

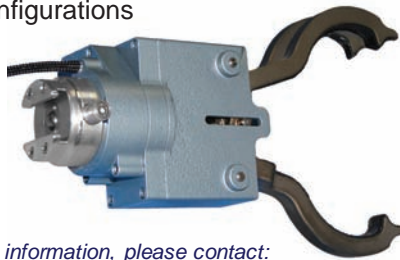
Terabot[®] - S on Matilda[®] Platform

Terabot[®] - S

Oceaneering's Terabot[®] family of manipulators consists of a range of a multi-degrees-of-freedom (DOF) all-electric manipulators capable of a wide variety of tasks. The Terabot[®] - S is the latest in the series and features an optional Spatially Correspondent (SC) master user interface for highly intuitive control. The manipulator joints have integrated clutches for constant protection against overloads and are fully sealed, making them water and dust tight. The manipulator uses a quick-release manual tool interface and a variety of options, including a 2 jaw gripper. A variety of custom tooling can be supplied, or the user can choose to integrate their own tooling on a quick-release interface plate. Cartesian control options are available to provide true end-point gripper control and automated routines for redundant tasks.

Features

- 5-DOF + gripper, articulated robotic arm, and high efficiency digital controller
- Integrated joint overload clutches
- Absolute joint encoding, clutch independent
- Mobility platform independent
- High payload-to-weight ratio
- Manual quick-release tool changeout
- Open serial interface protocol
- Compact, low profile stowage
- Joint space control
- Optional SC master controller
- Optional 2 jaw bypass type gripper (shown below)
- Optional Cartesian space control
- Optional scalable link sizes for custom configurations



For further information, please contact:

Benefits

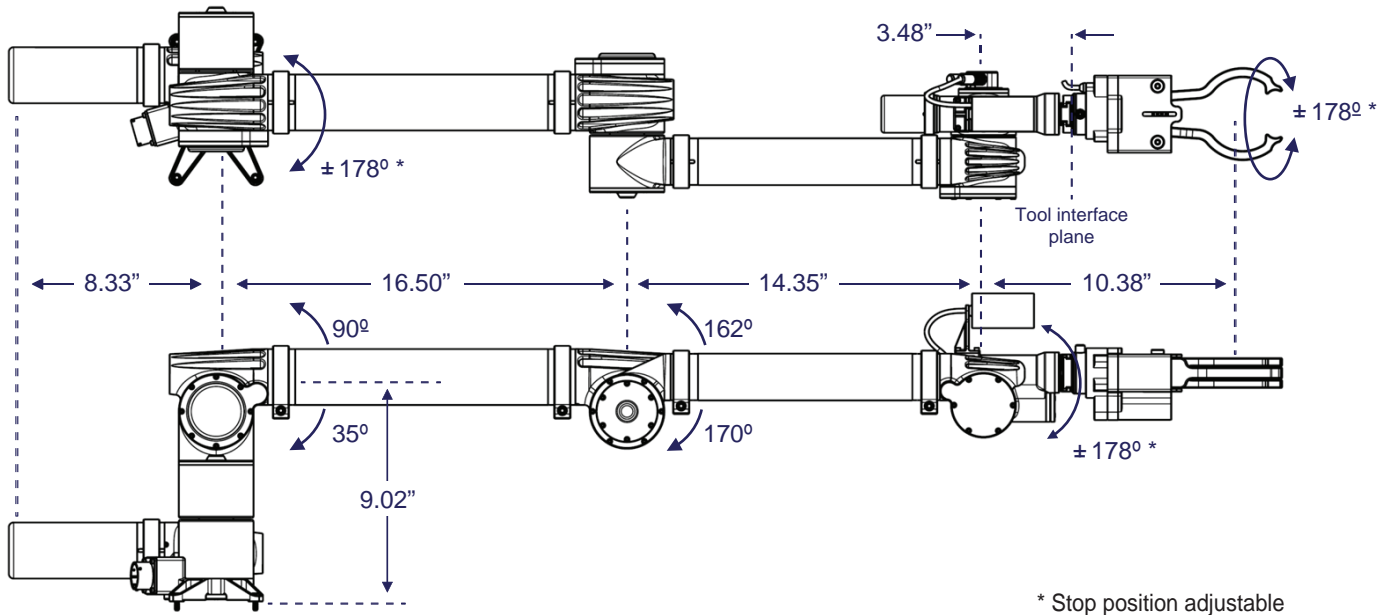
- Flexible system performs complex tasks
- Intuitive control greatly minimizes training
- Quick-release interface allows easy installation of user tools/sensors
- Joint clutches provide constant protection against overloads
- Operation in harsh environmental conditions
- System may be washed / decontaminated
- User I/O pass thru minimizes external cables
- Lightweight system can be fitted to many vehicles as OEM or retrofit
- Open command/data interface allows connection to any user system
- Low power consumption extends vehicle battery life

Applications

- Military operations/EOD
- First responders
- Tactical law enforcement
- Biotech/Biochem response & cleanup
- Education/Research

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	TERABOT® - S	TERABOT®	TERABOT® XL
Payload (Full extension / 12in Reach)	20 / 50 lbs	25 / 60 lbs	10 / 60 lbs
Reach	40 in	42 in	72 in
Weight	22 lbs	42 lbs	110 lbs
Tooling/Gripper	Manual quick release	2 finger	Auto tool changer
Power (Standby / Max)	< 5w / 175w	< 6w / 225w	< 6w / 800w
Joint Resolution	~0.1°	~0.05°	~0.01°
Joint Rate (Max)	45°	30°	40°
Joint Type	Low backlash, clutch protected	Zero backlash	Zero backlash, clutch protected

Manipulator

- Configuration 5 DOF + gripper
- Housing material Aluminum
- Environmental protection Static and dynamic seals
- Joint encoding Absolute
- Joint backlash < ±1°
- Tool interface Quick release, manual
- User I/O Internal pass thru
- Camera Color w/auto IR lighting

SC Master Controller

- Configuration 5 DOF + gripper control
- Length ~ 12 in extended
- Power source 9-18 VDC, 0.5A max
- Data interface RS232, 19.2k baud
- User interface SC controller
4x40 LCD, switches

Gripper

- Housing Aluminum, sealed
- Grip force 20 lb at center of grip
- Opening 4 in, bypass fingers
- Interface Quick release

Manipulator System Controller

- Housing Aluminum, sealed
- Power source 24-30VDC, 8A max
- Data interface RS232, 19.2k baud
- Command / query Joint space, status

Terabot® - S Options

- Cartesian control with onboard kinematics
- Custom tooling including grippers, cutters, and digging implements
- Quick release interface adapters to attach user supplied tooling / sensors
- Automated tool changeout
- Quick release manipulator mount
- Color zoom camera with remote zoom / focus / iris
- Alternate segment lengths for custom applications
- Graphical user interface software for control from a notebook PC with scripting, Cartesian control and display, and integrated video
- Alternate communications using RS 422/485 or Ethernet