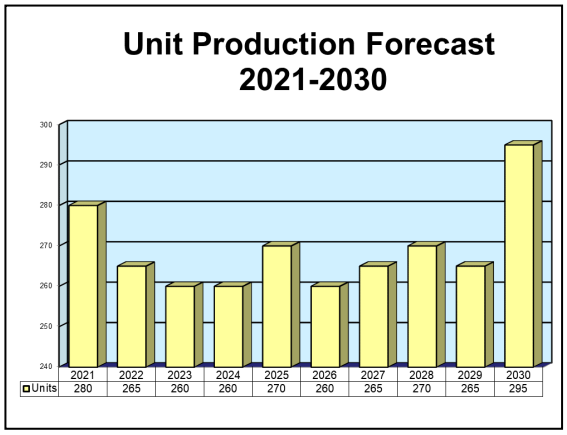
MicroLight

Outlook

- Designed for use by military personnel, first responders, and public safety officials
- U.S. Air Force ordered a quantity of MicroLight radios to help ground controllers direct attack aircraft to their targets



Orientation

Description. The MicroLight is a small, hands-free, software-defined voice, data, and video radio.

Sponsor

Raytheon Company
Space and Airborne Systems
Integrated Communications Systems
1801 Hughes Dr
Fullerton, CA 92834
Tel: + 1 (714) 446-4305
Fax: + 1 (714) 446-4314
Website: http://www.raytheon.com

Status. In production and service.

Application. For use by dismounted soldiers, first responders, and public safety officials.

Price Range. The MicroLight radio is estimated to cost $6,500.

Contractors

Prime

Raytheon Intelligence & Space, Integrated Communications Systems	http://www.raytheonintelligenceandspace.com, 1801 Hughes Dr, Fullerton, CA 92834 United States, Tel: + 1 (714) 446-4305, Fax: + 1 (714) 446-4314, Prime

Contractors are invited to submit updated information to Editor, International Contractors, Forecast International, 22 Commerce Road, Newtown, CT 06470, USA; rich.pettibone@forecast1.com

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Technical Data

The MicroLight is a hands-free, software-defined military radio that combines voice and data communications into a single compact unit. The radio weighs approximately 12 ounces (without power supply), with height, width, and depth dimensions of 5, 2.75, and 1.5 inches, respectively. The MicroLight is small enough to fit in a shirt pocket.

Raytheon designed the MicroLight radio to operate using multiple radio waveforms. Currently, the MicroLight is operated using the Software Communications Architecture-compliant Enhanced Position Location Reporting System (EPLRS) waveform of the Joint Tactical Radio System (JTRS). The MicroLight radio also operates via the MicroLight waveform, which is evolving to become JTRS-SCA-compliant. As new radio waveforms are developed, they will be made available to MicroLight radio users via software download. In addition to being used by dismounted soldiers, the MicroLight radio can be installed and used on military vehicles, aircraft, and unmanned aerial vehicles, among other platforms. Power is supplied to the MicroLight through the radio's interface connector pins, using an external (remote) battery pack or an external power supply from fixed, vehicle, or air platform power sources.

The portable MicroLight radio was designed with the dismounted soldier in mind.

Source: Public Domain

Program Review

Raytheon introduced its MicroLight radio in June 2004. One year later, Raytheon announced that the U.S. Army had received a JTRS waiver from the Office of the Secretary of Defense (OSD) allowing the service to purchase MicroLight radios for its Land Warrior program.

In July 2005, Raytheon revealed that it had delivered 26 MicroLight radios to General Dynamics C4 Systems for the U.S. Army's Land Warrior program (General Dynamics is the prime contractor). This was the first delivery of MicroLight radios for this program.

In September 2006, Raytheon teamed with Hamilton Sundstrand to successfully demonstrate the MicroLight's non-GPS-aided navigation capability at NASA's annual Desert Research and Technology Studies (Desert RATS) demonstrations. At the demonstrations, the MicroLight generally maintained the correct track of two astronauts riding in the Science Crew Operations and Utility Testbed (SCOUT) rover robot within about 20 meters. Raytheon stated that this performance was acceptable for a typical moon exploration mission.

Raytheon announced in May 2007 that its MicroLight had been selected by the Thales Prime Contracting Management Office, acting on behalf of the U.K. Ministry of Defence, as the core communications system for the operational effectiveness trials in the assessment phase of the U.K.'s Future Integrated Soldier Technology (FIST) program. Raytheon partnered with Cobham Defence Communications for the FIST trials; Cobham provided the battle management system.

In 2009, Raytheon disclosed that the company would be supporting a research project with Worcester Polytechnic Institute regarding use of the MicroLight as a source of indoor position-location information. WPI's collaboration with Raytheon aimed to configure an indoor position-location solution based on information generated by both the Raytheon MicroLight system and the WPI radio-frequency Precision Personnel Location system. One of the objectives of the research was to obtain improved performance from both systems by fusing location information.

Raytheon signed a contract in January 2011 with the Australian Defence Materiel Organization for the provision of EPLRSs and MicroLight radios and associated support under Joint Project 2072. Joint Project 2072 provides the Australian Defence Force with the land elements of an integrated battlespace communications system.

In April 2013, Federal Business Opportunities announced that the General Services Administration (GSA) – in accordance with Federal Acquisition Regulation Part 13, Simplified Acquisition Procedures – intended to award a firm-fixed-price purchase order on a sole-source basis to Raytheon for refurbished MicroLight radios.

In November 2013, the U.S. Air Force issued a sources-sought notice for, among other C4ISR systems, the MicroLight radio. The systems would be used to help ground controllers direct attack aircraft to their targets.

Contracts/Orders & Options

Contractor	Award ($ millions)	Date/Description
Raytheon	70.0	Jan 2011 – Contract from the Australian Defence Materiel Organization for the provision of EPLRSs and MicroLight radios and associated support under Joint Project 2072.

Worldwide Distribution/Inventories

According to Raytheon, the **U.S. Army**, **Canada**, the **United Kingdom**, and **Australia** have purchased the MicroLight radio.

Forecast Rationale

Raytheon markets the MicroLight radio for use by military personnel, first responders, and public safety officials. These relatively low-cost, commercial off-the-shelf (COTS) radios would appear to be especially appealing for use in unplanned contingency situations and to meet unexpected requirements.

Still, as the well-stocked multimission communications marketplace is always volatile, demand for such systems tends to vary often and widely because purchases are frequently driven by the urgent need to replace radios damaged, lost, or degraded in hostile environments. This may go some way to explaining the scarcity of announcements of significant sales of the MicroLight.

The forecast for relatively modest production should be considered speculative, as it is based to a good extent on Raytheon's stature and the large potential customer base for this otherwise appealing and relatively affordable system.

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Ten-Year Outlook

ESTIMATED CALENDAR YEAR UNIT PRODUCTION												
Designation or Program		High Confidence				Good Confidence			Speculative			
	Thru 2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Total
Raytheon Intelligence & Space												
MicroLight <> Department of Defense Note: Worldwide												
	4,309	180	185	170	180	200	205	200	200	180	200	1,900
MicroLight <> United States <> Department of Defense												
	515	100	80	90	80	70	55	65	70	85	95	790
Subtotal	4,824	280	265	260	260	270	260	265	270	265	295	2,690
Total	4,824	280	265	260	260	270	260	265	270	265	295	2,690