SINGLE CHANNEL MODEM

SECURE INFORMATION, SURVEILLANCE AND RECONNAISSANCE (ISR) DATA

Cubic's Single Channel Modem (SCM) provides front line tactical ISR communications that are crucial for air, ground and maritime forces during combat. The SCM is an environmentally rugged and compact data link system that is designed to provide ISR data to various platforms and personnel. The modem's EMI protected assembly houses a multiband miniature transceiver (MMT), KI-16 removable Type 1 encryption module, and an integrated RF switch array that enables various antenna configurations and multi band operations.

The SCM supports multiple waveforms including Standard CDL and Bandwidth-Efficient CDL. Additionally, the SCM can transmit independently in UHF, L, S, C and Ku Band. The ability to transmit in multiband allows data to be transferred to various users.

The SCM is the outcome of a successful five-year Mini-CDL development program undertaken for the U.S. Air Force Research Laboratory AFRL in 2006. This development provided a miniaturized software defined radio with removable Type 1 encryption.

Single Channel Modem enables secure access of Intelligence, Surveillance, and Reconnaissance data across multiple sensor platforms.

The SCM core (MMT) is used as the CDL module inside the U.S. Marine Corps VideoScout terminal and for the U.S. Navy's MQ-8B & C Fire Scout Unmanned Aerial Vehicle (UAV). Cubic has delivered more than 700 MMTs on the VideoScout program and over 50 on the Fire Scout program to date.

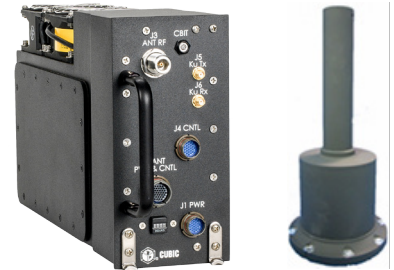| FEATURES		BENEFITS
■ Low required power and small size and weight footprint for installation flexibility	→	■ Compatible with short-range tactical UAVs and larger manned and unmanned vehicles
■ Multi-band reception and transmission (UHF/L/S/C/Ku)	→	■ Enables operation anywhere in the world
■ AES encryption; optional Type 1 (U.S. only)	→	■ Facilitates flexible, tested secure communications
■ Integrated video compression/ decompression	→	■ Simplifies integration and further reduces terminal footprint
■ Transmit and receive data rates up to 45 Mbps	→	■ Provides high-capacity IP channels for voice, data, and video
■ Web-browser operator and SNMP machine-to-machine control	→	■ Eases human or machine control

CUBIC™

CUBIC'S SCM HERITAGE

For more than two decades Cubic has designed, manufactured, integrated, and deployed transceivers for the DoD-mandated ISR Common Data Link (CDL), used universally by tactical and strategic airborne, terrestrial and maritime vehicles.

A ruggedized tablet or laptop can be used to easily display ISR information inside the cockpit

Features	Dual Channel Modem
Frequency bands of operation	UHF, L, S, C, Ku
Waveforms (up to 15 stored per modem)	Standard CDL Bandwidth Efficient (BE) CDL Rev B 466 ER Tactical 1.6, 3.2, 6.4 VNW (planned for FY18)
Number of simultaneous transmit channels	2
Number of transmit data sources	1
Number of receive channels	1
PCE/SCE reconfigurable mid-mission	Yes
Type 1 encryption	KI-16
Type 3 encryption	NSA-approved AES
Size	1.6" x 13" x 5"
Weight	6 lbs.
Power	<69 W
Cooling	Single integrated forced air fans
Open Standard interfaces	28 VDC power Single DS-101/DS-102 for Keyfill Single 10/100 BaseT Ethernet red interfaces Single 10/100 BaseT Ethernet black interfaces Single Dedicated RF ports: Ku, C, UHF/L/S Single RS-170 analog video and audio

Various power amplifiers and antenna configurations can be easily integrated into the SCM, depending on the user's concept of operations