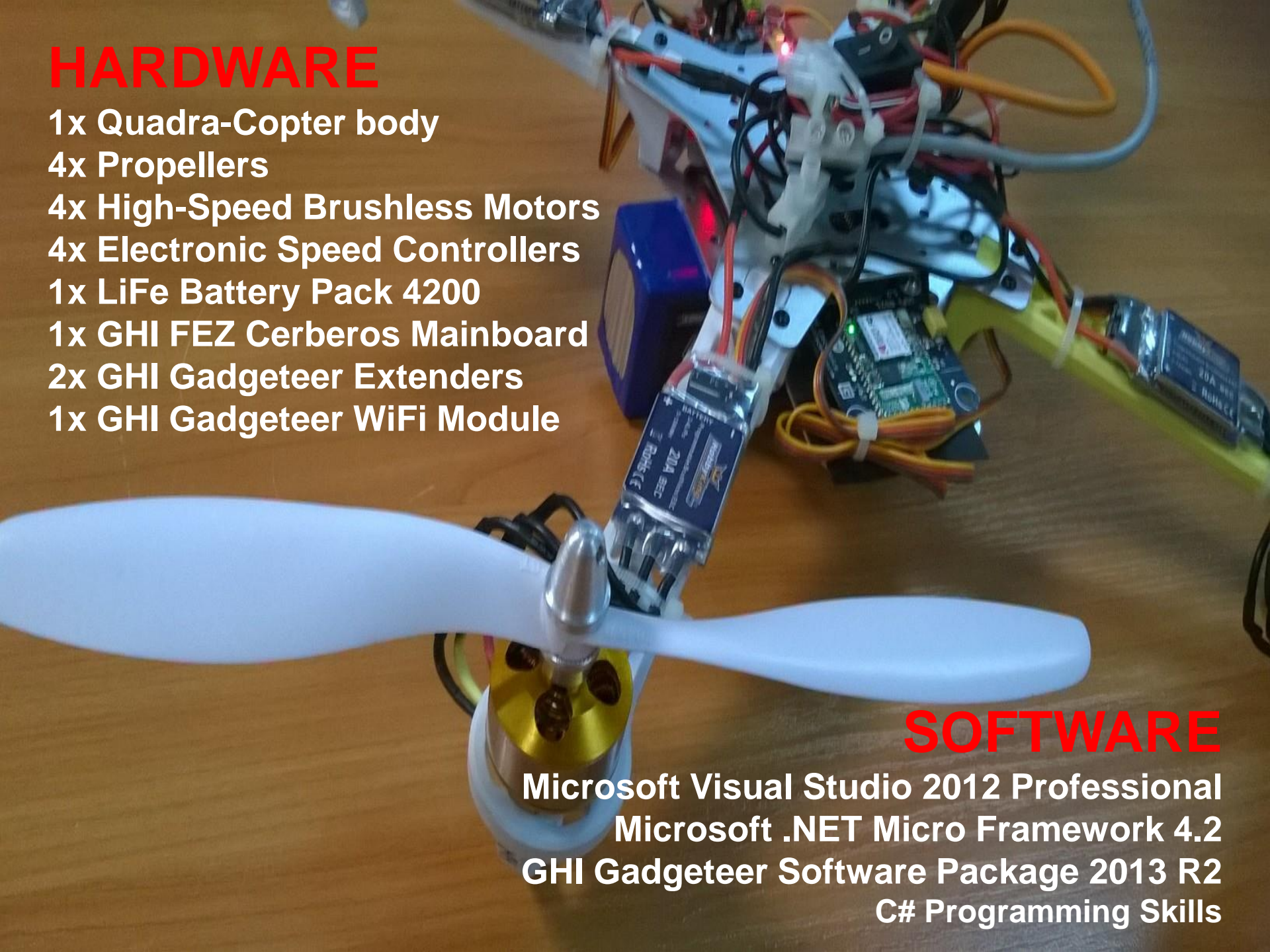
**Faculty of Computer Science and Engineering**

# **HARDWARE**

- 1x Quadra-Copter body
- 4x Propellers
- 4x High-Speed Brushless Motors
- 4x Electronic Speed Controllers
- 1x LiFe Battery Pack 4200
- 1x GHI FEZ Cerberos Mainboard
- 2x GHI Gadgeteer Extenders
- 1x GHI Gadgeteer WiFi Module

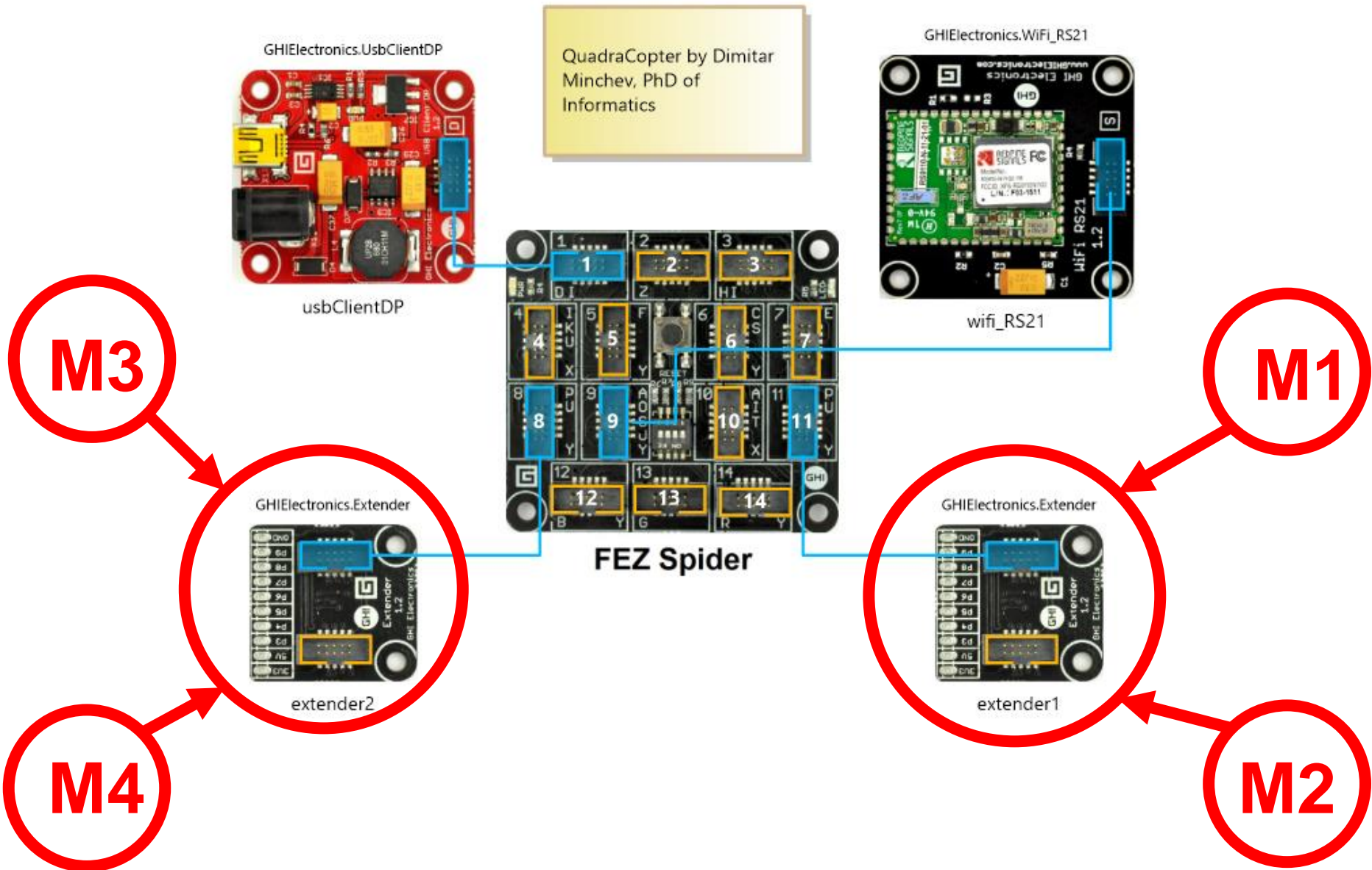
# **SOFTWARE**

- Microsoft Visual Studio 2012 Professional
- Microsoft .NET Micro Framework 4.2
- GHI Gadgeteer Software Package 2013 R2
- C# Programming Skills



# QUADRACOPTER CORE

## GHI Gadgeteer Architecture



# QuadraCopter

Developer: Dimitar Minchev, PhD of Informatics, E-mail: mitko@bfu.bg

## User Interface (UI) Windows 8 Store App

52%

Messages Log ...

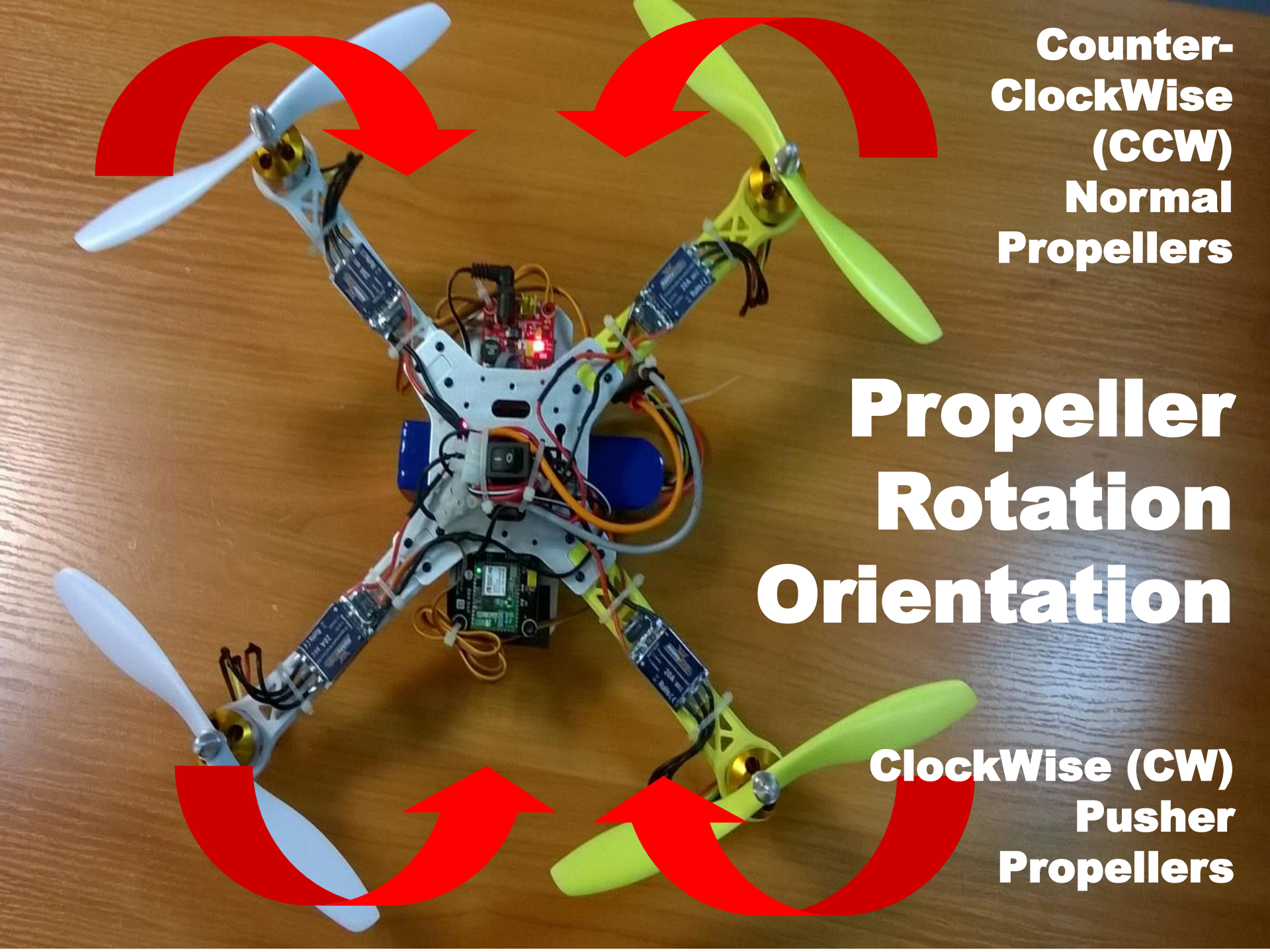
Socket Initialized. 192.168.0.104:5150.  
M1=52% M2=52% M3=52% M4=52%  
M1=47% M2=57% M3=57% M4=47%

**CONTROL  
MOTOR  
POWER**

**CONTROL  
FLYING  
DIRECTION**

FORWARD





**Counter-  
ClockWise  
(CCW)  
Normal  
Propellers**

# **Propeller Rotation Orientation**

**ClockWise (CW)  
Pusher  
Propellers**

```
try
{
    // Build a QuadraCopter
}
catch (Exception e)
{
    // Questions ?
}
finally
{
    // Thank You!
}
```