

# A COMMANDO™ FOR EVERY MISSION

WHEN UNSURPASSED PROTECTION, MOBILITY,  
AND MISSION-CUSTOMIZED VERSATILITY MATTER



**COMMANDO**   
STRIKE SWIFTLY.™



[textronsystems.com](http://textronsystems.com)

**TEXTRON** Systems



# THE COMMANDO FAMILY OF ARMORED VEHICLES DELIVERS

## VERSATILITY

- Common chassis with multiple variants
- APC variant accommodates up to 10 troops
- Payload capacity up to 4,260 lb allows for various configurations and future growth, including increased survivability
- Accommodates various remote weapon stations (RWS)
- Can integrate turrets up to 90mm and mortars up to 120mm

## MOBILITY

- Superior mobility, handling and ride quality with all-wheel drive independent suspension
- On-road 65 mph/off-road up to 45 mph
- Traverses 24-inch vertical obstacles, can climb a 60% gradient, 30% sideslope and can ford water crossings up to 60 inches
- 400-mile range on a single tank of fuel

## LETHALITY

- Dual 40mm/.50 cal turret
  - Optional thermal imager for day/night operations
  - Optional laser range-finder improves first-round hit capability
  - Optional precision power controls and stabilization to reduce target acquisition time and provide shoot-on-the move capability
- 90-mm CMI turret
  - Two-man turret equipped with Cockerill 90mm MK3 gun
  - More than 2,300 units in service worldwide
- 20-25-30 CPWS
- Mortar, up to 120mm
- RWS, light to medium, dual or single-configuration, including 40mm AGL, .50 cal MG, M240, M249

## RELIABILITY AND SUSTAINABILITY

- Rugged and survivable in the toughest conditions; vehicles frequently in service 20 years or more
- Exceptional operational readiness rate with 3,600 base vehicles in the U.S. Army inventory
- Reliability/maintainability with reduced logistics burden due to high usage of DOD and NATO inventory items
- Common spare parts and components (engine, transmission suspension components and turret) with existing military systems
- Operator and maintenance training programs

## SURVIVABILITY

- Scalable levels of protection to meet various threat levels
- Mine Resistant Ambush Protected (MRAP) and a range of STANAG 4569 protection levels

## AWARD-WINNING SPARES SUPPLIER

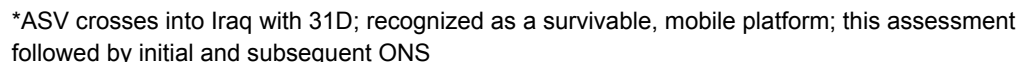
*Marine & Land Systems has been recognized several times in recent years by the Federal Defense Industries (FDI) organization with its Outstanding Supplier Award. Our team earned FDI's Outstanding Supplier – Vehicle Components Award in both 2009 and 2013. For the most recent award, we were honored for effectively supplying spare parts that were critical to the armored vehicle end user in Afghanistan.*

**COMMANDO...an unbeatable package!**








# A Legacy of Combat-Proven COMMANDO Vehicles






## Always evolving to meet your needs.







# WORLDWIDE CUSTOMER BASE

EUROPE		
	Bulgaria	17
	Luxembourg	5
	Portugal	97

ASIA		
	Thailand	335
	Taiwan	330
	Malaysia	270
	Philippines	185
	Indonesia	108
	Singapore	247

NORTH & SOUTH AMERICA		
	Canada*	644
	United States	5,165
	Mexico	28
	Guatemala	12
	Dominican Republic	8
	Haiti	6
	Panama	29
	Jamaica	14
	Venezuela	77
	Bolivia	7
	Colombia	67

\*includes 500 TAPVs under contract

AFRICA		
	Somalia	5
	Sudan	123
	Cameroon	53
	Gabon	11
	Botswana	31
	Chad	11

MIDDLE EAST		
	Oman	3
	Lebanon	9
	UAE	5
	Iraq	324
	Afghanistan	689
	Turkey	168
	Saudi Arabia	1,000
	Kuwait	82
	Egypt	112

\*includes 55 MSFVs under contract

- More than 12,000 vehicles delivered worldwide
- 50-plus years of fulfilling customer vehicle requirements



# AWARD-WINNING OPTIONS

In 2015, the COMMANDO family of vehicles was recognized with the "Best Performing Armored Vehicles" award from Defense IQ at the annual International Armored Vehicles Conference.

*"Choosing Textron Systems was really quite simple...the [COMMANDO] vehicle has a genuinely long legacy and in its current form is probably the best example of a platform that has been taken to new levels."*

*Member of the selection committee at the 2015 International Armored Vehicles Conference*

Textron Systems Marine & Land Systems is designing and manufacturing the next generation of COMMANDO armored vehicles for customers around the world.

Elite, Select and Advanced COMMANDO family of vehicles are customized to meet our customers' unique mission requirements.

- VERSATILITY – multiple variants and configurations give operators the ability to go almost anywhere and perform nearly any mission
- PROTECTION – scalable levels of protection to match needs to the mission
- MOBILITY – unmatched on-road/off-road mobility with exceptional handling and ride quality
- FIREPOWER – wide range of weapon system options available to meet the mission
- RELIABILITY – over 12,000 vehicles in service with the U.S Army, international militaries and police forces worldwide
- MAINTAINABILITY – provide end-to-end solutions through customer fielding, training maintenance and logistics support throughout the vehicle's life cycle



COMMANDO™  
Elite



COMMANDO™  
Select



COMMANDO™  
Advanced

## GET TO KNOW COMMANDO.



# COMMANDO™ Elite



COMMANDO Elite successfully completed the UAE Military Summer Trials, a thorough and complete evaluation of vehicle mobility conducted in extremely challenging conditions.



COMMANDO Elite UAE Trials



Valcartier Canada Test Run



UAE Desert Trials

*"Qualification testing has shown that the TAPV's protection and firepower performance is extremely high. This rigorous test program being conducted with the soldiers who will ultimately deploy on the vehicle will ensure the TAPV meets the needs of the Army."*

— Major Stef Grubb, Project Director for TAPV  
Infantry Corps Newsletter, 1 May 2015

COMMANDO Elite vehicles are our most highly protected and capable vehicles, providing superior direct-fire and mine blast protection. These vehicles come equipped with our latest drive train enhancements making them fast and highly maneuverable in a wide range of environments. Lethality is achieved through multiple sensors and weapons options. Elite vehicles are flexible enough to accommodate nearly any remote weapon station available - single or dual weapon mix. They also feature a digital backbone for systems monitoring and future electronics expansion.



## COMMANDO ELITE VEHICLES

The COMMANDO Elite line comprises the best 4x4 armored vehicle on the market, featuring the ultimate package of sustainability, mobility, lethality and survivability.

## COMMANDO ELITE VEHICLE SPECIFICATIONS

### WEIGHT

- Gross Vehicle Weight..... 40,700 lb (18,460 kg)
- Curb Weight..... 36,300 lb (16,460 kg)

### PERFORMANCE (at 38,000 lb)

- Speed (level hard surface) ..... 65 mph (105 kph)
- Range @ 50 mph (80 kph)..... 400 miles (644 km)
- Gradient..... 60%
- Side Slope..... 30%
- Vertical Wall ..... 24 in (.6 m)
- Fording ..... 60 in (1.5 m)
- Turning diameter..... 64 ft (19.5 m)

**TIRES**..... Michelin 16.00R20 XZL with Hutchinson run flat inserts

**SUSPENSION** ..... Fully independent front and rear, upper and lower control arms

### POWER TRAIN

- Engine..... Cummins QSL 365, 365 hp, 1113 lb-ft
- Transmission ..... 6-speed, Allison 3200SP

**ARMAMENT** ..... Various (depending on customer needs)

**SURVIVABILITY**..... Protects against direct and indirect weapons, mines and IEDs

**SITUATIONAL AWARENESS** ..... Unaided 360 degrees

### OTHER MISSION EQUIPMENT OPTIONS

- Add-on Armor ..... Customer specification
- Turret Enhancements..... Customer specification
- Alternator ..... 400- and 575-amp alternator
- ABS ..... Customer specification
- NAV/GPS ..... Customer specification
- NBC Individual/Overpressure ..... Customer specification
- 360-Degree Situational Awareness ..... Customer specification (Night/Day)

### COMMANDO ELITE SEATING

- With OGPK or RWS ..... 2 crew, 4 dismounts



# COMMANDO™ Select



General Sher Mohammed Karimi opened his capstone address at the 2013 International Armoured Vehicles (IAV) conference with a slide showing COMMANDO Select Mobile Strike Force Vehicle (MSFV) configurations.



GEN Karimi at IAV



Select with 40mm/.50 cal Turret



Select with 90mm Turret

*"High-end armored capabilities are critical to the survival of the state to develop capabilities to fight insurgents. There will always be a requirement for mobile, protected firepower on the battlefield. The MSFV has been significantly upgraded from the original design to make it more survivable in the IED environment."*

— General Sher Mohammad Karimi, Chief of General Staff  
Afghan National Army

2013 International Armoured Vehicles Conference

COMMANDO Select personnel carriers offer an enhanced combination of lethality, survivability, mobility and sustainability. Exceptional crew protection is built into all Select vehicles. Greater survivability, however, doesn't mean sacrificing vehicle mobility — these vehicles deliver greater mobility than similar armored vehicles on the market. These vehicle can be configured to accommodate up to 10 (three crew plus passengers) to enable greater troop carrying capacity.

## APC WITH TURRET

COMMANDO Select Armored Personnel Carriers with Turret substantially increase security, mobility and survivability using knowledge gained from more than 13 years of dual combat theater use.

## APC MEDEVAC

COMMANDO Select Armored Personnel Carrier Ambulance provides ballistic and blast protection to the medical crew during patient treatment and transport.

## 90MM DIRECT FIRE VEHICLE

The new COMMANDO Select 90mm Direct Fire Vehicle combines the full range of combat-tested COMMANDO Select vehicle capabilities (such as mobility, survivability, sustainability) with a tested 90mm turret for additional firepower and lethality.

## MORTAR VEHICLE

COMMANDO Select Mortar Vehicles meet the emergent requirements of today's combat units for a more operationally flexible and adaptable indirect fire capability while taking advantage of the vehicle's mobility and survivability.

## COMMANDO SELECT VEHICLE SPECIFICATIONS

### WEIGHT

- Gross Vehicle Weight.....up to 39,915 lb (18,100 kg)
- Curb Weight.....34,600 lb (15,400 kg)

### DIMENSIONS

- Length.....261 in (6,629 mm)
- Width (overall).....108 in (2,743 mm)
- Height.....119 in (3,022 mm)
- Ground Clearance.....26 in (660 mm)

### PERFORMANCE (at 35,100 lb)

- Speed (level hard surface).....62 mph (100 kph)
- Acceleration 0-20 mph (0-32 kph).....8 sec
- Acceleration 0-50 mph (0-80 kph).....30 sec
- Range @ 40 mph (64 kph).....400 miles (644 km)
- Turning Diameter.....65 ft (21.3 m)
- Gradient.....60%
- Side Slope.....30%
- Vertical Wall.....22 in (.56 m)
- Fording.....60 in (1.5 m)

**TIRES**.....Michelin 16.00R20 XZL with run flat inserts

**SUSPENSION**.....Fully independent front and rear, upper and lower control arms

### POWER TRAIN

- Engine.....Cummins 6CTA8.3, 280 hp peak, 825 lb-ft
- Transmission.....6-speed, Allison 3500SP

**SIGHTS**.....M-36 day/night gunner's sight

**ARMAMENT**.....Turret: 40mm MK-19, .50 cal M2HB

**SURVIVABILITY**.....Protects against direct and indirect weapons, mines and IEDs

### COMMANDO SELECT SEATING

- **APC**
  - Turret: 3 crew, 4 dismounts
  - OGPK or RWS: 3 crew, 7 dismounts
- **APC SWB**
  - Turret: 3 crew, 1 dismount;
  - OGPK or RWS: 3 crew, 2 dismounts
- **MEDEVAC**
  - 3 crew and up to 2 ambulatory, 2 litter patients
- **Mortar Vehicle**
  - Driver, Commander, 2 Mortar Crew
- **90mm Direct Fire Vehicle**
  - Driver, commander, gunner and loader



# COMMANDO™ Advanced

With more than 13 years of combat in the toughest environments, COMMANDO Advanced has excelled in mission flexibility and survivability. More than 3,600 have been fielded with the U.S. Army. COMMANDO Advanced is currently in use in Bulgaria, Colombia and Iraq.



Convoy Headed by Advanced APC



Iraqi Advanced APC



Colombian Advanced APC

*"Thanks to technological upgrades in maneuverability, suspension and armor, these vehicles were put under very difficult geographic conditions in-country while responding to terrorist groups, which indiscriminately act against strategic assets of the Colombian state. The vehicles demonstrated performance superiority and withstood IED explosions without negative effects to their physical integrity."*

*— Major Hugo Angel Parra, Director of Armored Vehicles, Colombian Army Cavalry*

COMMANDO Advanced vehicles, derived from our Armored Security Vehicles (ASV), are combat proven in locations including Afghanistan, Iraq and Colombia. They offer excellent on-road and off-road mobility enabling them to operate in urban, jungle, desert and mountainous terrain. Crew protection is reinforced with a V-shaped hull bottom and 360-degree protection from direct fire. Customers utilizing the legacy Advanced platform can upgrade to higher levels of crew protection through an Enhanced Survivability package. Advanced vehicles are extremely dependable. Those in use by the U.S. Army have delivered an excellent operational readiness rate – consistently above 90 percent.



## APC

COMMANDO Advanced Armored Personnel Carriers provide additional troop capacity to a highly mobile survivable medium armored vehicle. Choice of gunner's protection kit (GPK) or turret is available.

## RECONNAISSANCE VEHICLE

COMMANDO Advanced Recon Vehicles provide an armored reconnaissance platform that incorporates both ballistic and blast protection. Mission equipment options are available, according to customer specification.

## COMMANDO ADVANCED VEHICLE SPECIFICATIONS

### WEIGHT

- Gross Vehicle Weight  
ASV ..... 32,600 lb (14,785 kg)  
APC/Recon ..... 36,000 lb (16,329 kg)

### DIMENSIONS

- Length  
ASV ..... 237 in (6.07 m)  
APC/Recon ..... 261 in (6,629 mm)
- Width ..... 101 in (2.56 m)
- Height ..... 102 in (2.59 m)
- Ground Clearance ..... 18 in (.46 m)

### PERFORMANCE

- Speed ..... 65+ mph (105+ kph)
- Range @ 40 mph (64 kph) ..... 440 miles (708 km)
- Turning Diameter
  - ASV 55 ft ..... 56 ft (17.1 m)
  - APC/Recon 65 ft ..... 65 ft (19.8 m)
- Gradient ..... 60%
- Side Slope ..... 30%
- Vertical Wall
  - ASV ..... 22 in (.56 m)
  - APC/Recon ..... 22 in (.56 m)

- Fording ..... 60 in (1.5 m)

**AIR TRANSPORTABILITY (ASV)** ..... C-17 carries 6

**TIRES** ..... Michelin 14.00R20 XZL, Run Flat Inserts

**SUSPENSION** ..... Fully independent

### POWER TRAIN

- Engine  
ASV/APC/Recon ..... Cummins 6CTA8.3, 260 hp/828 lb-ft
- Transmission ..... 6-speed, Allison 3500SP

### ARMAMENT

- ASV ..... Turret: 40mm MK19, .50 cal M2HB
- APC ..... Various, depending on customer needs
- Recon ..... TUA, Cupola

**SURVIVABILITY** ..... Protection from direct/indirect weapons, mines, and IEDs

### SEATING

- ASV ..... With turret: 3 crew, 1 dismount; with OGPK or RWS: 3 crew, 2 dismounts
- APC ..... With turret: 3 crew, 4 dismounts; with OGPK or RWS: 3 crew, 7 dismounts
- Recon ..... Up to 3 crew and 4 dismounts



# OTHER PLATFORMS



# WORLDWIDE CUSTOMER SUPPORT



Completed SCTV (left) with legacy HMMWV



Maintenance Training



Field Service Support



Hands-On Instruction

## SURVIVABLE COMBAT TACTICAL VEHICLE (SCTV™) FOR HMMWV UPGRADE

Textron Systems offers a lightweight, highly protected system with improved Performance, Safety and Mobility. It is compatible with all version 11-series HMMWVs currently in service and select 10- and 9-series vehicles. The SCTV exceeds MRAP-style protection by incorporating angles and a v-shaped blast deflection under-body plate. Significant parts commonality with existing HMMWV inventory. It modernizes the original HMMWV cab while continuing to utilize existing controls, linkages, and drive system.

- Various levels of blast protection available
- Multiple configurations of vehicle available
- Vehicle performance kits include:
  - Mobility package
  - Engine and cooling packages
  - Braking package
- Air conditioner BTU: 20,000 cool and 22,000 heat
- Available for in-country co-production
- Safety Enhancements:
  - Roll-over crush protection
  - Isolates fuel cell from crew compartment
  - External battery compartment
  - Fire retardant insulation panels
  - Smooth interior reduces hazards to crew
  - Thermal guard soft interior headline
- Roof supports weight and function of most gunner protection kits and weapon systems currently in use



In partnership with Textron Systems Support Solutions, Marine & Land Systems offers an extensive array of vehicle services including fielding, training and logistics support.

Textron Systems is a trusted provider of total life-cycle support for the COMMANDO family of vehicles and other product lines.

Our team delivers highly-qualified field service support –

- We possess extensive experience deploying skilled field service engineers along customers to ensure continuous asset availability
- We deploy personnel to work on-site at customer facilities and at forward locations around the globe

We also provide effective vehicle operator and maintainer training wherever the mission requires –

- We collaborate with customers to understand their requirements and develop targeted curricula

- We are skilled at courseware development and sustainment for both operators and maintainers
- We offer structured classroom and hands-on vehicle training
- We partner with customers to provide professional field-level operator and maintenance training

We also excel at performance-based logistics including –

- Strategic supply chain planning
- Effective spares provisioning

Our mission is to apply our know-how every day to deliver the highest vehicle availability rates. Our team customizes its services to meet your individual requirements – because the right support from the best team creates unmatched vehicle availability and value.



# COMMANDO VEHICLE PLATFORMS AND EQUIPMENT OPTIONS

## COMMANDO™ Elite



### STANDARD EQUIPMENT

Engine ..... Cummins QSL365  
Transmission ..... 6-speed, Allison 3200SP  
Speed ..... 65 mph  
Range ..... 400 miles  
Weight (GVW/Curb) ..... 40,700/36,300 lb  
Turning Diameter ..... 64 ft  
Remote Weapon Station ..... Customer-Specified  
Scalable Armor  
Mast Sensor (fitted with choice of optics)  
Electrical ..... 575 Amp Alternator  
Two-Speed Transfer Case  
Winch ..... 15,000-lb  
Antilock Brake System (ABS)  
Independent Suspension  
Central Tire Inflation (CTI) with Run-Flat Inserts  
CANBUS  
Digital Architecture  
Power-Assisted Doors  
Base Vehicle Occupants ..... 2 + 4  
Air Conditioning

### OPTIONAL EQUIPMENT

#### Lethality

- Remote Video Terminal (RVT)
- Anti-Tank Missile

#### Survivability

- Situational Awareness Suite
- Smoke Grenade Launchers
- NBC (Overpressure System)
- Shot Detection System
- Tactical RPG Airbag Protection System (TRAPS)
- Driver's Vision Enhancer (DVE)

#### Electrical

- 575 Amp Alternator
- 400 Amp Alternator

## COMMANDO™ Select



### STANDARD EQUIPMENT

Engine ..... Cummins 6CTA 8.3  
Transmission ..... 6-speed, Allison 3500SP  
Speed ..... 62 mph  
Range ..... 400 miles  
Weight (GVW/Curb) ..... 39,915/34,600 lb  
Turning Diameter ..... 65 ft  
Scalable Armor  
Smoke Grenade Launchers  
Electrical ..... 260 Amp Alternator  
Two-Speed Transfer Case  
Winch ..... 15,000-lb  
Antilock Brake System (ABS)  
Independent Suspension  
Central Tire Inflation (CTI)  
Run-Flat Inserts  
Air Conditioning

### OPTIONAL EQUIPMENT

#### Lethality

- Remote Weapon Station
- 40/.50 Turret (40mm Grenade Launcher/.50 cal mg)
- Cockerill CPWS with medium caliber weapon (20/25/30mm)
- BattleHawk™
- RVT
- GPK/OGPK (Objective Gunner Protection Kit)
- Anti-Tank Missile

#### Survivability

- Mast Sensor (Fitted with choice of optics)
- Situational Awareness Suite
- NBC (Overpressure System)
- Shot Detection System
- Driver's Vision Enhancer (DVE)

#### Electrical

- 400 Amp Alternator

### OPTIONAL VEHICLE CONFIGURATIONS



40 MM/.50 CAL TURRET



90MM DIRECT FIRE



MEDEVAC



30MM TURRET



INDIRECT FIRE VEHICLE

## COMMANDO™ Advanced



### STANDARD EQUIPMENT

Engine ..... Cummins 6CTA 8.3  
Transmission ..... 6-speed, Allison 3500SP  
Speed ..... 65 mph  
Range ..... 440 miles  
Weight (GVW/Curb) ..... 32,600/ 29,260 lb  
Turning Diameter ..... 56 ft  
Scalable Armor  
Electrical ..... 260 Amp Alternator

### OPTIONAL EQUIPMENT

#### Lethality

- Power & Stabilized Turret
- Smoke Grenade Launcher
- Remote Weapon Station (under power, stabilized turret & grenade launcher)
- BattleHawk™
- Cockerill CPWS with medium caliber weapon (20/25/30mm)
- RVT
- GPK with small caliber weapon (5.56, 7.62, .50 cal, MK19)
- Small Caliber Weapon (5.56, 7.62, .50 cal, MK19 40mm)
- Anti-Tank Missiles
- 40/.50 Turret (40mm grenade launcher/.50 cal MG)

#### Survivability

- Enhanced Survivability Kit
- Mast Sensor (Fitted with choice of optics)
- Situational Awareness Suite
- NBC (Overpressure System)
- Shot Detection System
- Driver's Vision Enhancer (DVE)

#### Electrical

- 400 Amp Alternator



## ADDITIONAL VEHICLE OPTIONS

- RPG Netting
- BattleHawk on Elite/Select
- Digital Backbone (on Select)
- GPS
- Multiple Radio Options
- Weapons-Optional Configurations
- Mast-mounted sensors
- Various Sight Systems & Night Vision
- Crane
- Spare Tire
- Winch
- Crew 2 Jammers
- Wireless Intercom



RPG Netting



Mast-Mounted Sensors



GPS



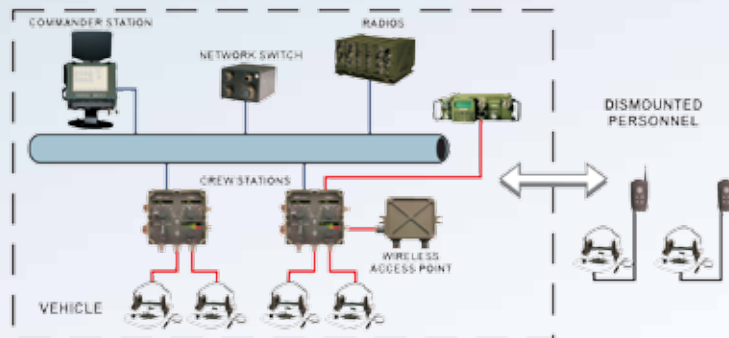
M36 Sight and Night Vision



Spare Tire



BattleHawk®



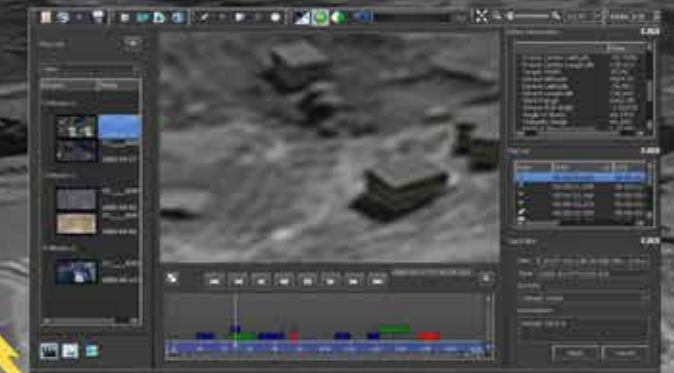
Multiple Radio/Intercom Options



## REAL-TIME SITUATIONAL AWARENESS ACROSS THE BATTLESPACE

### Remote Video Terminal

- Accepts video and data from multiple air platforms
- Intuitive and user-friendly
- Bi-directional control of UAS payloads
- Simultaneous to multiple vehicles
- Vehicle serves as mobile hub to distribute data across the battlespace



**SITUATIONAL AWARENESS SOLUTION**



# LETHALITY OPTIONS FOR CURRENT VEHICLES

## OUR TURRET EXPERIENCE – A LEGACY OF LETHALITY

Textron Systems has a long legacy of experience with turreted weapon system design, development, integration and fielding on both wheeled and tracked armored vehicles.

Our weapon system products integrate weapon calibers from small machine guns to 105mm main tank weapons. The weapon/turret drive and fire control capabilities in these systems range from manual hand controls for the smaller caliber systems to stabilized, full solution fire control capability for the 105mm class systems.

Our team designed and tested the Upgunned Weapon System (UGWS) for U.S. Marine Corps requirements and produced more than 340 units for this customer. The UGWS (40mm/.50

caliber turret) has proven to be a reliable and durable one-man turret system.

We integrated a modified version of the UGWS into our COMMANDO Advanced vehicles, and more than 3,500 units were produced for the U.S. and Afghanistan National Army. We've also expanded our lethality offerings by partnering with CMI Defence on products such as the Cockerill CSE 9LP on our COMMANDO 90mm direct fire vehicle.

Our broad experience in lethality system development, integration, validation and test can be applied to fielding optimum lethality solutions for the COMMANDO family of vehicles or any wheeled or tracked vehicle platform.

### Cockerill CSE 90LP



- Two-man turret
- Electro-mechanical power control system
- Gunner's and commander's sight options
  - Day/night (I<sup>2</sup> or thermal)
  - Laser ranger finder
  - Ballistic computer
- Direct view optics

- Primary armament
- 90mm LP Gun
    - Rifled
    - Caliber: 90 mm
    - Wide range of ammunition types
    - Nominal pressure: 210 MPa
- Secondary armament
- 7.62mm coaxial and pintle-mounted machine gun
  - Multi-purpose grenade launchers

### Cockerill CPWS 20-25-30

- 20mm, 25mm (shown) or lightweight 30mm chain gun (user specified)
- Weight: less than one ton (basic)
- Remote control of the weapon systems and sensors
- Under-armor access to weapons and magazine
- Total ammunition capacity: 150 medium-calibre rounds
- 360° turret rotation
- Dual mode sighting system for panoramic observation and precise firing
- Two-axis stabilized
- 24 hour day/night (thermal) operating capability
- Laser range finder
- Ballistic computer
- Electro-Mechanical Gun and Turret Drive System
  - Maximum depression: -10°
  - Maximum elevation: +60°



- Secondary Armament
  - 7.62mm coaxial machine gun
  - Grenade launcher
- Training Services:
  - 'desktop' simulator
  - 'embedded' simulator' (enables the integration of turret hardware into a simulator network)

### 40 mm / .50 Caliber Turret



- Weight Combat Ready ..... 2,350 lb (1,066 kg), less gunner
- Armament
  - Primary Weapon ..... 40mm MK 19, Mod 3 (included)
  - Secondary Weapon ..... .50 caliber M2HB (included)
  - Smoke Grenade Launcher ..... Optional
- Vision ..... 360 degrees, 7 vision blocks with spill shields
- Gunner Sight ..... M36 day/night sight (modified)
- Ring Gear ..... 1 meter (39.36 in.), pitch diameter
- Seating ..... 1 man
- Turret Power ..... Electric, 24 VDC
- Traverse (Continuous) ..... 360 degrees

- Traverse Type ..... Manual fine lay with electric assist
- Traverse Rate (High Speed) ..... 45 degrees per second (minimum)
- Elevation ..... 45 degrees
- Depression ..... -8 degrees
- Elevation Type ..... Manual
- Fire Interrupter ..... Electric
- Method of Firing ..... Electric with manual backup
- Spotlight ..... 500,000 cp, coaxial (1,000,000 cp, optional)
- Slip Ring ..... 12-channel communication
- Ammunition Storage
  - Primary ..... 96 ready rounds of 40mm
  - Secondary ..... 200 ready rounds of .50 caliber
  - Smoke Grenades ..... 8 ready rounds, 8 rounds stored
- Options
  - Two-Axis Stabilization
  - Power Traverse and Elevation
  - Laser Rangefinder
  - Thermal Imager

### M153 Protector- Kongsberg

- Awarded prestigious contract Commonly Remotely Operated Weapon Station (CROWS II) by the US Army.
- Weight of weapon Station excluding weapon and ammunition: 379 lbs (172 kg)
- Height of weapon Station excluding weapon and ammunition: 30 inches (762 mm)
- Temperature- operating: -51°F to +149°F (-46°C to +65°C)
- Temperature- storage: -51°F to +160°F (-51°C to +71°C)
- Thermal Imager with dual field of view- autofocus and e-zoom
- Laser Range Finder
- Lock-on-target
- Optional Lockheed Martin/Raytheon Javelin Launcher (see below)



### Javelin Launcher – Lockheed Martin and Raytheon

- Range: 2.5km
- Guidance: Passive target acquisition/fire control with integrated day/thermal sight
- Magnification: 4x day and 4x or 9x thermal
- Warhead: Tandem shaped charge
- Weight:
  - 26 lb (11.8 kg) missile
  - 14.1 lb (6.4 kg) CLU
  - 35 lb (15.9 kg) round (missile, launch tube assy)
- Length:
  - 42.6 in (108.1 cm) missile
  - 47.2 in (119.8 cm) launch tube
- Diameter:
  - 5.0 in (12.7 cm) missile
  - 5.6 in (14.2 cm) launch tube



- 93% missile reliability
- 94% probability of first-time gunner hit
- Wide range of effectiveness (<75m to >2,500m) increases employment options





*Photo Courtesy of Army Logistician*

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