STUDICA ROBOTICS BUILDING SYSTEM

Bring Build Ideas to Life

The Studica Robotics Building System offers everything you need to create big and sturdy robots of your own design. This system is ideal for the classroom, and robotics teams like WorldSkills, FRC, FTC, WRO, and anyone who wants to make their build ideas come to life.

- This **affordable robotics** build platform offers a variety of structural and motion components.
- All components work easily together. In most cases there is **no need for a machine shop** or special equipment. If required, the aluminum material can easily be cut with a simple hacksaw or drilled with a hand-held drill.
- Unique hole pattern allows for **compatibility with many existing build systems.**
- The 3mm thick 6061-T6 aluminum structure is deburred, polished and blue anodized, making your robot or automation project strong, safe and stand out against the rest.
- Compatible with most FRC and FTC systems offering the ability to combine structure and electronics.
- With its open platform, the VMX Robotics Controller can be programmed in Java, C++, Python, ROS & even LabVIEW.
- STEP 3D files are available for each part making it easy to design your robot in Fusion 360, Solidworks, Inventor or Creo.

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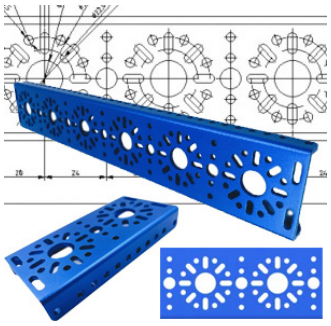
The VMX Robotics Controller

The VMX Robotics Controller is the heart of an intelligent robot and includes software libraries, example code and many more features. The controller can be programmed in Java and C++, Python, ROS and LabVIEW. The VMX offers a multitude of modern digital communications interfaces and with a Linux-based operating system, users can directly access most modern devices like Intel RealSense tracking, LIDAR, and depth cameras.



Structural Elements

There are two types of channel components available Low Profile Series Channel and U Series channel. The unique design pattern makes it easy to connect the structure, sprockets, motors, and gears. A large center hole makes it possible to integrate flange bearings to provide the ultimate support of shafts and motors. There are also a large variety of beams, flats, and brackets to allow you to build at multiple angles for unique chassis and mechanism. A multitude of mounting options for servos and DC motors mounts are available as well as gears, sprockets, pulleys, and chain.

Motion Components

The Multi-Mode Smart Servo features an ultra-stout steel gear train to provide more torque. This angular programmable servo can fill a variety of roles on your robot or project. In the default mode, the servo can rotate 300 degrees while having positioning feedback. In this mode, the PWM signal will determine the position of the servo. Using the Smart Robot Servo Programmer (sold separately) the Multi-Mode Smart Servo can be configured to run in continuous, standard, and custom angular mode. A Maverick DC Gear Motor and a variety of wheel options are also available.

Titan Quad Motor Controller

The Titan Quad Motor Controller is a powerful, 4-channel CAN-based motor controller with a built-in fuse-box (for DC motors up to 20A). Features 4 hardware encoder ports, 2 power extension ports to power other 12VDC devices, a built in LED controller, and more.

Studica Robotics Resources

Studica Robotics offers a documentation hub that provides a wide variety of information and tutorials. Key topics include software set-up, robotics & control systems, programming, and troubleshooting for both First Robotics and Worldskills Mobile Robotics. View at https://docs.studica.com/

Need More Info? Email: info@studica.com

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