



MT400
powered by
Motivity

MobileRobots MT-series robotic bases with *Motivity by MobileRobots™* provide the most common requirements for an indoor facility base, combining good payload capability with a people-friendly size appropriate to standard doorways, corridors and elevators. The robust design and proven hardware comprising MobileRobots bases have driven self-charging application solutions many thousands of miles. Industrial-quality laser sensing backed up by safety bumpers make the MT-series a platform that VARs, integrators and developers can rely on.

The MT400 base with easily accessible I/O ports maximizes flexibility for partners to add proprietary accessories, functionality and interfaces to the component base with Motivity Developer's Modules. The top plate provides ample space for mounting utility storage, actuators or custom shells for application development and branding as well.



The MT490 incorporates all the features of the MT400 plus an extension with interactive touchscreen. The extension includes an embedded PC strictly for partner software to reside and control. Designed to facilitate development of robot assistants, security robots, tour guides, robotic kiosks, and other people-sized applications, the MT490 provides a robust foundation for customer solutions requiring interaction with people.

Find out more at:

<http://www.MobileRobots.com>

	MT400	MT490
AUTONOMOUS NAVIGATION PACKAGES		
Motivity™ Indoor Autonomous Navigation	Yes	Yes
Motivity™ with Outdoor Navigation	No	No
PHYSICAL		
Length	59cm	59cm
Width	48cm	48cm
Height (body)	38cm (52cm w/ dome)	131cm
Ground clearance	5cm	5cm
Unladen weight	38kg	54kg
Payload of base platform with included battery	40kg flat	24kg flat
(other drive ratios available on large orders)	25kg @ 13% grade	9kg @ 8% grade
CONSTRUCTION		
Body	White powder-coated 5052 aluminum	White powder-coated 5052 aluminum
IP rating	42*	42*
Battery access	Removable panel access	Removable panel access
POWER		
Battery	24V NiMH	24V NiMH
Charge	432 Watt-Hr	432 Watt-Hr
Continuous run time, base platform (new / after 500 cycles)	4hrs / 2:45hrs	2:30hrs / 1:40hrs
Recharge time	2:15hrs	2:15hrs
Charging Dock for Autonomous Charging	Yes	Yes
Manual Charger	Optional	Optional
MOBILITY		
Drive	2-wheel differential drive, plus 2 front and 2 rear balancing casters	2-wheel differential drive, plus 2 front and 2 rear balancing casters
Motor Type	Brushless, planetary gear reduction, w/ encoder feedback	Brushless, planetary gear reduction, w/ encoder feedback
Wheel composition	Foam filled non-marking rubber, hard casters	Foam filled non-marking rubber, hard casters
Drive Wheel diameter / width	20cm / 5cm	20cm / 5cm
Suspension	Passive	Passive
Steering	Differential	Differential
Gear ratio	1:28.9	1:28.9
Pushing force	22kg	22kg
Swing radius / Turn radius	29cm / 0	29cm / 0
Translational speed max	1.7 m/sec	1.7 m/sec
Traversable sill max	2cm*	2cm*
Traversable gap max	3.5cm	3.5cm
Grade capability, unladen, max	13% grade	8% grade
Traversable / terrains	Office, laboratory, light-industrial	Office, laboratory, light-industrial

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SOFTWARE LICENSES & SERVERS		
Onboard Motivity Software	Yes	Yes
MobileEyes/MobilePlanner, single license	Yes	Yes
MobileSim / SimBank Compatible	Yes	Yes
Motivity Fleet Appliance Compatible	Yes	Yes
Motivity Developer Modules	Optional	Optional
MANIPULATION		
Arm	N/A	N/A
AUDIO / SURVEILLANCE / VISION		
Low-light Surveillance	Optional PTZ	Optional PTZ
Automated PTZ Positioning	(Included with PTZ Surveillance Packages)	(Included with PTZ Surveillance Packages)
Speaker	3.5" Speaker w/20W Amplifier, Mono Output	3.5" Speaker w/20W Amplifier, Mono Output
Microphone	(Included with PTZ Surveillance Packages)	(Included with PTZ Surveillance Packages)
GUIDANCE SENSORS		
Laser	LMS 200 included	LMS 200 included
Bumpers	6 Front, 6 Rear	8 Front (6 lower, 2 upper), 8 Rear (6 lower, 2 upper)
Ultrasonic	4 rear	4 rear
Low-lying Obstacle Detection	Optional	Optional
ADDITIONAL ODOMETRY SENSORS		
Gyro	Angular-rate gyro	Angular-rate gyro
SENSORS		
Sprinkler detection	Optional	Optional
Motion detection	Optional	Optional
Directional heat sensor	Optional	Optional
(Inquire for additional and custom sensors)		
OPERATOR INPUT & CONTROL OPTIONS		
GUI remote control	MobileEyes	MobileEyes
Touchscreen	No	Yes
Tethered joystick	Yes	Yes
Radio call button	Optional	Optional
Onboard pushbuttons	Optional	Optional
Web-browser and handheld interfaces	Optional	Optional
Custom Remote Control Options Available	Optional	Optional
Secondary Single-Board Computer for Integrator Use	No	Yes

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MISCELLANEOUS OPTIONS		
Barcode Scanner	Optional	Optional
RFID Reader	Optional	Optional
RF elevator & door control	Optional	Optional
COMMUNICATIONS		
Wireless Ethernet	802.11a/b/g radio & antennas included	802.11a/b/g radio & antennas included
ELECTRONICS / EXPANSION PORTS		
Onboard microcontroller	Hitachi SH2 (32-bit)	Hitachi SH2 (32-bit)
Onboard single-board computer	Intel Pentium-M Embedded SBC	Intel Pentium-M Embedded SBC
Digital I/O	8 inputs, 8 outputs	8 inputs, 8 outputs
Analog Input Ports	6 12-bit inputs (0-5VDC)	6 12-bit inputs (0-5VDC)
Communications busses	10/100 BaseT port, 2 RS-232	2 RS-232, Optional 3 10/100BaseT
Switched Power Outputs <i>(availability depends on which options are included)</i>	1 - Switched 5VDC, 2A 2 - Switched 12VDC, 2A/ea, 5A total 1 - Switched 24VDC, 2A 2 - Switched Battery Voltage, 2A/ea 1 - E-stopped Battery Voltage, 7.5A	1 - Switched 5VDC, 2A 2 - Switched 12VDC, 2A/ea 1 - Switched 24VDC, 2A 1 - Switched Battery Voltage, 2A 1 - E-stopped Battery Voltage, 7.5A
CONTROLS, PORTS AND INDICATORS (side or top panels)		
LCD display	Backlit w/ multiple menus and selection switches	Backlit w/ multiple menus and selection switches
Emergency Stop Control	Disconnects power from drive motors	Disconnects power from drive motors
Main power switch	Optional locked ON/OFF switch	Optional locked ON/OFF switch
Joystick Port	Yes	Yes
Charging	24VDC Charge Port	24VDC Charge Port
Automatic Charging Station	Manual Override	Manual Override
COMPLIANCE INFORMATION		
Charging Station	Tested to UL1740	Tested to UL1740
Robot Base	FCC Part15 Compliant	FCC Part15 Compliant