

TraX Controller

Terrain Ready Autonomy Extension



TECHNICAL SPECIFICATIONS

System Overview			
Product Name	TraX controller		
Function	Drive-by-wire & autonomy-enabling control unit for Unmanned Vehicles		
Operation Modes, Vehicle Type Support	Remote Control (RC), Autonomous for Combustion engine-powered Off-road/On- road platforms		
Drive-by-Wire Peripherals			
	Throttle & Brake	Steering	Gear Shift
Description	Electronic actuation (Linear actuator)	Electronic actuation (EPS)	Electronic actuation (BLDC)
Operation & Autonomy			
RC Mode	Human-in-the-loop via long-range RF		
Autonomous Mode	Velocity Control Integrated navigation, perception, planning (Upcoming)		
Peripheral Coordination	Supports robotic manipulators and drone docking/charging		
Sensor Fusion	Compatible with LiDAR, RADAR, RGB, IR cameras.		
Compute and Control modules			
Compute Board	Custom control board With Jetson and Stm Micro-Controller		
Interface & Connectivity			
USB	1x USB 3.0		
Ethernet	4x Gigabit Ethernet		
CAN Bus	2x CAN		
Serial	1x RS232, 1x RS485, 1x UART		
Signal	5x PWM Port		
Control I/O	CAN, UART, USB, Ethernet		
Wireless Communication	2.402 – 2.478 GHz 2x2 MIMO (Multiple Input Multiple Output)		
Mechanical & Environmental			
Enclosure	IP65-rated		
Operating Temperature	-20°C to +60°C		
Vibration Resistance	Designed for off-road environments		
Sensor Compatibility			
RGB Cameras & Infrared (IR) Cameras	Compatible & Plug-and-play via USB		
LiDAR	High-bandwidth supported (Ethernet/CAN)		
RADAR	Configurable via CAN/serial interfaces		
Contact us today for pricing and any technical assistance: info@automindynamics.com Visit our website : www.automindynamics.com			