



RoboLeg

Nvis 3305



Nvis 3305 RoboLeg is a next generation legged robot platform with marvelous design and capabilities. It has 6 degrees of freedom which gives it stable walking steps using 6 servo motors. The main board of the RoboLeg can drive up to 6 servo motors in parallel. There are various ports, I2C, SPI and USART connectors for variety of applications like sensor interfacing.

RoboLeg can perform various effective movements like Right Kick, Left Kick, Stretching, Forward walk and Reverse Walk. It is very easy to drive all these movements using menu switches and LCD provided on the main board. It can be controlled using wireless device, or using PC interface and software.

Features

- 6 DOF moving capability
- Main board featuring various ports and connectors for range of applications
- Wireless RF controlled
- High torque metal geared Servo motor
- Online Product Tutorial

Scope of Learning

- Learn to interface Servo motor
- Gaining knowledge about two legged walking principle
- Gaining knowledge about advance level programming for forward/reverse walking principle, right/left kick, stretching and many more
- Learn wireless control over RoboLeg using RF module
- Control using PC interface and software



Technical Specifications

Main Board:

Controller	: ATmega128
Operating frequency	: 16 MHz
Features	: I2C, SPI, UART and I/O lines available
Servo Connectors	: Standard Servo connecting ports
Interface	: TACT switches for menu selection
Display	: 16 x 2 LCD

High Torque metal Geared Servo motors:

Torque	: 15.5kg/cm at 4.8V, 17kg/cm at 6V
Operating speed	: 0.15sec/60 degree
Operating voltage	: 4.8V to 6V

Degree of freedom

Toe	: -30° to 90°
Knee	: -90° to 90°
Thigh	: -90° to 90°

RF Module (optional):

Typical working voltage	: 3.7V
Frequency of operation	: 433.92 MHz
Typical operating range	: 20 feet (open air)
UART baud rate	: 4800bps

Battery:

Type	: Li-Po 2 Cell battery
Ratings	: 8.4 volts, 2000 mAh

Included Accessories

DC adapter 9V	: 1 no.
Battery (8.4V)	: 1 no.
Software CD	: 1 no.

Optional Accessories

Compact AVR USB Programmer (Nvis 5003P)
RF module (Nvis MC15S09)

Sensor Modules:

- IR Sensor (Nvis MCS02)
- TSOP-IR Sensor (Nvis MCS03)
- Fire Sensor (Nvis MCS04)
- Light Sensor (Nvis MCS05)
- Clap Sensor (Nvis MCS06)



Compact AVR USB Programmer

