AquaARX

DVB-S2 Modem

BROADBAND SATCOM-ON-THE-MOVE

OVERVIEW

Unmanned Surface Vehicles, Autonomous Maritime Vehicles and Speedboats are critical for operations around the world in coast guard, surface warfare, military operations, troop and equipment transport, intelligence, surveillance, and reconnaissance (ISR) missions. These operations need brodband, seamless, resilient, real-time communication anywhere and everywhere to make mission-critical decisions.

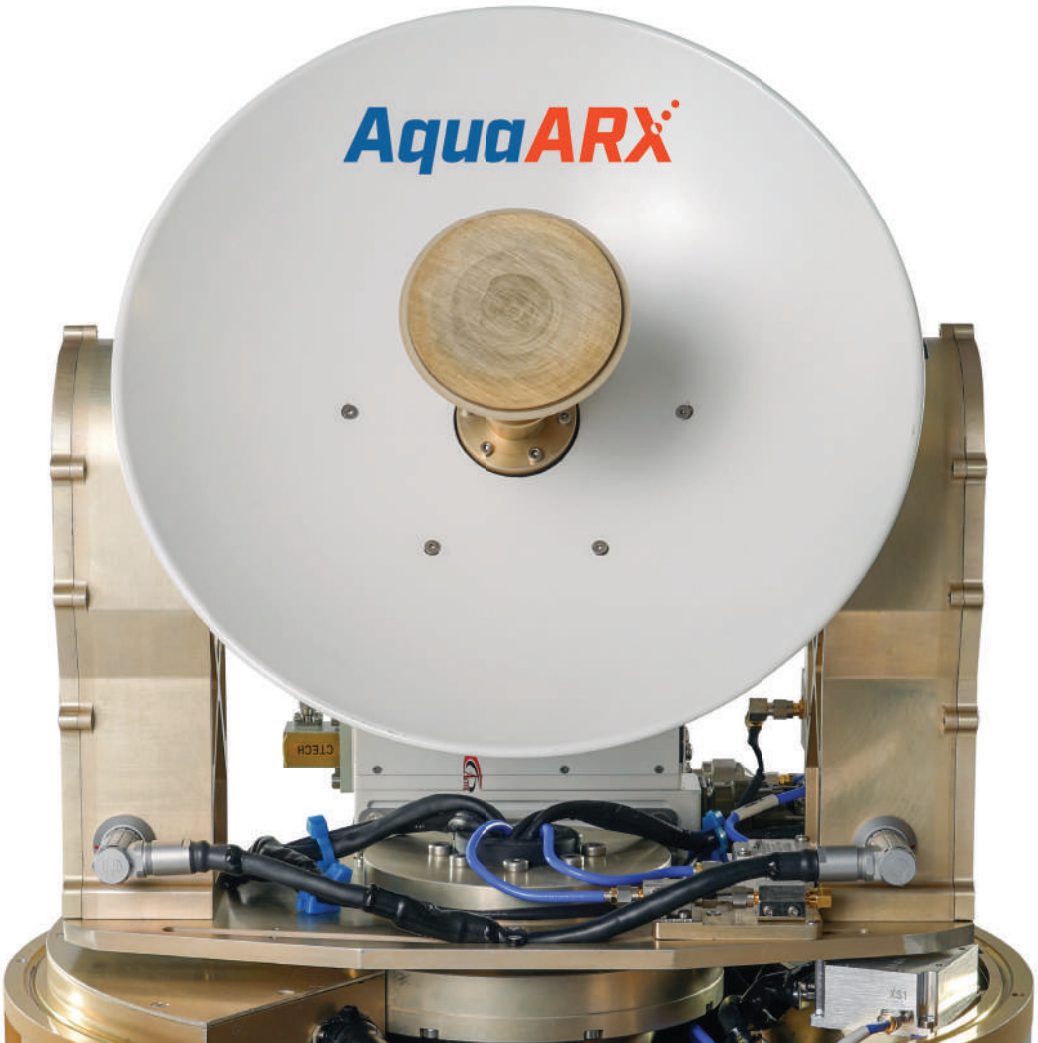
The AquaARX consists of a modem, a 12-inch antenna, and a ground control unit. Despite the high speed of the Vehicles, the antenna's high azimuth and elevation speeds and accelerations ensure uninterrupted communication. It transmits sound, image, and data packages instantly wherever needed in the world. Instant data transmission will provide mission flexibility and enable better planning during unexpected situations.

SATCOM On The Move Antenna

TURKISH AEROSPACE
SUBSIDIARY

DVB-S2 MODEM FEATURES	DVB-S2 MODEM SPECIFICATIONS
L-Band TX Out Frequency	950–2150 MHz
L-Band RX In Frequency	950–2150 MHz
Waveform	DVB-S2 (ETSI EN 302 307)
Data Encryption	AES-256
Interfaces	24 V DC Power Input L-Band RF TX x1, L-Band RF RX x1, 10/100/1000 Mbps Ethernet x2, Controlling/Monitoring/Maintenance 10/100/1000 Mbps Ethernet x1, Telemetry/Telecommand Data 10/100/1000 Mbps Ethernet x1, Antenna Control Unit RS-422 x2, CLI Control RS-232 x1, Linux Command Line
Connectors	SMA 50 Ohm Female Connector x2, L-Band RF TX ve RX (132284) 4-pin 38999- Military Type Circular Connector x1, Power Input (D38999/20WC4PN) 55-pin 38999- Military Type Circular Connector x1, Data/Control (TVP00WCI-17-35SF459)
Power Consumption @ Operating Voltage	Nominal: 72 W @ 28 V DC, Instant peak 202 W @ 28 V DC (1.5ms)
Operating Voltage	Nominal 28 V DC 16–33 V DC, MIL-STD-704F/DO-160 Normal
Box Features	Fan Cooled Finned Aluminum Body
Box Dimensions	312,1 x 261 x 133,4 mm (Length x Width x Height)
Weight	5406 ±5% gr
Operating Temperature Range	-40°C/+55°C
Storage Temperature Range	-55°C/+70°C

ANTENNA FEATURES	ANTENNA SPECIFICATIONS
L-Band RF IN / OUT Frequencies	TX: 950–1700 MHz RX: 950–1700 MHz
Ku-Band Frequencies	10.95–12.75 GHz RX 13.75–14.5 GHz TX
BUC	50 W
EIRP	44.6 dBW @ 14 GHz
G/T	7.8 dBi/K @ 11,7 GHz, 30° elevation
Polarization	Linear (Vertical + Horizontal)
Power Consumption (W) Instant Power Consumption (W) @24VDC	500 W (Antenna Assembly + Radome Assembly) 700 W (Antenna Assembly + Radome Assembly)
Operating Voltage	Nominal 24 V DC 16-32 V DC
Elevation scope	+5° / +85°
Azimuth scope	360°, continuous
Polarization scope	-135° / +135°
Elevation max velocity-acceleration	100°/sec - ≤500°/sec²
Azimuth max velocity-acceleration	150°/sec - ≤500°/sec²
Polarization max velocity-acceleration	100°/sec - ≤500°/sec²
Operating temperature range	-32°C/+50°C
Storage temperature range	-40°C/+60°C



Ground Modem

GROUND MODEM FEATURES	GROUND MODEM SPECIFICATIONS
L-Band TX Out Frequency	950–2150 MHz
L-Band RX In Frequency	950–2150 MHz
Waveform	DVB-S2 (ETSI EN 302 307)
Data Encryption	AES-256
Interfaces	24 V DC Power Input L-Band RF TX x1, L-Band RF RX x1, 10/100/1000Mbps Ethernet x2, Controlling/Monitoring/Maintenance 10/100/1000Mbps Ethernet x1, Telemetry/Telecommand Data 10/100/1000Mbps Ethernet x1, Antenna Control Unit RS-232 x2, CLI Control RS-232 x1, Linux Command Line
Connectors	SMA 50 Ohm Female Connector x2, L-Band RF TX ve RX (132284) 4-pin 38999- Military Type Circular Connector x1, Power Input (D38999/20WC4PN) 22-pin 38999- Military Type Circular Connector x2, Data/Control (TVP00WCI-17-35SF459) (TVP00WCI-13-35SA-F459)
Power Consumption @ Operating Voltage	Nominal: 72 W @ 28 V DC, Instant peak 202 W @ 28 V DC (1.5ms)
Operating Voltage	220 V AC / 50 Hz
Box Features	Fan Cooled Finned Aluminum Body
Box Dimensions	502,9 x 483 x 44,4 mm (Length x Width x Height)
Weight	8460±5% gr
Operating Temperature Range	-40°C/+55°C
Storage Temperature Range	-55°C/+70°C

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