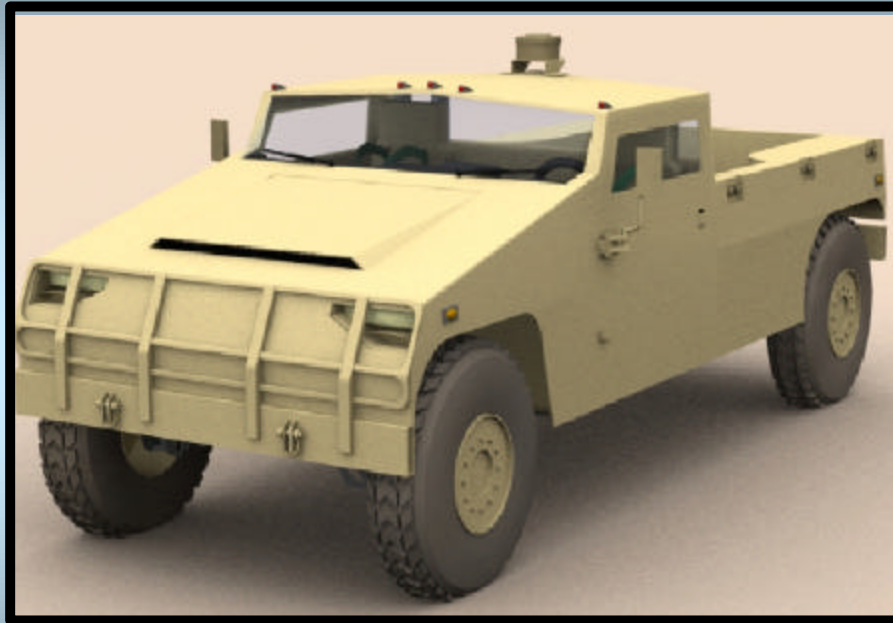


FTTS Utility Vehicle (UV1) Concept Review



FTTS UV1 Utility Vehicle

Jan. 5, 2005

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE 01 JAN 2005	2. REPORT TYPE	3. DATES COVERED -			
4. TITLE AND SUBTITLE FTTS UTILITY VEHICLE (UVI) CONCEPT REVIEW		5a. CONTRACT NUMBER			
		5b. GRANT NUMBER			
		5c. PROGRAM ELEMENT NUMBER			
6. AUTHOR(S) BRANDEN DRAKE		5d. PROJECT NUMBER			
		5e. TASK NUMBER			
		5f. WORK UNIT NUMBER			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) US ARMY TACOM,6501 EAST 11 MILE RD,WARREN,MI,48397-5000		8. PERFORMING ORGANIZATION REPORT NUMBER 14738			
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)			
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)			
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT GOVERNMENT CONCEPTS TO SUPPORT THE FUTURE TACTICAL TRUCK SYSTEMS (FTTS) DEVELOPMENT. THIS BRIEFING EXPLAINS THE TRUCK CONCEPT BY DESCRIBING THE VEHICLE THROUGH MAJOR SUBSYSTEM CATEGORIES SUCH AS MOBILITY, SURVIVABILITY, AND C4I TECHNOLOGIES. IT ALSO PROVIDES AN OVERVIEW OF THE WEIGHT BREAK DOWN AND TOP LEVEL SYSTEM CHARACTERISTICS.					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES 11	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

FTTS UV1 Base Chassis

Characteristics

Cab Seating: 2 Man

Axle Configuration: 4 x 4

Curb Weight: 9,625 lbs (4,375 kg)

Gross Vehicle Weight (GVW):

14,785 lbs (6,720 kg)

Length: 225" (5,715 mm)

Width: 86" (2,184 mm)

Height: 79" (2,006 mm)

Track: 74" (1,880 mm)

Maximum Speed: 65 mph (105 Kph)

Tires: 12.00R20 XML LRG Michelin

Central Tire Inflation: Yes

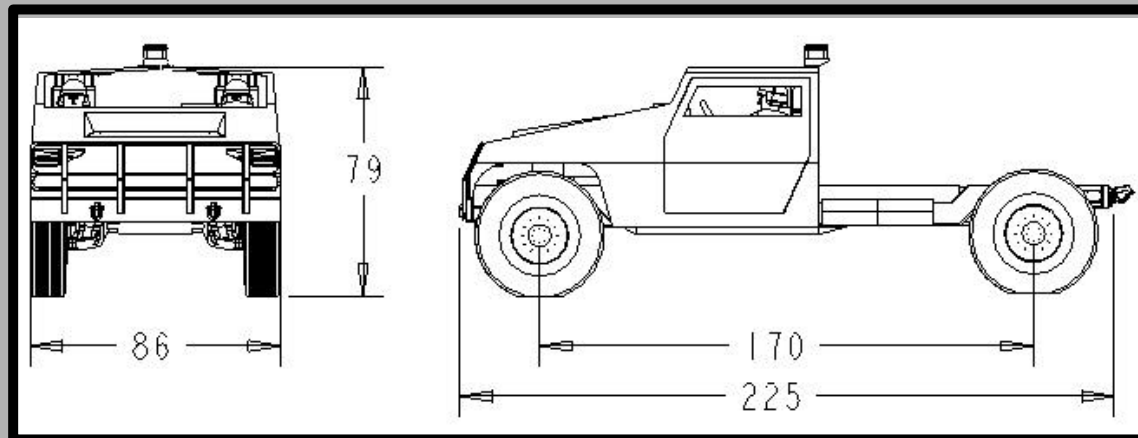
Fuel Capacity: 45 gal (170 liters)

Air Transportability: C130, C141, C17

Engine: Cummins ISB

Transmission: Electric Drive

Suspension: Independent w/Variable Damping



Jan. 5, 2005

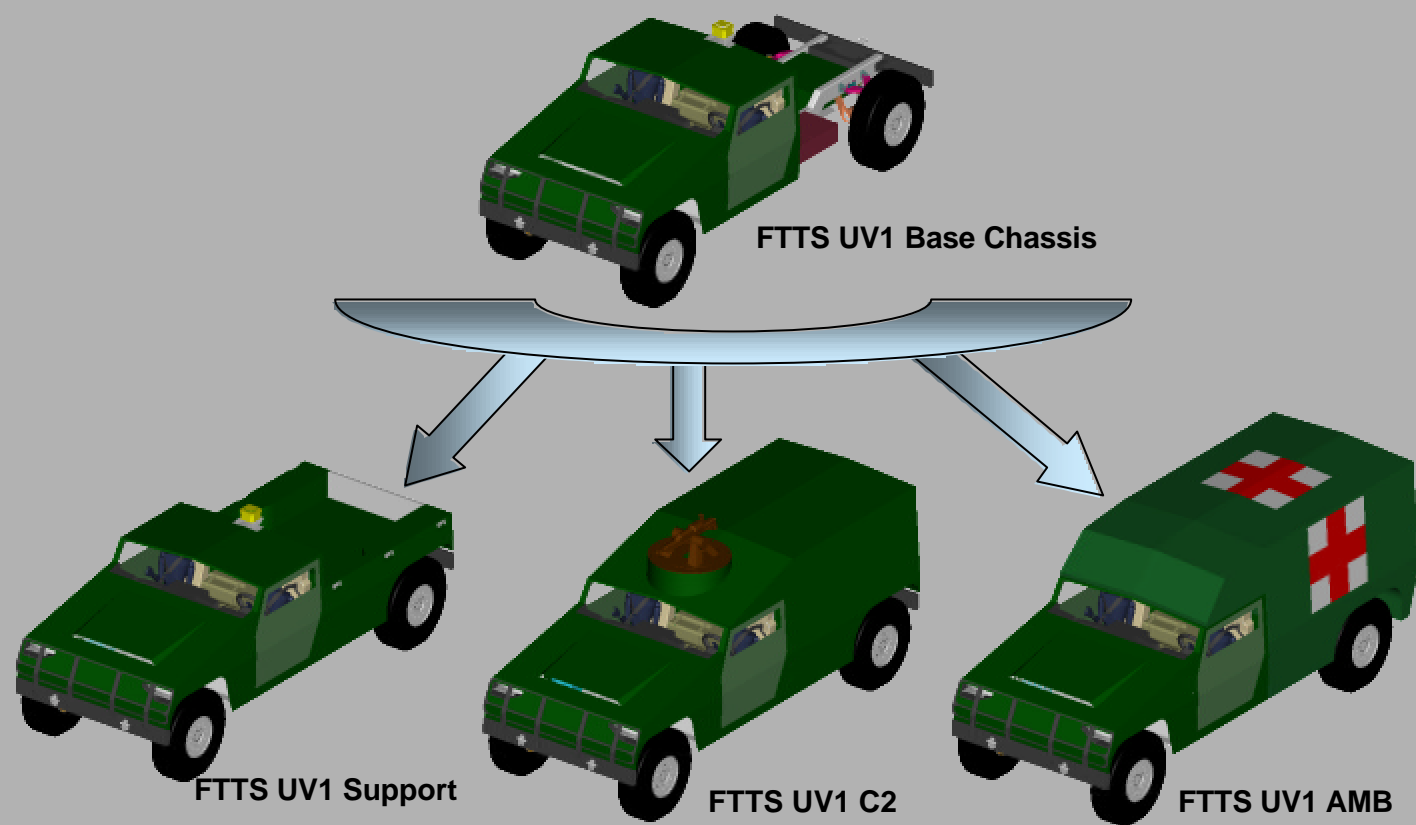
FTTS UV1 WEIGHT STUDY

FTTS-UV-BASE CHASSIS, (2 CREW)			
Envisioned Weight Study			
(July 2003)			
SYSTEM			WEIGHT
1. Structure			2,771
A. Cab w/7.62 armor (5/16" Steel)		1655	
1. Cab Door (2)	306		
B. Frame & Supports		758	
C. Frame Attachments		358	
2. VETRONICS			637
A. CREW SEAT (2)		232	
1. ROOF RAILS (1/8" Steel)	32		
B. DRIVER'S STATION		50	
1. DRIVER		50	
a. MULTI-FUNCTIONAL DISPLAY (Vert.)	30		
b. INSTRUMENT PANEL	20		
2. CREW CHIEF STATION		120	
a. MULTI-FUNCTIONAL DISPLAY (Hor.) (2)	60		
b. KEYBOARD & JOYSTICK	10		
c. JTRS	50		
C. FIREWALL & DASH (2)		155	
D. CONTROL BOXES		60	
1. POWER CONTROL MODULE	20		
2. HARDWARE CONTROL BOXES (2)	40		
E. STEERING WHEEL & COLUMN		20	
3. AUTOMOTIVE			3057
A. TIRE UNIT		2288	
1. TIRE (Michelin 12R20 XML) (4)	672		
2. RIM (20"x8.5" bolt-together aluminum) (4)	296		
3. RUNFLATS (4)	360		
4. IN-HUB DRIVE (4) (Motor, Gearbox, Brakes)	960		
B. SUSPENSION		629	
1. SUSPENSION MOUNT TO TIRE (4) Steel	38		
2. LOWER CONTROL ARM (4) Steel	204		
3. LOWER CONTROL ARM SUPPORT (2 x 4) Steel	14		
4. UPPER CONTROL ARM (4) Steel	80		
5. UPPER CONTROL ARM SUPPORT (2 x 4) Steel	28		
6. STRUT (4) (hydrostrut)	200		
7. STRUT BRACKET (2 x 4) Steel	14		
8. STRUT BOLT BRACKET TO FRAME (4) Steel	21		
9. STRUT MOUNT (4) Steel	30		
C. FOUR WHEEL STEERING (2)		80	
D. CENTRAL TIRE INFLATION SYSTEM ASSEMBLY		60	

4. POWER MANAGEMENT			1668
A. PRIME POWER		1668	
1. PRIME POWER (CUMMINS ENGINE 300HP + Generator)	1225		
2. LI-ION BATTERY PACK	250		
3. INVERTOR (4 @35lbs)	140		
4. CONVERTOR	15		
5. RADIATOR & OIL RADIATOR	38		
5. SURVIVABILITY			1110
A. ON-BOARD SYSTEMS		888	
1. ENVIRONMENTAL CONTROL UNIT (ECU)	403		
2. NBC SYSTEM	187		
3. ON BOARD WATER GENERATION	278		
4. FIRE EXTINGUISHERS (5 lbs) (2)	20		
B. WINDOW PROTECTION		222	
1. CAB WINDSHIELD (Sapphire 7.62AP)	100		
2. CAB REAR WINDOW (Sapphire 7.62AP)	69		
3. CAB DOOR GLASS (Sapphire 7.62AP) (2)	53		
6. FUEL			382
A. FUEL TANK		45	
B. FUEL (45 gal @7.48lbs/gal)		337	
CURB WEIGHT (LBS)			9625
7. CREW			660
A. BASIC CREW (2)		660	
8. PAYLOAD (LBS)			4500
GROSS VEHICLE WEIGHT (LBS)			14785
TONS (US)			7.4

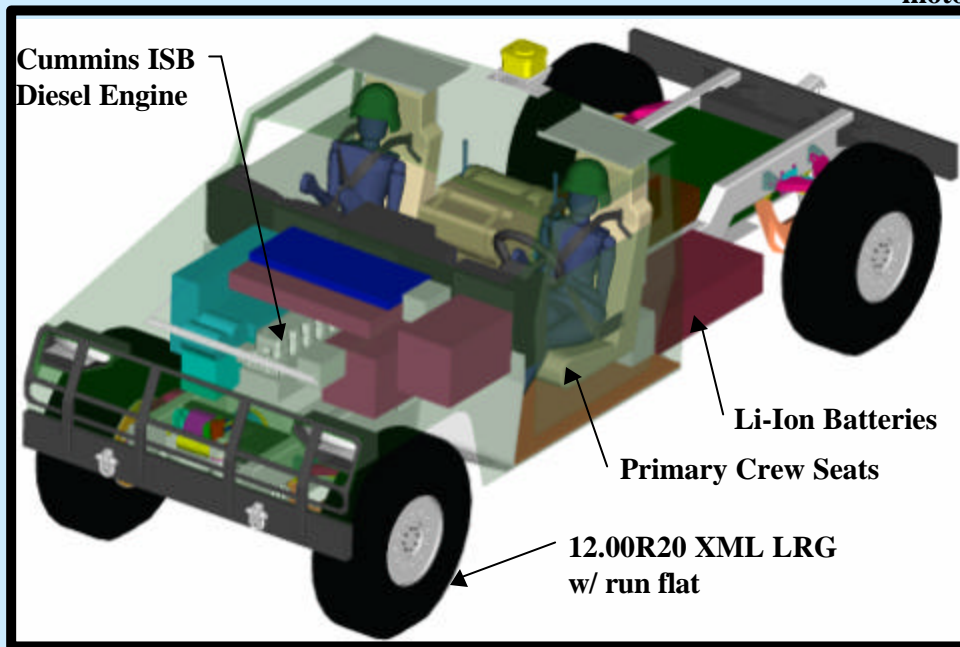
Jan. 5, 2005

FTTS UV1 Variants



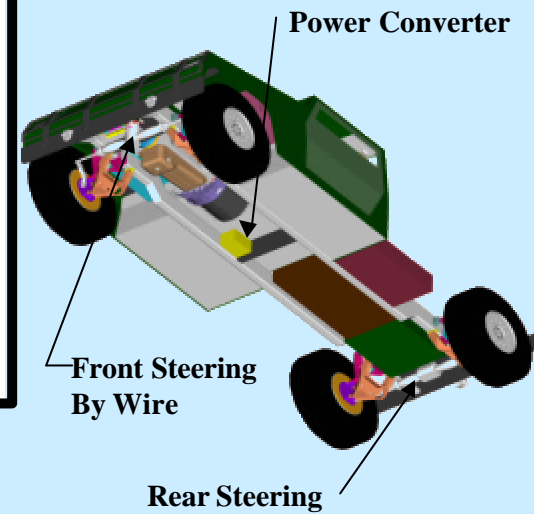
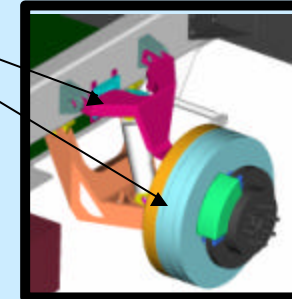
Jan. 5, 2005

FTTS UV1 Mobility Technologies



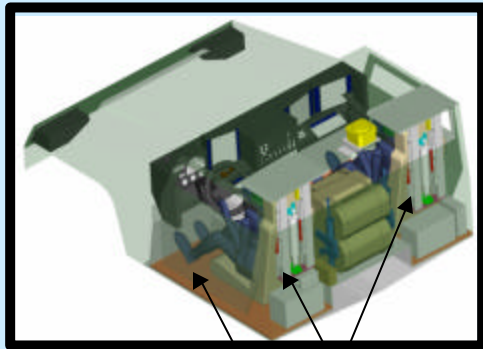
Independent Suspension w/Variable Damping

In-Hub electric motors



Jan. 5, 2005

FTTS UV1 Survivability Technologies

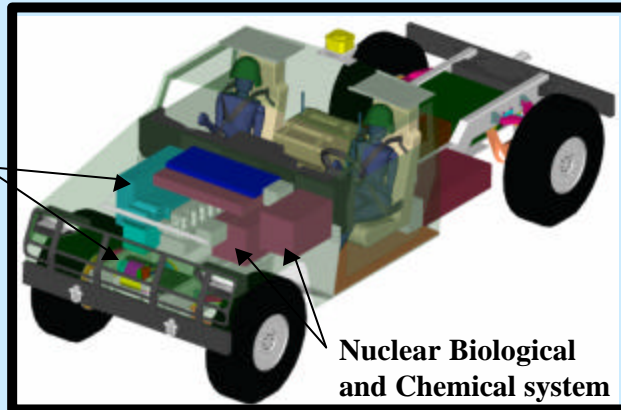


Kevlar Floor Lining

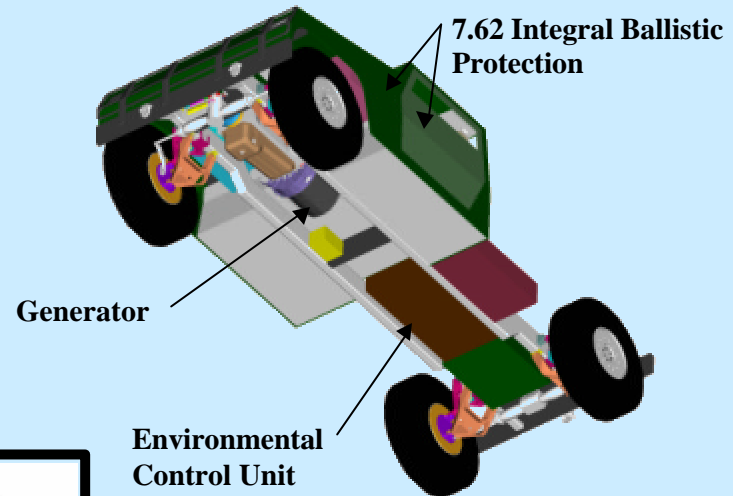
Mine Blast Protective Seats

Central Tire Inflation System (CTIS)

H2O Regeneration



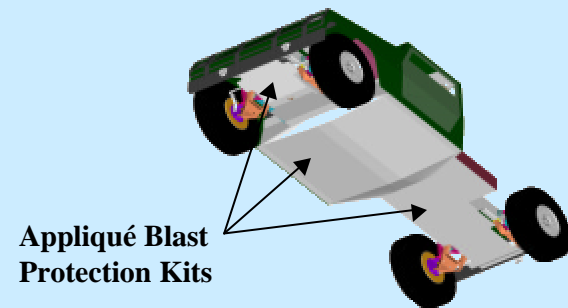
Nuclear Biological and Chemical system



7.62 Integral Ballistic Protection

Generator

Environmental Control Unit

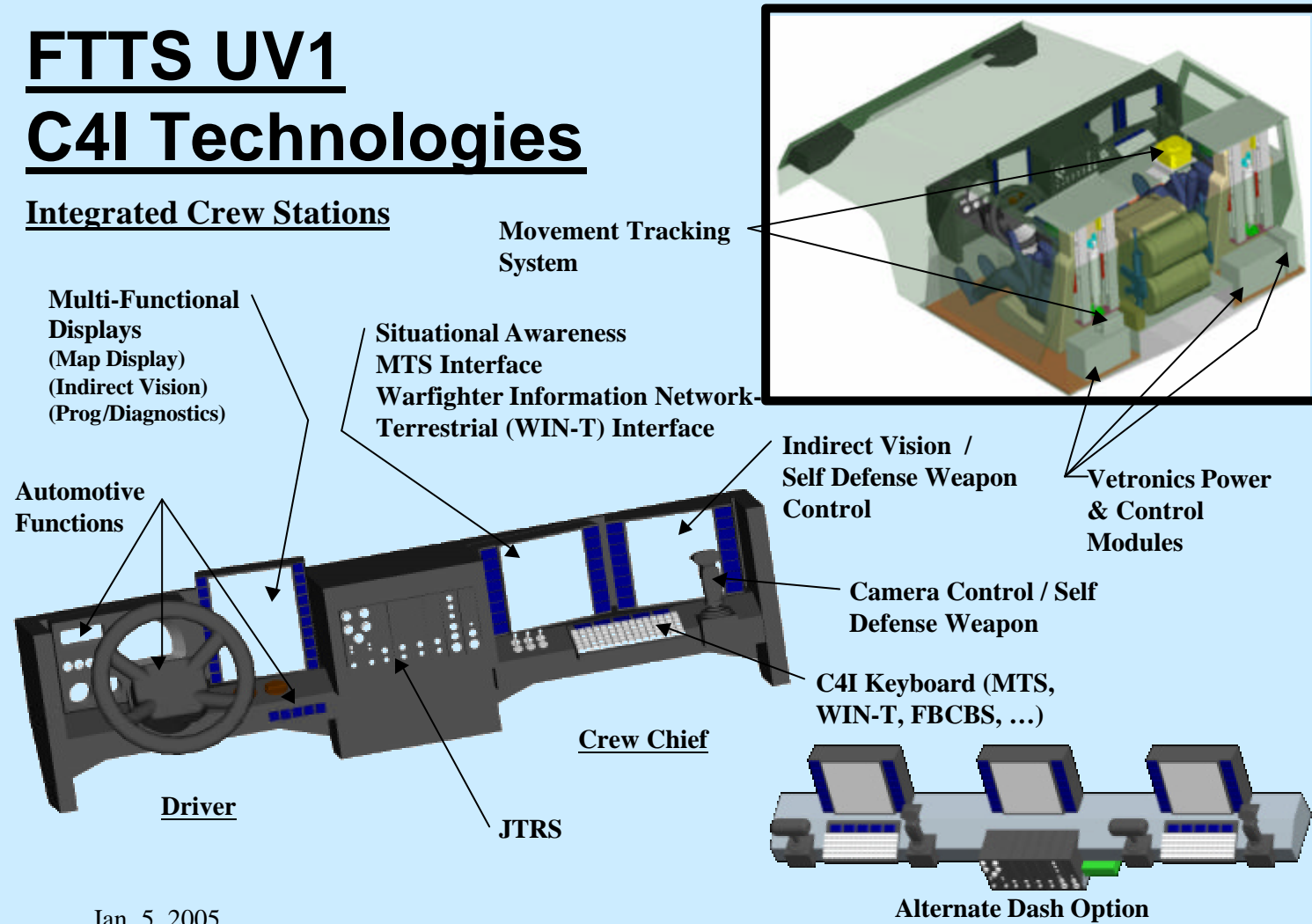


Appliqué Blast Protection Kits

Jan. 5, 2005

FTTS UV1 C4I Technologies

Integrated Crew Stations



Jan. 5, 2005

FTTS UV1 Support Characteristics

Cab Seating: 2 Man

Axle Configuration: 4 x 4

Curb Weight: 10,242 lbs

Gross Vehicle Weight (GVW):

14,785 lbs

Length: 223"

Width: 86"

Height: 79"

Track: 74"

Maximum Speed: 65 mph (105 Kph)

Tires: 12.00R20 XML LRG Michelin

Central Tire Inflation: Yes

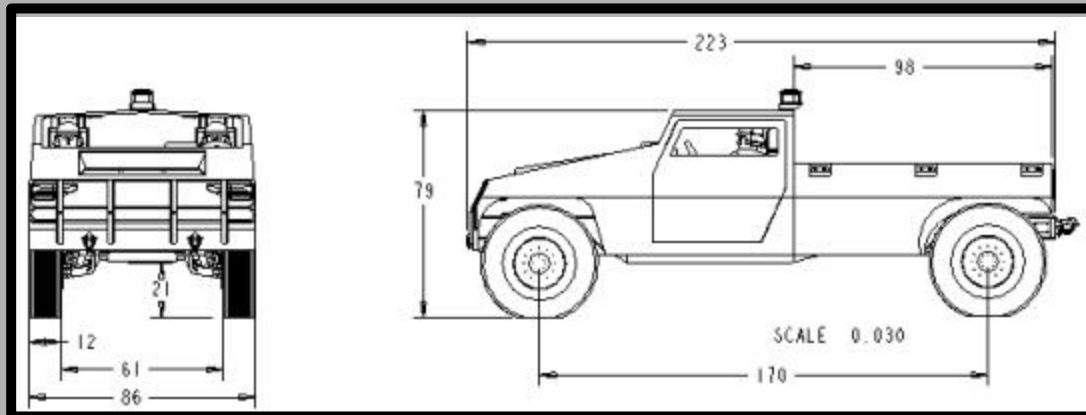
Fuel Capacity: 45 gal (170 liters)

Air Transportability: C130, C141, C17

Engine: Cummins ISB

Transmission: Electric Drive

Suspension: Independent w/Variable Damping



Jan. 5, 2005

FTTS UV1 Ambulance

Characteristics

Cab Seating: 2 Man

Axle Configuration: 4 x 4

Curb Weight: 12,500 lbs

Gross Vehicle Weight (GVW):

14,785 lbs

Length: 235"

Width: 86"

Height: 100"

Track: 74"

Maximum Speed: 65 mph (105 Kph)

Tires: 12.00R20 XML LRG Michelin

Central Tire Inflation: Yes

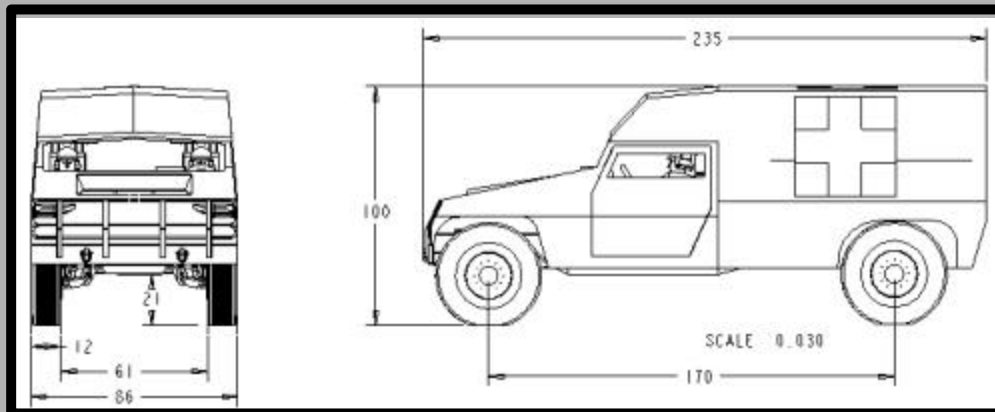
Fuel Capacity: 45 gal (170 liters)

Air Transportability: C130, C141, C17

Engine: Cummins ISB

Transmission: Electric Drive

Suspension: Independent w/Variable Damping



Jan. 5, 2005

FTTS UV1 Command and Control Characteristics

Cab Seating: 2 Man

Axle Configuration: 4 x 4

Curb Weight: 12,500 lbs

Gross Vehicle Weight (GVW):

14,785 lbs

Length: 223"

Width: 86"

Height: 94"

Track: 74"

Maximum Speed: 65 mph (105 Kph)

Tires: 12.00R20 XML LRG Michelin

Central Tire Inflation: Yes

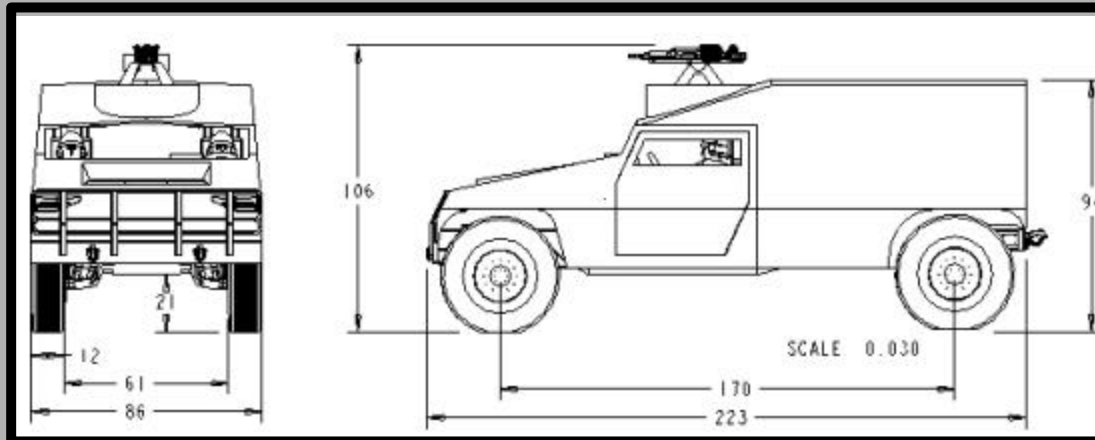
Fuel Capacity: 45 gal (170 liters)

Air Transportability: C130, C141, C17 with
OCSW removed

Engine: Cummins ISB

Transmission: Electric Drive

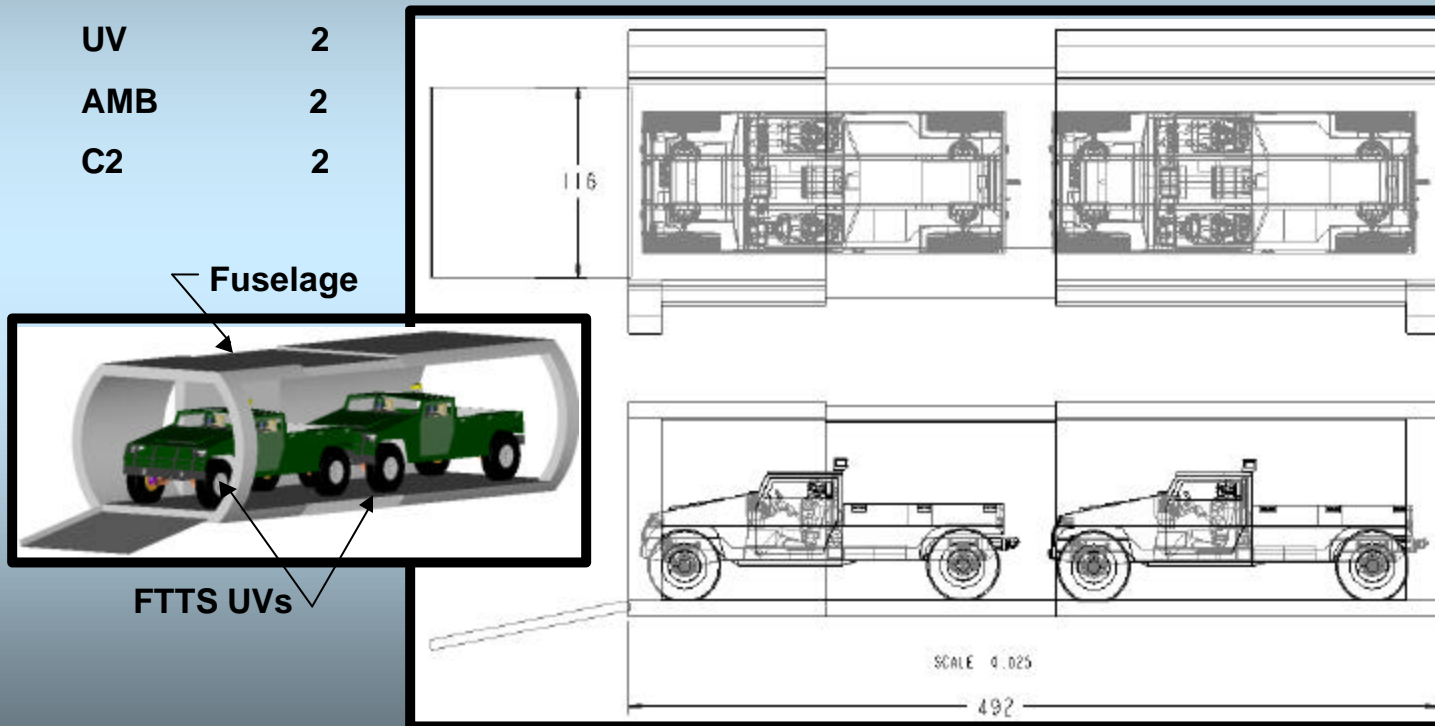
Suspension: Independent w/Variable Damping



Jan. 5, 2005

FTTS UV1 C-130 Transportability

<u>Variant</u>	<u>Loaded</u>
UV	2
AMB	2
C2	2



Jan. 5, 2005