



CALIBER[®] FLEX

SMART, STRONG, AFFORDABLE



CALIBER® FLEX EOD Robot

ICOR's next-generation, most technologically advanced EOD robot meets the demands of today's bomb technicians

Through supplying robots in over 55 countries, ICOR has learned what bomb technicians demand in EOD robots: simplicity, reliability, dependability and affordability.

ICOR has always maintained an engineering philosophy to focus on core mission requirements and ease of use. The CALIBER® FLEX is the next-generation EOD robot that will render safe the threats of today and with the expandability to address the threats of the future.





Key Features:

- Mesh COFDM IP radios
- Configurable radio frequencies via CCU settings
- RF signal strength indicator
- Multiple presets and Real-time 3D avatar
- Picture-in-Picture (PIP)
- 15" (38 cm) LCD capacitive touchscreen
- 2-way audio with video/screenshot recording
- Operate on AC or DC voltage
- Gamepad controller with multi-axis control

COMMAND & CONTROL UNIT (CCU)

Simple & Intuitive Operation

To increase mission effectiveness, the CALIBER® FLEX CCU improves upon the familiarity of the battle-proven CCU interface used in other CALIBER® robots. A combination of LCD capacitive touchscreen buttons, variable speed joysticks, and membrane push buttons group the major functions of the robot into a logical and familiar sequence.

The real-time 3D avatar provides better awareness of the robot's position by highlighting the selected function in green. Preset positions make it faster to deploy the robot, configure it for a specific mission and then stow it home once finished.

The CALIBER® FLEX has the option of an easy-to-use gamepad controller in addition to the standard features on the CCU. This allows for simultaneous multi-axis control of the manipulator arm, enhancing fine motor skill operations. Using the gamepad controller is easy with the on-screen diagram showing the button functions.





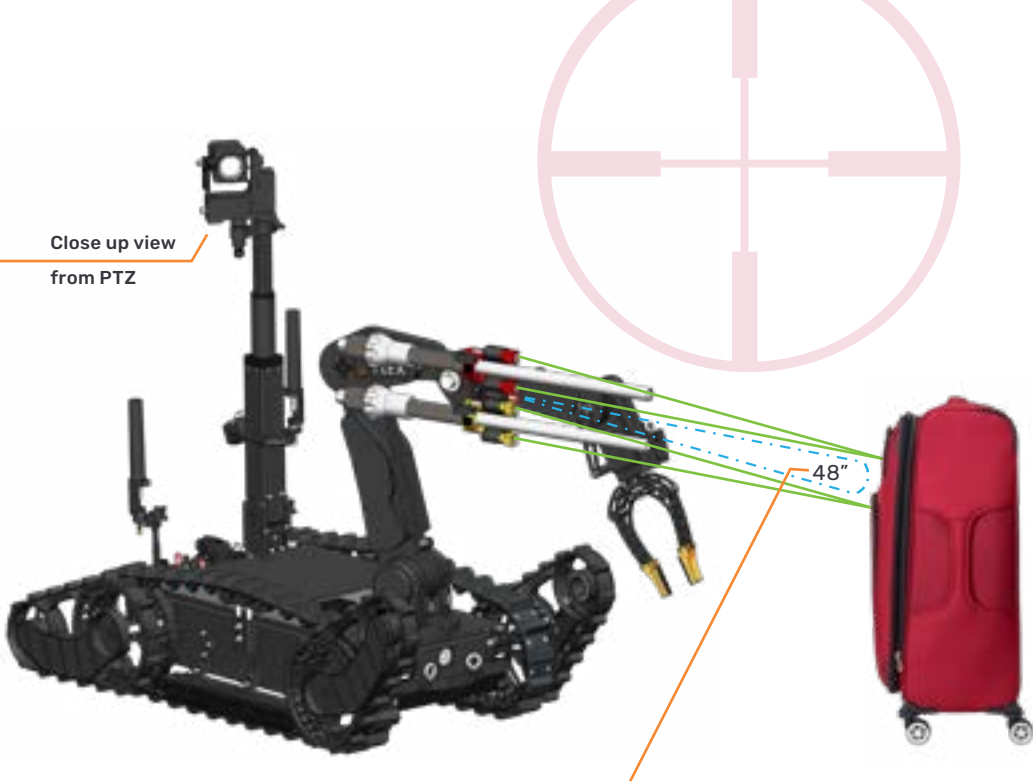
Disrupter System and Mounts

CALIBER® FLEX has the ability to mount two recoilless disrupters on the manipulator arm and will work with most major brands. Once the operator selects the disrupter system from the toolbox, the 3D avatar will update with a visual representation of that disrupter. Loading the disrupter is simplified by using the weapon load preset position.



Lasers, Sensors, and Circuits

The CCU has on-board cross hairs for aiming that are calibrated with the LIDAR measuring sensor and green lasers. Gold and red laser assemblies make it easy to differentiate which disrupter is selected for firing. The CALIBER® FLEX has 5 sets of 24V firing circuits, conveniently located on the claw, disrupter mount and on the deck. Each firing circuit has an individually configurable hold time.

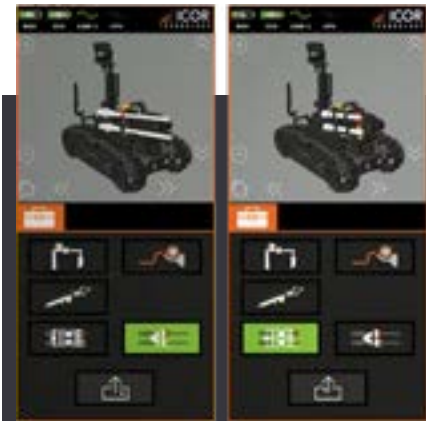


Close up view from PTZ

Color coordinated icons on the CCU differentiate between the red and gold disrupters mounts. Integrated LIDAR sensor measures the distance from the disrupter to the target. In the illustration shown, the LIDAR is indicating a distance of 48" (122 cm) from the barrel to the bag. Users can configure measurements in inches or centimeters.



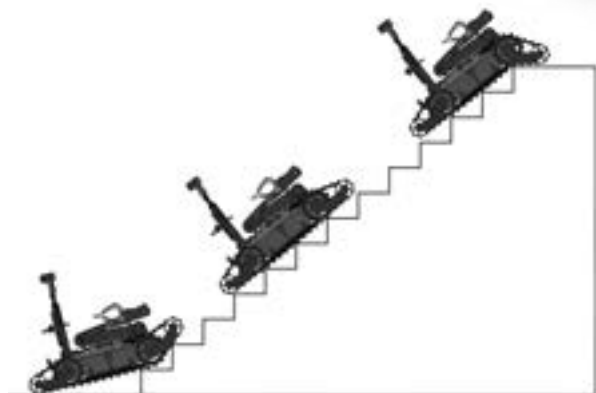
Ready, Aim, Fire



3D avatar is user-configurable to display installed disrupters, giving the operator more lifelike situational awareness.

Drive System

Strong, robust and precise are the core attributes of the CALIBER® FLEX drive system. Operators will note the powerful drive motors that reach full torque at zero speed with precise control, making it easier to maneuver through obstacles with confidence.



Preset Stair Positions

The preset positions for climbing stairs take the guesswork out of approaching, ascending, and descending stairs.

With a push of a button the CALIBER® Flex will automatically set the flippers to the optimal position to traverse stairs.



Mobility

The combination of front and rear articulating flippers and rubber tracks make this medium-sized robot effortlessly drive over rough terrain and climb 45° stairs with stability. The 2-stage transmission, with 3 drive modes and variable speed joystick can drive up to 3.7 mph (6km/h) and make 0° radius turns. Front & rear drive cameras have overlaid guidelines to assist with driving.

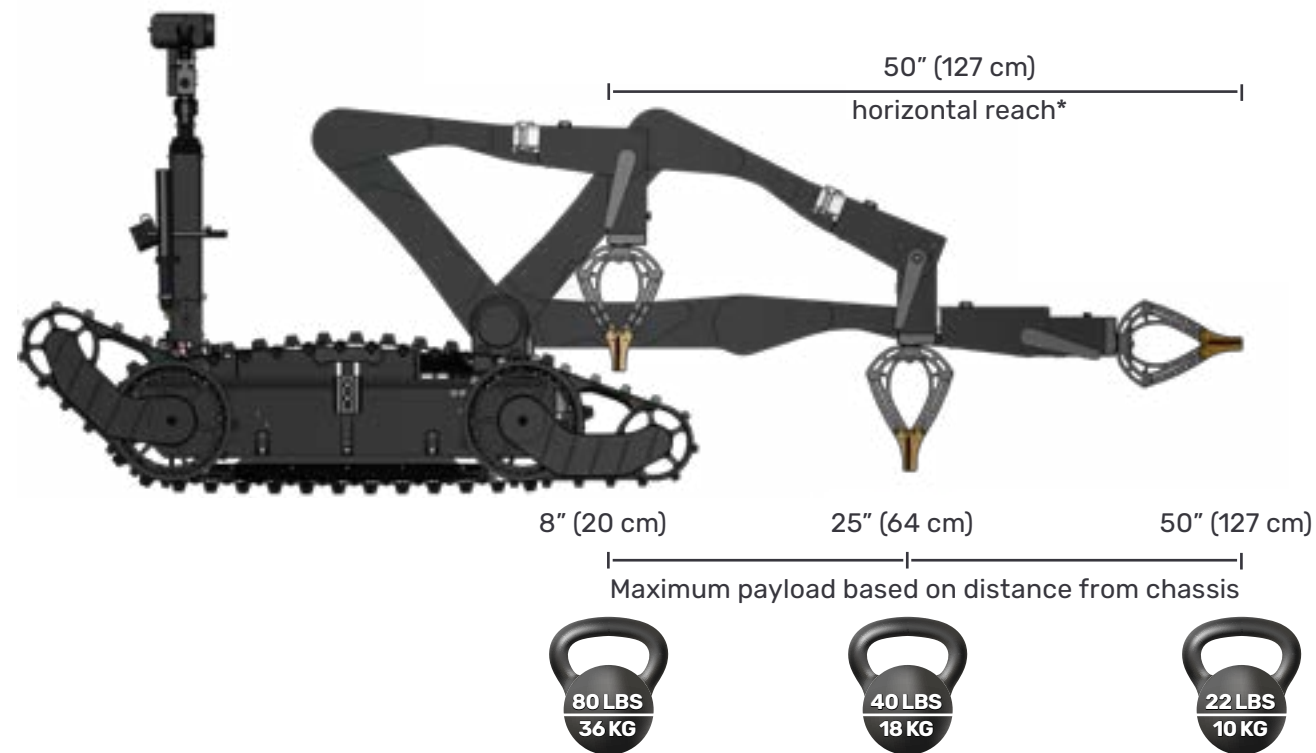


Key Features & Benefits

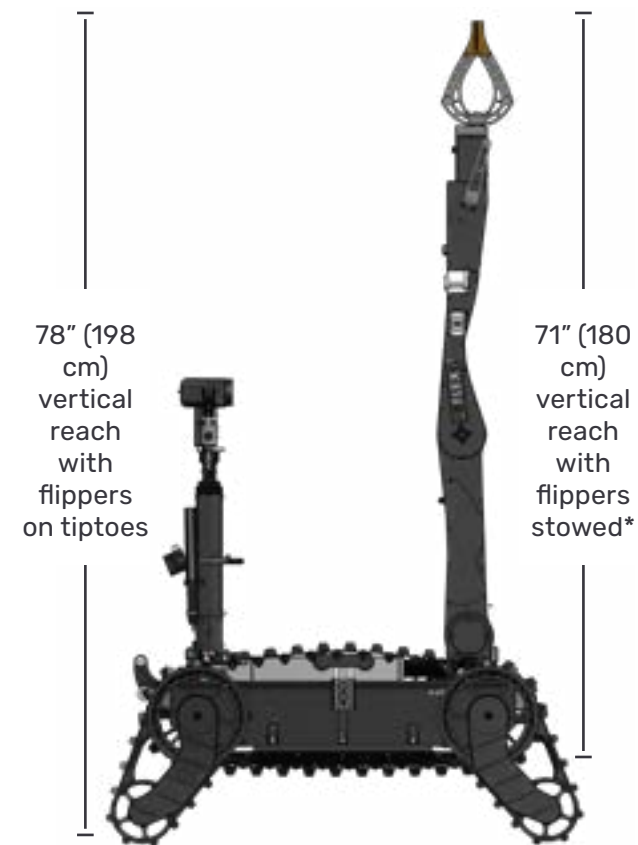
- Transmit crisp, clear video images with excellent Non-Line-of-Sight (NLOS) operations using Mesh COFDM IP radios
- Quickly deploy robot using one-button touchscreen preset positions
- Increase situational awareness with real-time 3D avatar positioning
- Simplify disrupter aiming with new and improved lasers and integrated LIDAR
- Intuitive, easy-to-use CCU interface with flexible controls; your choice of simultaneous gamepad and/or push buttons and joysticks



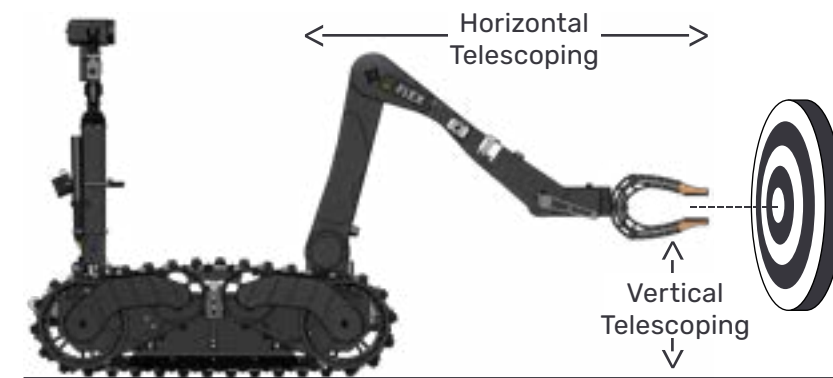
The operator can control the robot arm's elbow, shoulder and wrist simultaneously, making it easier to access tight and awkward spaces.



CALIBER® FLEX SPECIFICATIONS



Linear telescoping mode moves the claw in a level position



*Optional extension arm will increase vertical reach to 124" (315 cm) on tiptoes & horizontal reach to 98.5" (250 cm)

Technical Details



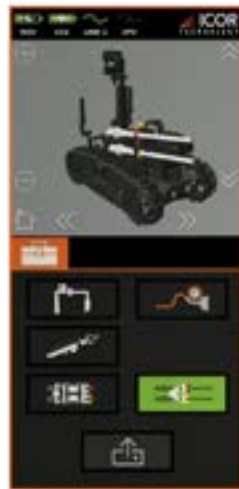
FEATURE	DESCRIPTION
Drive System	<ul style="list-style-type: none">• 3-speed drive system• Rubber Tracks• 0° turning radius• Automatic brake system
Front/Rear Flippers	<ul style="list-style-type: none">• Front & rear articulating flippers for stair climbing and obstacle negotiation• -40° - +170° flipper rotation
Robotic Claw on Turreted Arm	<ul style="list-style-type: none">• Claw with 360° continuous rotation• 80 lbs (36 kg) lift capacity (max payload)• 0 - 200° shoulder rotation• +/- 130° turret and arm rotation• 0 - 260° elbow rotation• 71" (180 cm) vertical reach• 78" (198 cm) vertical reach on flipper• 50" (127 cm) horizontal reach• LED lights
Firing System	<ul style="list-style-type: none">• 5 isolated circuits, with individually configurable hold time
Disrupter Mount	<ul style="list-style-type: none">• Disrupter mount for 2 recoilless disrupters• Integrated LIDAR for distance measuring with dual disrupter mount
Front/Rear Drive Cameras	<ul style="list-style-type: none">• IR color cameras• Front & rear driving guidelines overlaid on CCU screen
PTZ Camera	<ul style="list-style-type: none">• Pan-Tilt-Zoom color camera• 30X optical zoom with LED lights• 360° continuous rotation• Folds down for transportation• Motorized telescopic height adjustment• Includes claw follow feature

Claw Cameras	<ul style="list-style-type: none">• Integrated Color Camera with LED Lights
Disrupter Cameras	<ul style="list-style-type: none">• 2X color camera with LED lights
CCU	<ul style="list-style-type: none">• Command and Control Unit to operate robot• Advanced multi-function control, variable speed joystick• Gamepad controller with simultaneous multi-axis control• Capacitive touch daylight readable screen• Battery status indicator• HDMI output to auxiliary monitor• Integrated standard PIP (Picture-in-Picture)• Integrated video/screenshot recording• 3D avatar of robot with presets• Weather-resistant
RF System	<ul style="list-style-type: none">• Mesh COFDM IP radio system• One data stream for voice, video and data• High quality video transmission• Configurable radio frequencies via CCU settings
Digital 2-Way Audio	<ul style="list-style-type: none">• 2-way audio• Integrated digital audio player on CCU• Integrated microphone and speakers
Robot Battery Pack	<ul style="list-style-type: none">• 2 x 13 Ah, 24V DC, quick-change, rechargeable, non-proprietary, lead-acid batteries
Battery Chargers	<ul style="list-style-type: none">• 1 x Robot: 24 VDC/110 or 220 VAC• 1 x CCU: 12 VDC/110 or 220 VAC• Smart battery charger with trickle charge and Bluetooth monitoring feature
Training Course	<ul style="list-style-type: none">• Two day Robot Operation and Maintenance course
WARRANTY	2-YEAR LIMITED WARRANTY
TECHNICAL SUPPORT	UNLIMITED 24/7 TECHNICAL SUPPORT customerservice@icortechology.com



By the Numbers

Mission Time	2 - 4 hours +, mission dependent
Width	24" (61 cm)
Height	27" (69 cm) stowed
Length	38" (96.5 cm) stowed 55" (140 cm) deployed
Weight	250 lbs (113 kg) with batteries
Ground Clearance	<ul style="list-style-type: none">• 2.75" (7 cm) stowed• 9.8" (25 cm) on tiptoes
Stair Climbing	<ul style="list-style-type: none">• Climbs 8" (20 cm) stairs at 45°• Slope lateral side to side driving at 30°
Weather Resistance	Designed to IP65 Environmentally sealed; chem-bio wash-down capability






The CALIBER® FLEX comes loaded with essential features, however you can augment your robot with optional accessories such as Arm extensions, Fibre Optic reels, xray mounts and more.

Check out the Optional Features datasheet for upgrades to enhance the capabilities of the CALIBER® FLEX

Flexible Options



WHICH ROBOT IS RIGHT FOR YOU?

	EOD	SWAT	3D ROBOT AVATAR POSITIONING	PRESET POSITIONS	IP MESH RADIOS	CLIMB STAIRS	FITS DOWN AISLE OF INT. PLANES, BUSES, AND TRAINS	FITS DOWN AISLES OF REGIONAL JETS	WEIGHT	ARM LIFT CAPACITY	NUMBERS OF CAMERAS
CALIBER® MK4 	✓		✓	✓	✓	✓			735 lbs (333 kg)	200 lbs (90 kg)	7 color incl. 2 IR
CALIBER® FLEX 	✓		✓	✓	✓	✓			250 lbs (113 kg)	80 lbs (36 kg)	6 color incl. 2 IR
MK3 CALIBER® 	✓					✓			197 lbs (89 kg)	65 lbs (29 kg)	6 color incl. 2 IR
CALIBER® T5 	✓	✓				✓	✓		150 lbs (68 kg)	45 lbs (20 kg)	5 color incl. 2 IR
MINI-CALIBER® 	✓	✓		✓		✓	✓	✓	64 lbs (29 kg)	15 lbs (6.8 kg)	5 color incl. 2 IR

About ICOR Technology

ICOR Technology Inc. (ICOR) is a Canadian-based company that manufactures and supplies affordable, high-quality protective security equipment to Explosive Ordinance Disposal (EOD), Tactical, and CBRNE units worldwide.

Incorporated in 2005, ICOR's main expertise is in the engineering and manufacturing of the life-saving CALIBER® robots that are in use with law enforcement agencies in over 55 countries. All CALIBER® robots are made on-site in Ottawa, Canada, within the company's 27,500 sqft (2,555 sqm) manufacturing facility: from R&D, design and prototyping to machine shop, assembly and quality assurance.

As a sign of recognition and symbol of respect for the many dangers men and women in law enforcement face on duty, ICOR established the Purple Gear Award Program: acknowledging robots damaged in action.



24/7 Customer Service

From day one, ICOR has earned a reputation worldwide for customer service excellence.

Quick to respond and easy to work with, your ICOR technician will go above and beyond to ensure your robot is running properly.

During a critical mission, remember Customer Service assistance is only a phone call away 24/7, 365 days a year.

URGENT TECH SUPPORT

• 613-986-7978

NON-URGENT TECH SUPPORT

• customerservice@icortechology.com
• 613-745-3600
• 1-877-483-7978 (in Canada and the U.S.)



icortechnology.com • sales@icortechnology.com • 935 Ages Drive, Ottawa, ON, Canada, K1G 6L3



Due to a policy of continuous product improvement, ICOR reserves the right to change specifications and appearances without notice.

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