Add-On Systems for Explosive Ordnance Disposal Robots

Distance measurement & manipulation assistance

“Plug & play” camera & laser range finder

Pan/tilt/zoom & panoramic cameras

Touch screen user interface for navigation & reconnaissance

We make EOD robots smarter and easier to use.
NREC’s add-on perception and autonomy packages make life easier for EOD robot operators

Manipulation Assistance
- “Plug & play” camera and laser range finder unit gives distance from the end effector to the target
- Recommends optimum manipulator arm movements to reach the target
- Replaces existing end effector camera
- Easily retrofitted to fielded EOD robots
- Overlays on robot’s existing OCU

Situational Awareness
- Ultra-fast pan/tilt/zoom camera lets operators scout out the terrain and zoom in on objects and places of interest
- Panoramic video cameras give operators a full, 360° view of the robot’s surroundings
- Miniaturized laser range finder gives distance to target

Autonomy
- “Click & go” — The robot navigates to a target selected by the operator, automatically avoiding obstacles
- “Click & grab” — The robot moves itself within reach of the target, extends the manipulator, and grasps the target with the end effector

Benefits
- Improves operator awareness of the robot’s environment
- Reduces operator workload
- Supports surveillance, reconnaissance, and related missions

NREC’s “plug & play” manipulation assistance system is compatible with both the Talon and Packbot platforms. (Photos courtesy of US Army)