



Border Control Special mission Helicopters

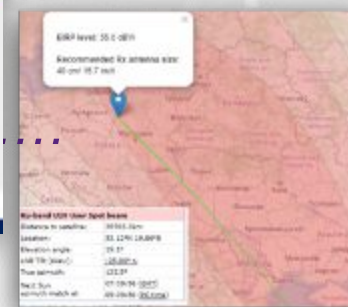
Oct. 2023

This is non classified presentation limited to public information present in website and internet
For more info please contact sales@most-sys.com



Table of Contents:

- *Company Profile* *Pages 3*
- *Future Battlefield* *Page 4*
- *Mission vehicle..* *Page 5-8*
- *Typical missions* *Page 9-14*
- *Performance* *Page 15-18*
- *Appendix* *Page 17-26*
- *TDS*



Who We Are: MOST Company Profile



MOST Key Facts:

- Over 20 years of experience in R&D and production in the mobility segment of LOS and SATCOM
- Reliable supplier of the market leaders in Israel and all over the globe

MOST Key Inventions:

- MODEMs , IMU, control system, antennas (patents) designed and manufactured in house (not a glue company)

MOST Key Clients:



MOST Group is a leader in mobile SATCOM worldwide

MOST Sat Com On The Move



MOBILE COMMAND AND CONTROL COMMUNICATIONS:

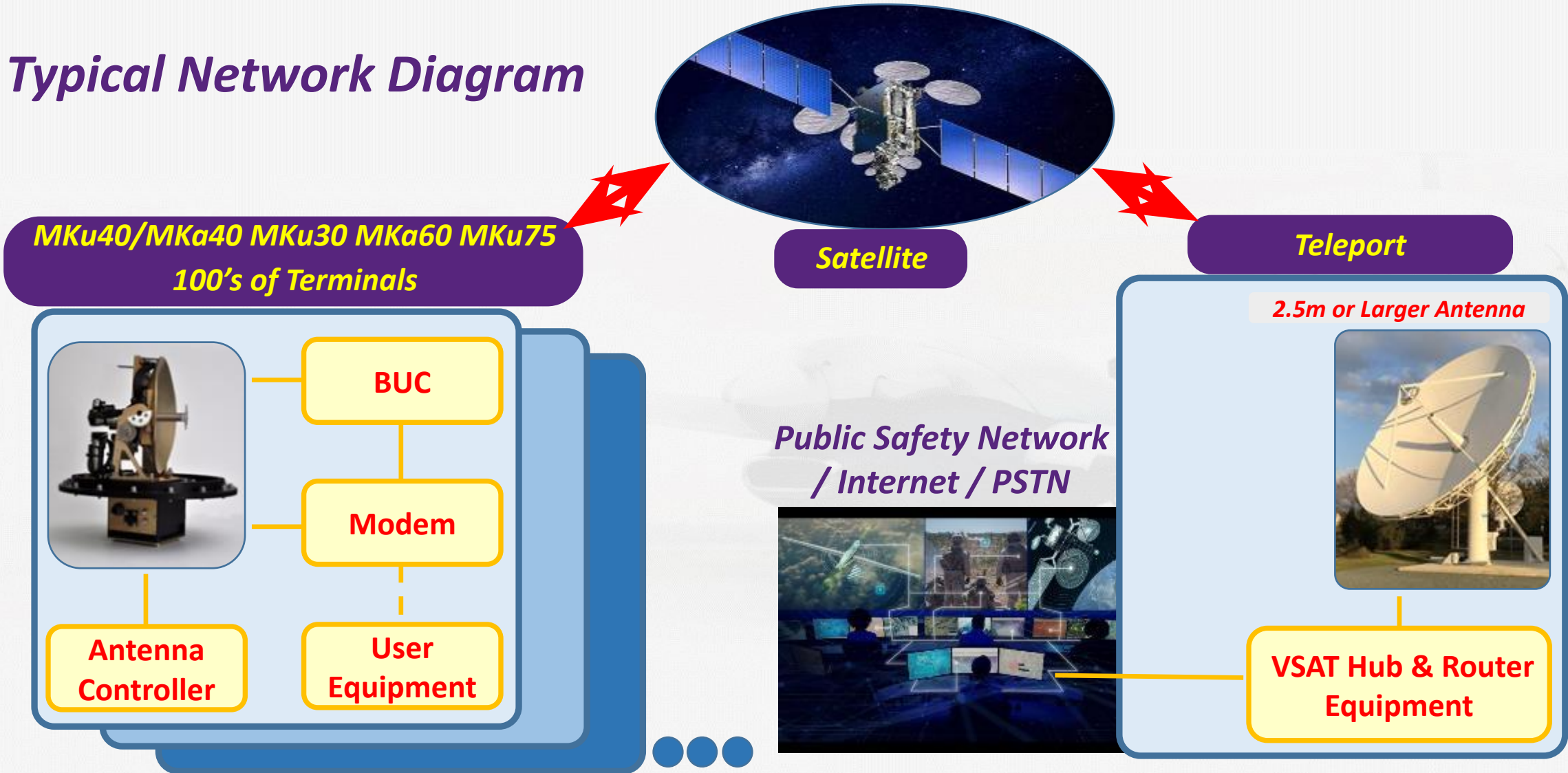
- FSS and MSS COTM solutions can provide fully mobile IP data and voice services to vehicles on the move up to 60 mph. The comprehensive FSS COTM offering includes the terminal, teleport, and satellite capacity to provide high performance COTM IP connectivity.

TYPICAL APPLICATIONS SUPPORTED:

- Any vehicle can serve as information gathering from multiple sensors or as a mobile command post
- A full 4 Mbps outbound channels delivered via FSS to the vehicle and 2-4 Mbps inbound channel transmitted from the vehicle to the FSS using IP support for voice, video and data simultaneously.
- Support for 802.11x wireless access allows vehicle to function as wireless hot spot access point for a convoy while in-route or a fixed hot spot for personnel upon arrival.



Typical Network Diagram



Mission Helicopters

Operator Post

- Upper Display 21.5" – Software picture overlay system
- Lower Display 21.5" – EOP Viewer
- EOP Joy Stick and Control Panel
- Intercom and Gooseneck led light
- RJ45 Internet USB Charger

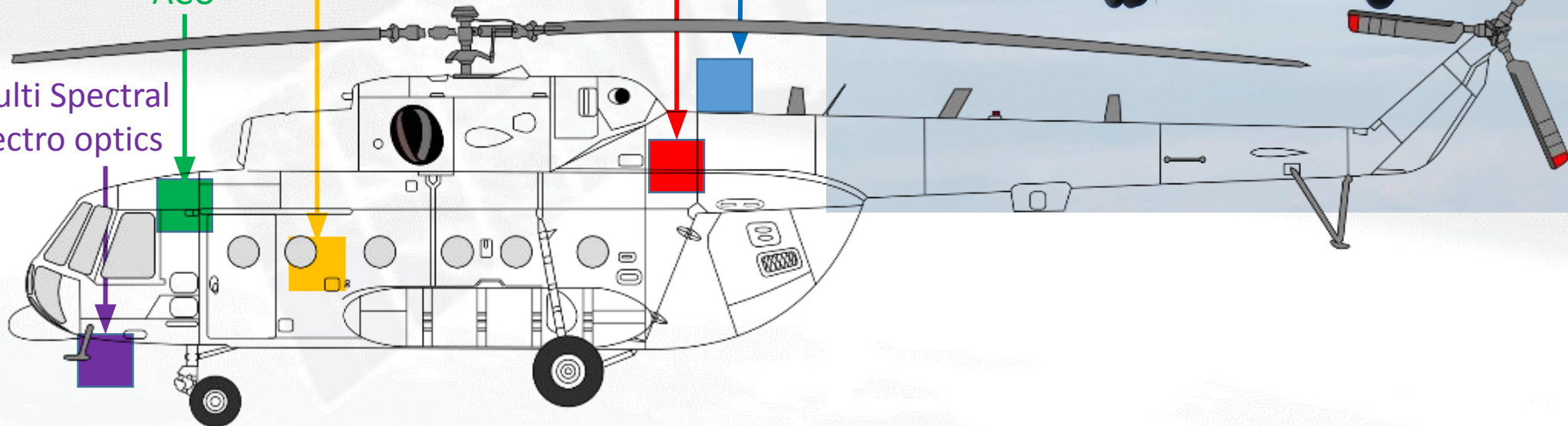


Antenna

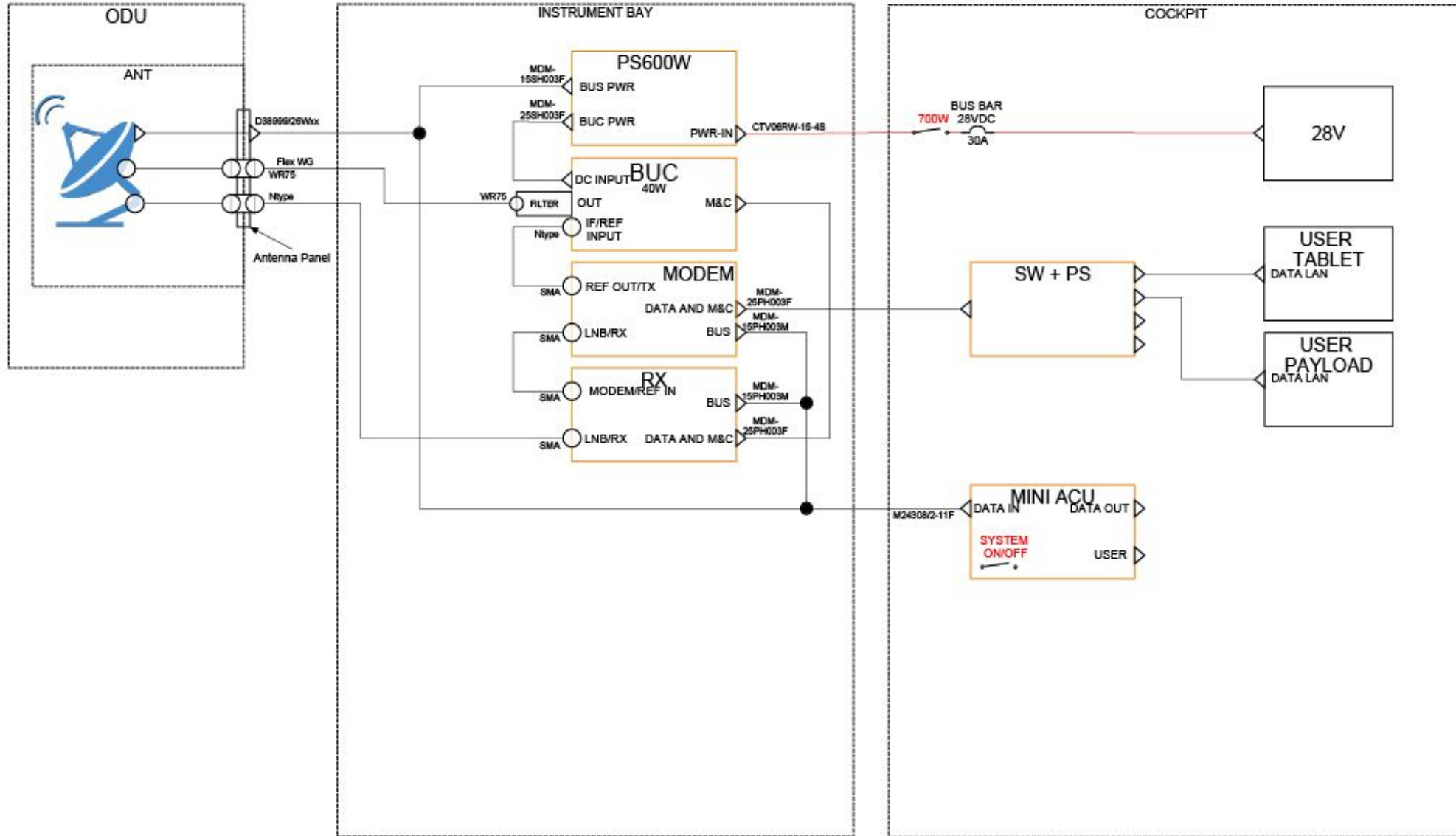
LRU's

ACU

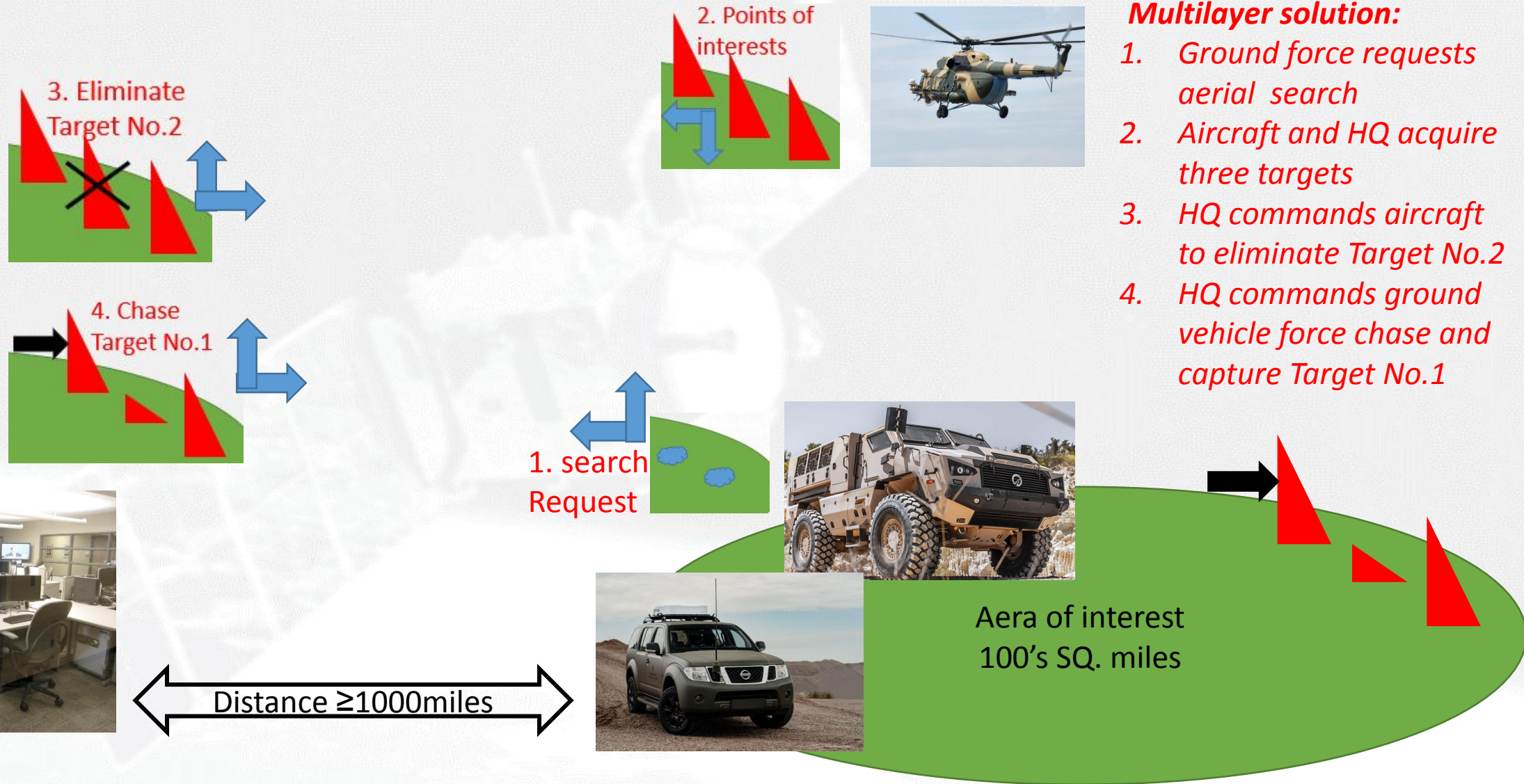
Multi Spectral Electro optics



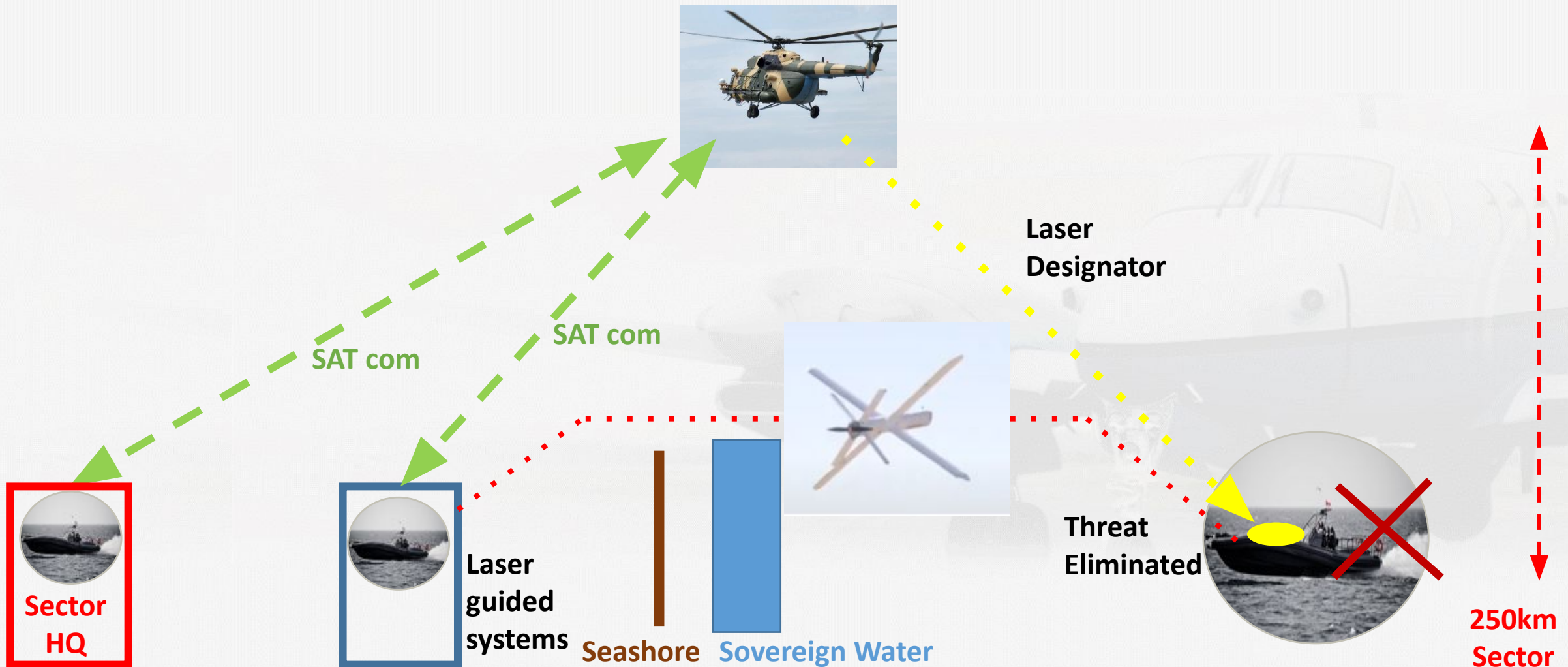
Mobile block diagram [A/C, Heli, CMD vehicle]



Multilayer solution



Sensor-to-Shooter Threat Elimination



MKu40 built on patents of MOST, enabling sharing continuous, live Video, Voice and Data, while on the move



The connection of mobile land forces in action in remote regions is challenging, it places high demands: availability with high IP transmission rates and functionality in difficult terrain.

1. Self-initializing and self-aligning system
2. Fast and user-friendly installation on different vehicles
3. Easy packaging of the system in transport boxes.
4. Reliability under adverse operating conditions, e.g. in case of high temperature, vibrations, shock etc.

Marine vessels work with mission Helicopters



MKu75 sharing live Video, Voice and Data, while vessels is on the move

Typical users:

- *Army and paramilitary units*
- *Border and coast control authorities*
- *Law enforcement agencies*
- *Emergency management agencies*
- *Environmental control agency, etc.*

Typical tasks performed:

- *Ground situation awareness picture*
- *Electronic Order of Battle (EOB)*
- *Maritime patrol*
- *Border control*
- *Critical infrastructure protection*
- *Search & rescue missions*
- *Intelligence, surveillance and reconnaissance*
- *Deterring illegal activities: terror, piracy, contraband and narcotics trafficking*
- *Environment protection: pollution, illegal fishing and forest fire spotting*
- *Theft of minerals prevention: gas, oil, minerals*

Special mission aircraft is a powerful instrument in winning informational and operational supremacy in complex emergency situations

HUB station

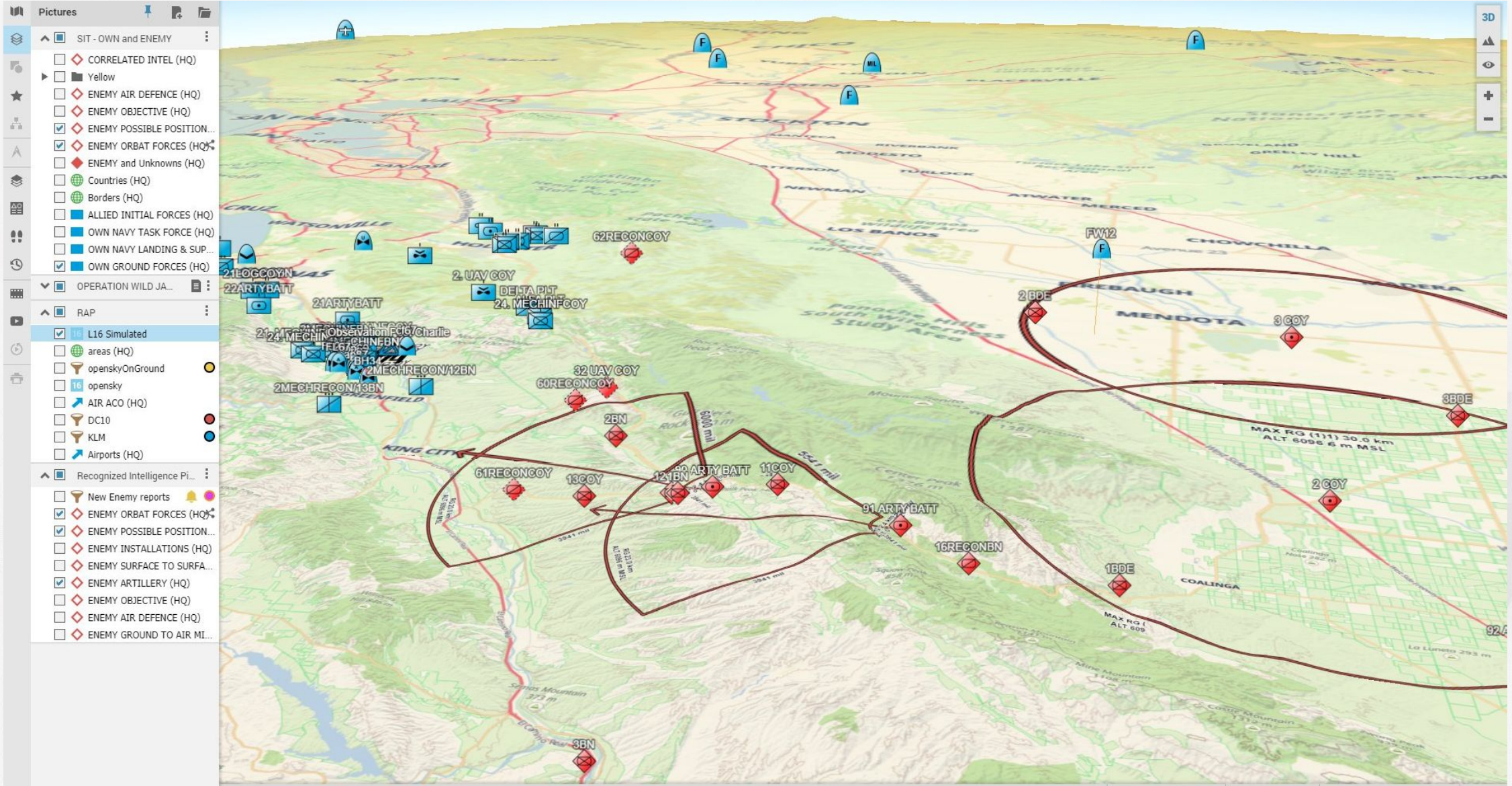
Headquarters staff and commanders exchange messages, pictures, and video scripts with airborne and ground forces in the field over VSAT tactical bandwidth.

HQ receives and processes air and ground visual data coming from various sources, radars, optical sensors. HQ qualified personal scan the data from multiple sources and creates a combined ground situation, processes the pertinence of targets and evaluates their characteristics.

HQ displays the ground situation, target positions and suggests the optimal allocation of targets to subordinate fire elements according to their position and the tactical parameters.



C4I digital map



Installing MKu30H antenna : SOW work contents

Conducting a mechanical survey in the helicopter of the various installation areas

Design of antenna installation at the root of the tail

Design and manufacture of electrical braids for the system

Static and dynamic analyzes of antenna installation.

Writing reports for approval in the following list configuration:

- ✓ Report W / B Weight and Balance - Delta of Weight and Their Location*
- ✓ STRESS report strength, static and dynamic analysis*
- ✓ IND Report - Installation and Disassembly Report*
- ✓ ELA report*

Mechanical production parts for the installation of the antenna and the additional units.

Mechanical installation of system components.



Team work

Our facilities owned, subcontracting and leased:

- *R&D*
- *Production*
- *Installation*
- *Testing*
- *Runway*
- *Logistics center, spare parts supply*
- *Maintenance infrastructure*

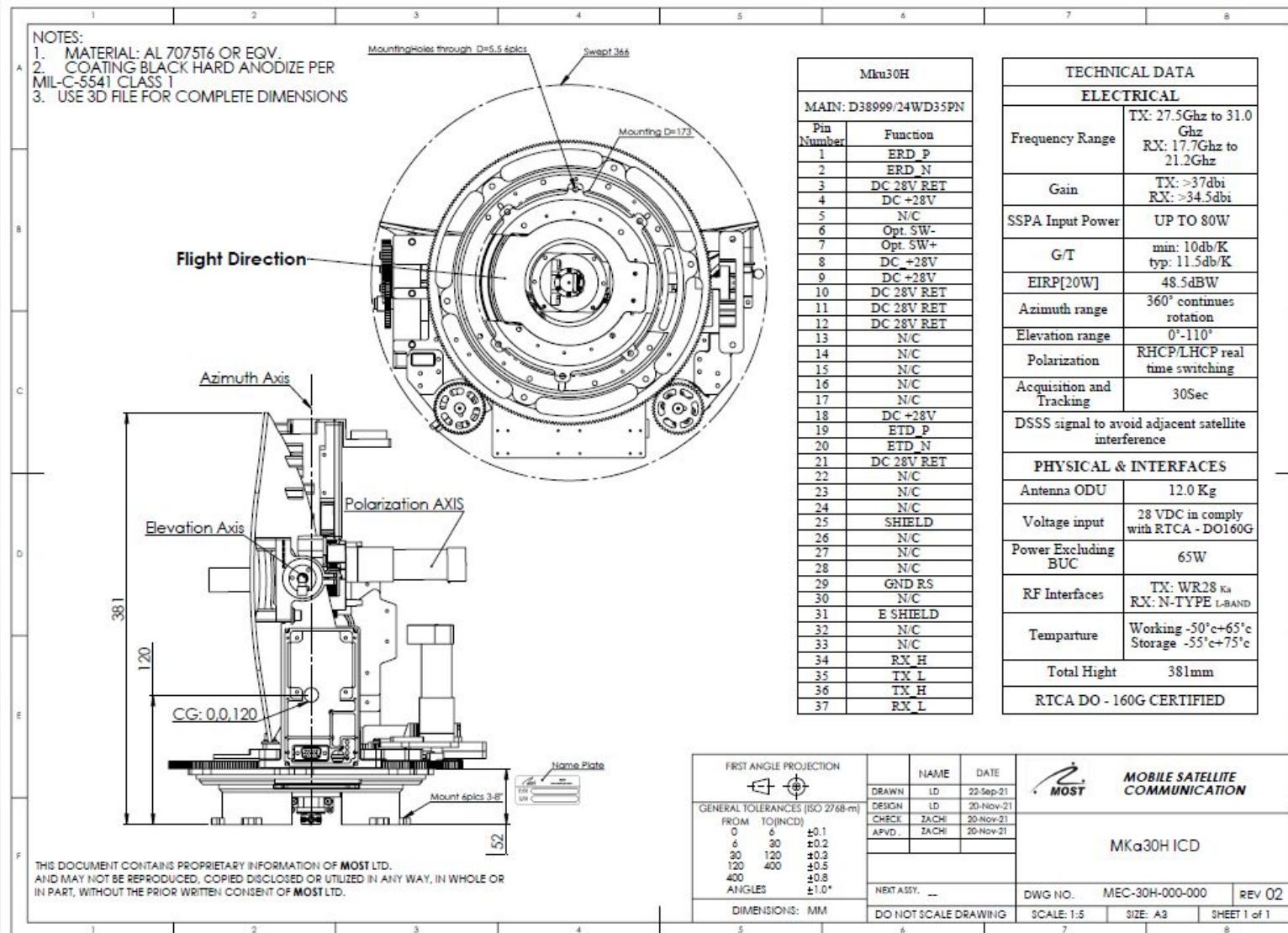




Team work

** See Appendix: LRU's ICD and TDS* ↓

Appendix LRU ICD and TDS: Antenna



Appendix LRU ICD and TDS: PS600W



TABLE 1: MDM-25M		TABLE 2: MDM-15M		TABLE 4: TECHNICAL DATA	
P/N	FUNCTION	P/N	FUNCTION	ELECTRICAL SPECIFICATIONS	
1	DO NOT CONNECT	1	48V (OUT)	INPUT VOLTAGE	MIN 16V MAX: 40V
2	DO NOT CONNECT	2	48V (OUT)	ISOLATION VOLTAGE	1500V
3	DO NOT CONNECT	3	CHASSIS	AGENCY APPROVAL	DESIGNED TO MEET UL/CUL 60950, IEC/EN60950-1
4	DO NOT CONNECT	4	48V (RETURN)	FIXED SWITCH FREQUENCY	400 KHZ
5	DO NOT CONNECT	5	48V (RETURN)	OUTPUT OVERVOLTAGE PROTECTION	112% TYP
6	48V (RETURN)	6	ON (OPEN) / OFF (SHORT)	ON/OFF CONTROL	POSITIVE LOGIC
7	48V (RETURN)	7	DO NOT CONNECT	OPERATING INPUT VOLTAGE RANGE	MIN : 16 V MAX : 36 V
8	48V (RETURN)	8	DO NOT CONNECT	MAXIMUM INPUT CURRENT	37.5 A
9	48V (RETURN)	9	48V (OUT)	OUTPUT VOLTAGE RANGE	MIN : 47.28 V TYP : 48.00 V MAX 48.92 V
10	48V (OUT)	10	48V (OUT)	OVERLOAD PROTECTION	62.4 V
11	48V (OUT)	11	48V (RETURN)	OUTPUT CURRENT RANGE	MAX: 12.5 A
12	48V (OUT)	12	48V (RETURN)	EFFICIENCY (VIN=24V)	100% LOAD - TYP: 90% 50% LOAD - TYP: 92%
13	48V (OUT)	13	ON (OPEN) / OFF (SHORT)	PHYSICAL & INTERFACES	
14	DO NOT CONNECT	14	DO NOT CONNECT	TEMPARTURE	WORKING: -40°C - +85°C STORAGE: -55°C - +125°C
15	DO NOT CONNECT	15	DO NOT CONNECT	WEIGHT	2.1 KG

TABLE 3: TVP00RW-15-4P	
P/N	FUNCTION
A	28V (RETURN)
B	28V (RETURN)
C	28V (IN)
D	28V (IN)

REST ANGLE PROJECTION			MOBILE SATELLITE COMMUNICATION	
NAME	DATE	PS-600		
DRAWN: Hodor B.S	28/03/2022			
DESIGN: Hodor B.S	28/03/2022			
CHECK: [Signature]	28/03/2022			
APPROV: Zach	28/03/2022			
NEXT ASSY: ---		DWG NO:	MEC-ELC-PS-000	REV D1
DIMENSIONS: MM		DO NOT SCALE DRAWING	SCALE: 1:2	SRE: A3 SHEET 1 of 1

The information and ideas contained herein are proprietary to MOST Mobile Sat Ltd, and shall not be duplicated or disclosed outside the receiving organization or the receiving organization's potential customer without prior written approval from MOST Mobile Sat, not used by the receiving organization or any of its subsidiaries or affiliates, for any purpose other than evaluation of the ideas and work contained herein.

Appendix LRU ICD and TDS: RX

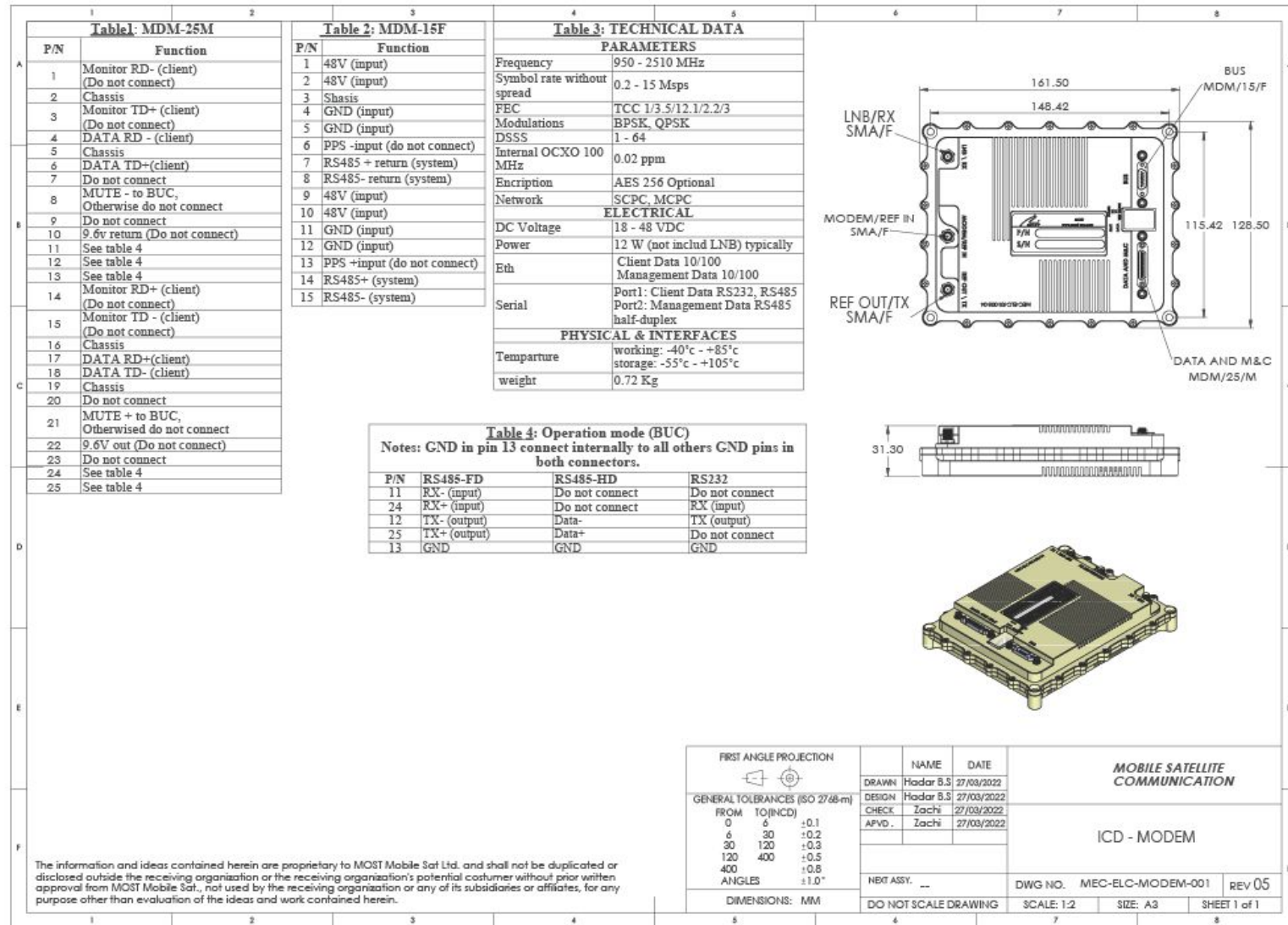
Table 1: MDM-25M		Table 2: MDM-15F		Table 3: TECHNICAL DATA	
P/N	Function	P/N	Function	PARAMETERS	
1	Monitor RD- (client) (Do not connect)	1	48V (input)	FFT	1 Hz to 20 MHz in single sweep
2	Chassis	2	48V (input)	RSSI	70 dB minimum dynamic range
3	Monitor TD+ (client) (Do not connect)	3	Shasis	Noise Figure	8.2 dB
4	DATA RD - (client) (Do not connect)	4	GND (input)	RSL	-78 dBm
5	Chassis	5	GND (input)	ELECTRICAL	
6	DATA TD+(client) (Do not connect)	6	PPS -input (do not connect)	DC Voltage	18 - 48 VDC
7	Do not connect	7	RS485 + return (system)	Power	12 W (not includ LNB) typically
8	MUTE - to supported BUC, Otherwise do not connect	8	RS485- return (system)	Eth	Client Data 10/100 Management Data 10/100
9	Do not connect	9	48V (input)	Serial	Port1: Client Data RS232, RS485 Port2: Management Data RS485 half-duplex
10	9.6v return (Do not connect)	10	48V (input)	PHYSICAL & INTERFACES	
11	See table 4	11	GND (input)	Temperature	working: -40°C - +85°C storage: -55°C - +105°C
12	See table 4	12	GND (input)	weight	0.72 Kg
13	See table 4	13	PPS +input (do not connect)		
14	Monitor RD+ (client) (Do not connect)	14	RS485+ (system)		
15	Monitor TD - (client) (Do not connect)	15	RS485- (system)		
16	Chassis				
17	DATA RD+(client) (Do not connect)				
18	DATA TD- (client) (Do not connect)				
19	Chassis				
20	Do not connect				
21	MUTE + to supported BUC, Otherwise do not connect				
22	9.6V out (Do not connect)				
23	Do not connect				
24	See table 4				
25	See table 4				

Notes: GND in pin 13 connect internally to all others GND pins in both connectors.			
If BUC not connected to Rx, Do not connect all pins below.			
P/N	RS485-FD	RS485-HD	RS232
11	RX- (input)	Do not connect	Do not connect
24	RX+ (input)	Do not connect	RX (input)
12	TX- (output)	Data-	TX (output)
25	TX+ (output)	Data+	Do not connect
13	GND	GND	GND

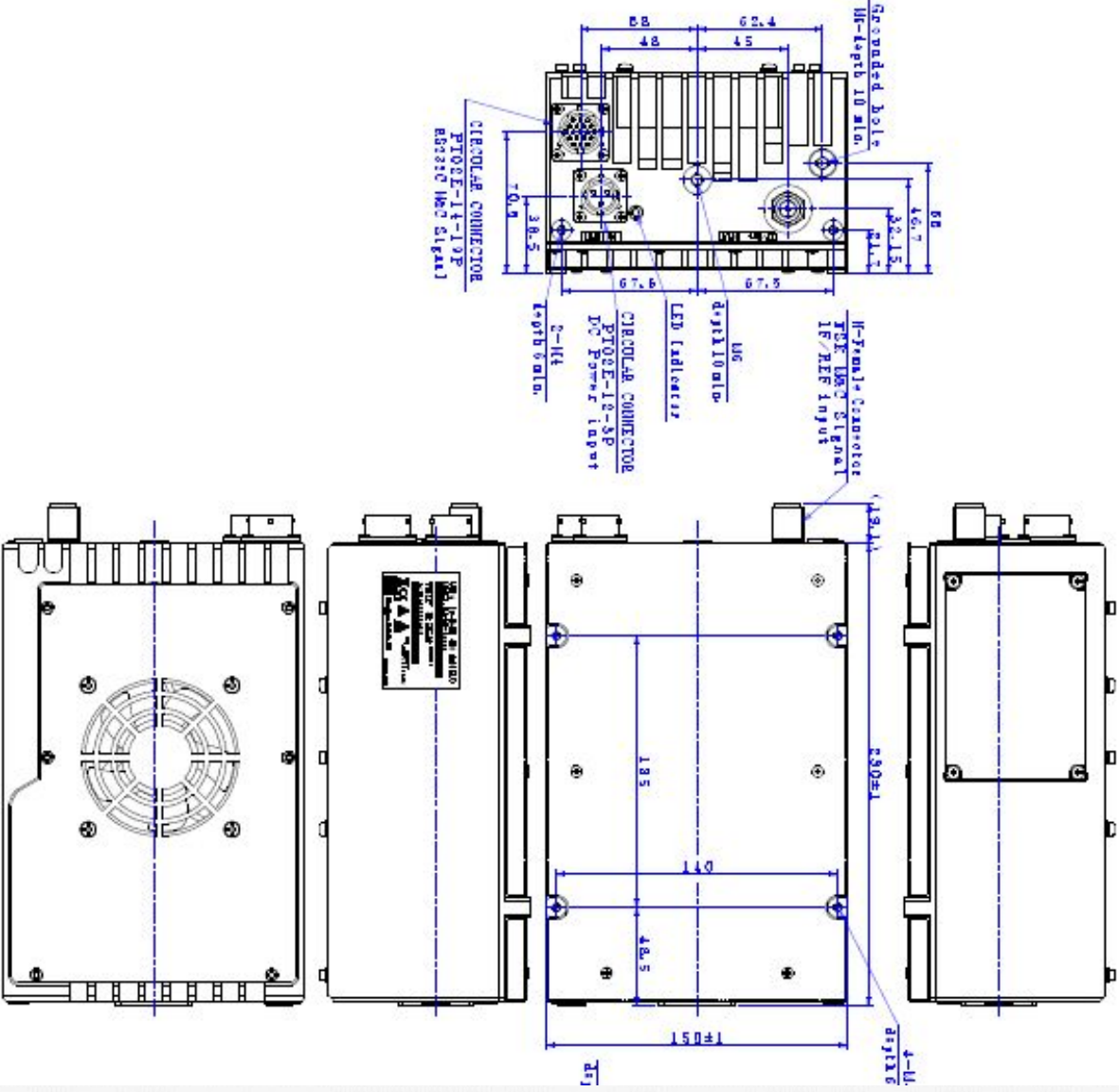
FIRST ANGLE PROJECTION		NAME	DATE	MOBILE SATELLITE COMMUNICATION	
GENERAL TOLERANCES (ISO 2768-m)		DRAWN	Hadar B.S	27/03/2022	ICD - RX tracking receiver
FROM	TO(INCD)	DESIGN	Hadar B.S	27/03/2022	
0	6	CHECK	Zachi	27/03/2022	
6	30	APVD	Zachi	27/03/2022	
30	120				
120	400				
400					
ANGLES	±1.0°				
DIMENSIONS: MM		DWG NO.		MEC-ELC-RX-001	REV 05
		DO NOT SCALE DRAWING		SCALE: 1:2	SIZE: A3
					SHEET 1 of 1

The information and ideas contained herein are proprietary to MOST Mobile Sat Ltd. and shall not be duplicated or disclosed outside the receiving organization or the receiving organization's potential customer without prior written approval from MOST Mobile Sat., not used by the receiving organization or any of its subsidiaries or affiliates, for any purpose other than evaluation of the ideas and work contained herein.

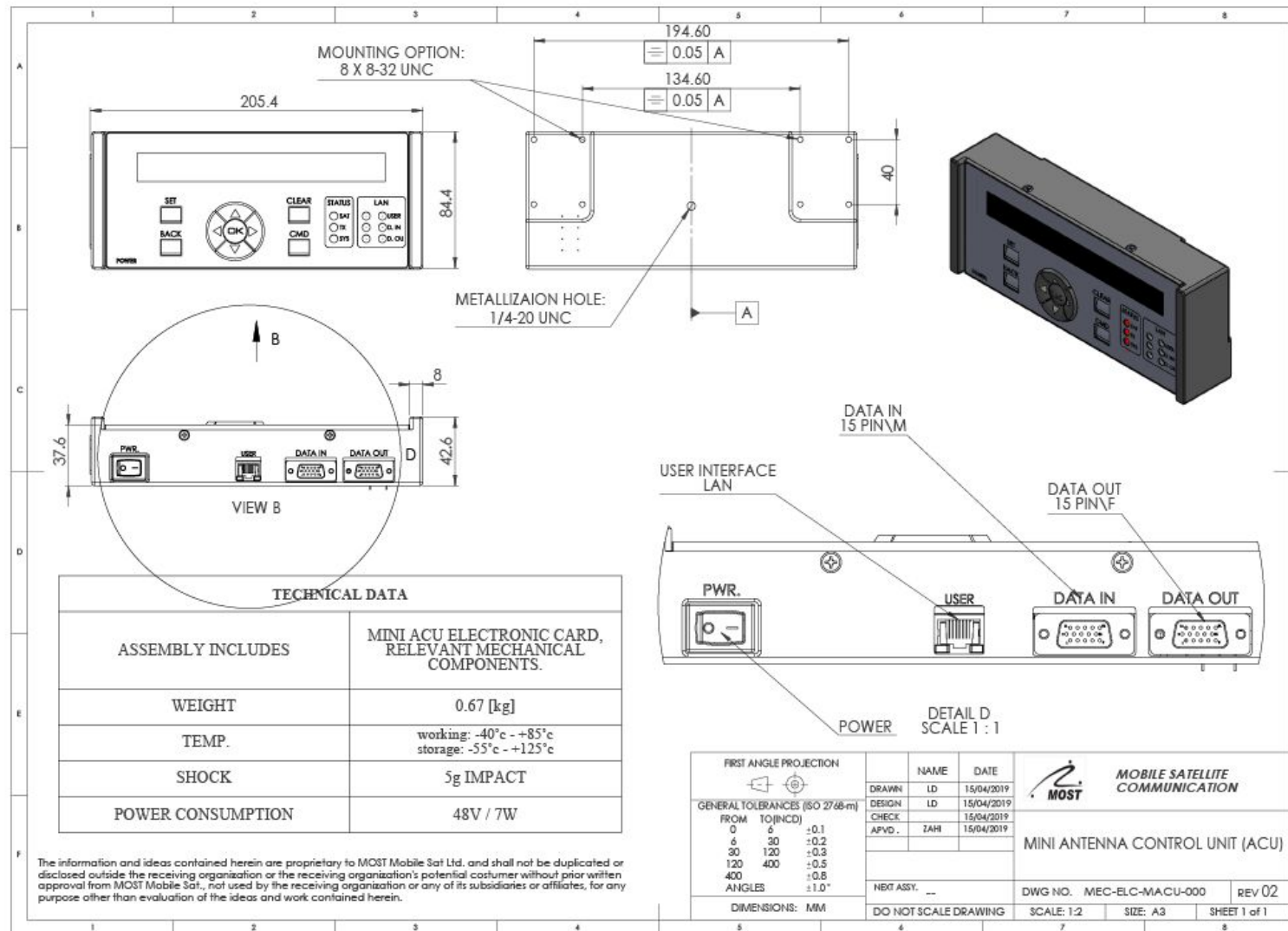
Appendix LRU ICD and TDS: MODEM



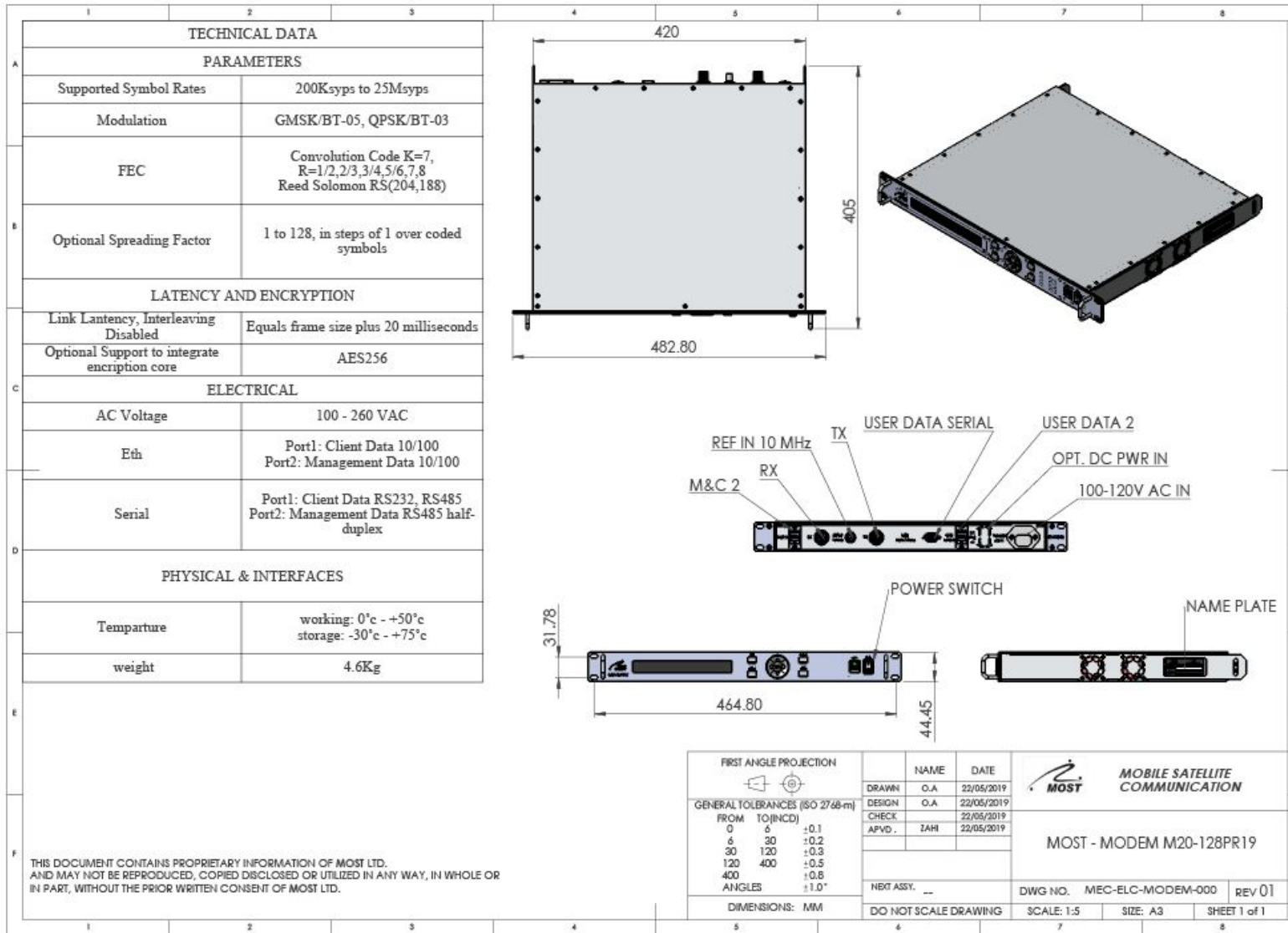
Appendix LRU ICD and TDS: BUC



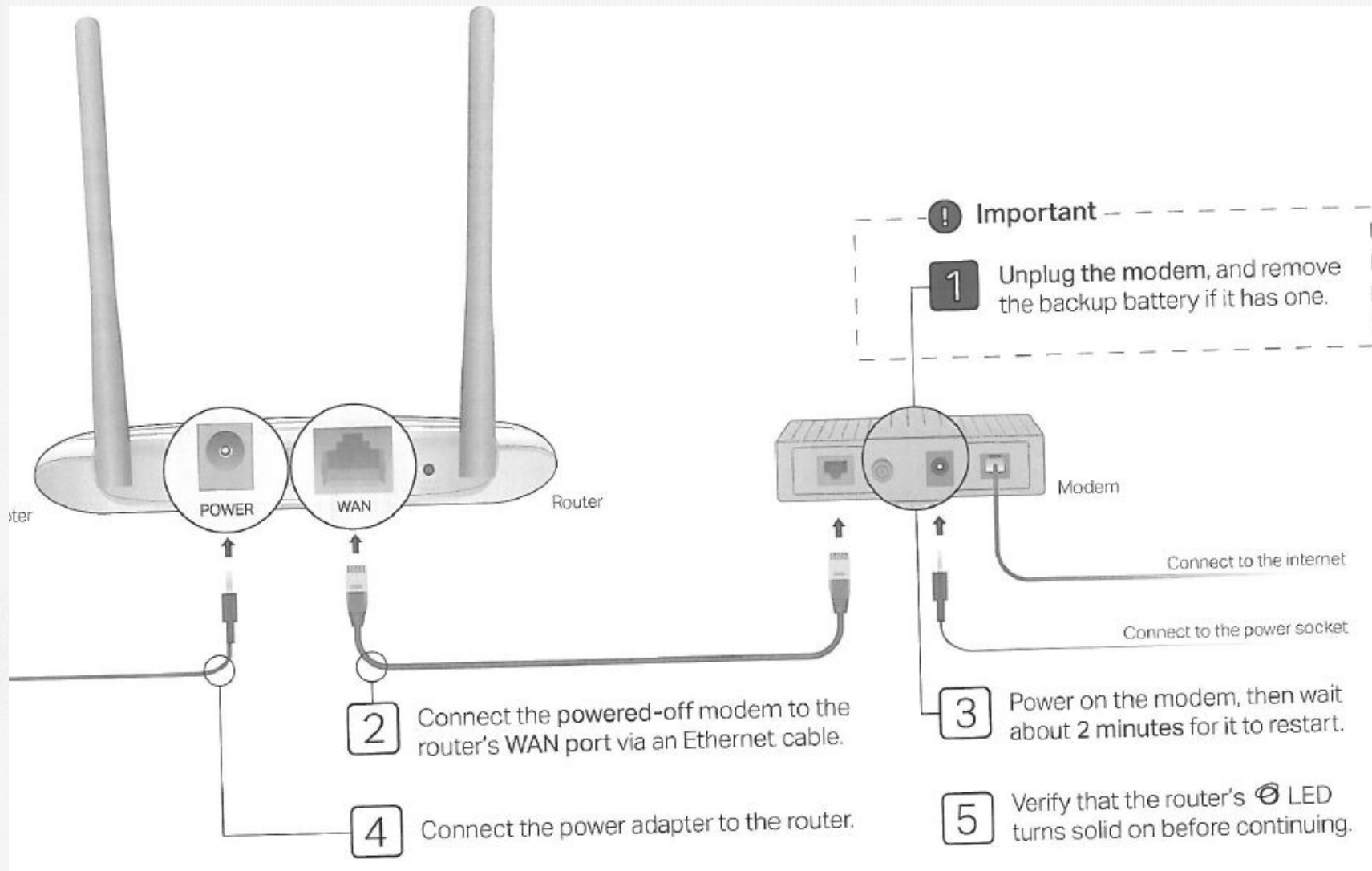
Appendix LRU ICD and TDS: mini ACU



Appendix LRU ICD and TDS: HUB MODEM



ETH switch



The interface of H.264 SDI encoder and WIFI encoder are the same:





AES Network Tunnel, Bridge or Router

- **Encrypt LAN to LAN Traffic**
- **Secure Proprietary Information**
- **Standalone Encryption Appliance**