



The AN/USQ-130(V1) (left) and the AN/USQ-130(V2) (right) help to improve allied interoperability.

Photo provided by navy.mil.

## AN/USQ-130 AIRBORNE LINK-11 DATA TERMINAL SET / LINK-22 SIGNAL PROCESSING CONTROLLER

### IMPROVING ALLIED INTEROPERABILITY.

The AN/USQ-130 Data Link MODEM provides all required modem and network control functions for a Link- 11/ TADIL-A System or the Signal Processing Controller (SPC) functions for operation of Link-22 networks. The AN/USQ-130 can be used with either High Frequency (HF) or Ultra High Frequency (UHF) radio equipment.

The AN/USQ-130 Data Link MODEM contains the latest state-of-the-art signal processing technology that provides:

- Next-generation Software-Defined Modem (SDM) architecture
- Increased reserve processing power for future Link-22 advancements
- Integrated multi-use reconfigurable channel processor cards
- Reduced size, weight, power, and logistics

The AN/USQ-130 Data Link MODEM meets the requirements of the NATO Improvement Link-11 (NILE) SPC system segment specifications for HF and UHF fixed-

frequency SPC operation and provides the capability to upgrade to the latest UHF and HF Electronic Protection Measures (EPM) waveforms as well as the HF Fixed Frequency waveforms defined in the STANAG 4539 Annexes E, F, and G.

The AN/USQ-130 provides an additional media port where Link-11 data may be sent over satellite, wireline or other tactical circuits. This Satellite/Wireline interface is a 2,400 bps, full-duplex, RS-232 compatible port. It enables operation in either the “digital” mode, the “conventional” mode or in a “mixed” mode (a gateway), where some net participating units operate in the digital transmission mode and some in the conventional HF or UHF mode. The AN/USQ-130 is offered in two airborne qualified variants. The V1 is ¼ ATR and can be configured from the control menus as either a Link-11 Data Terminal Set supporting single channel operation or as a single Link-22 SPC. The V2 is ½ ATR and is a multi-channel MODEM that can support Multi-Frequency Link-11 (MFL), gateway operations and up to two channels of Link-22 SPC.

# AN/USQ-130

## DESCRIPTION (CONTINUED)

The AN/USQ-130 Data Link MODEM is based on over three decades of continuous design, development, production, and sustainment of data link systems worldwide. Leonardo DRS is the world leader in data link modem technology and has delivered upwards of 2,000 systems in more than 20 countries. DRS data link systems are currently employed in shore support facilities and on destroyers, frigates, submarines, and fixed and rotary wing aircraft.

## SPECIFICATIONS

FEATURE	MX-512PA(V1)	MX-512PA(V2)
Size	1/4 ATR-short	1/2 ATR-short
Height	7.6 inches (19.3 cm)	7.61 inches (19.3 cm)
Width	2.25 inches (5.7 cm)	5 inches (12.7 cm)
Depth	12.6 inches (32.0 cm)	15 inches (38.1 cm)
Weight	10 lbs. (4.6 kg)	24 lbs. (11 kg)
Power	24 to 32 VDC 28 watts	24 to 32 VDC 39 watts
MTBF	Over 10,000 hrs per MIL-HDBK-217F at +122°F (+50°C) AIC	6,540 hrs per MIL-HDBK-217F at +86°F (+30°C) AIC
Temperature, Operating	-40°F to +131°F (-40°C to +55°C)	+5°F to +131°F (-15°C to +55°C)
Temperature, Non-operating	-70°F to +185°F (-57°C to +85°C)	-67°F to +185°F (-55°C to +85°C)
Altitude	Up to 50,000 feet (15,240 meters)	Up to 50,000 feet (15,240 meters)
Vibration	MIL-STD-810F, Method 514 MIL-E-5400	MIL-STD-810F, Method 514 MIL-E-5400
Humidity	95%	95%
Meets MIL-STD-188-203-1A	Yes	Yes
Multi-media over radio	Std.	Std.
SATCOM / Wireline	Std.	Std.
SATCOM Gateway	Std.	Std.
Control interface (std.)	Serial	Serial / Ethernet
Control interface (option)	1553 dual redundant	Not Applicable
Control software	Windows® NT/XP, LINUX	Windows® NT/XP, LINUX
Computer addressing	Optional	Optional
Channel 1	HF or UHF: CLEW, SLEW, or Link-22 (SPC)	HF or UHF: CLEW, SLEW, or Link-22 (SPC)
Channel 2	Not Applicable	HF or UHF: CLEW, SLEW, or Link-22 (SPC)
<b>LINK ANALYSIS</b>		
Link Monitor System (LMS)	Optional	Optional

The MX-512PA has built-in LMS which is a tool for Link Management and Measurement that provides color displays of critical network and participating unit parameters. This capability requires an external PC or equivalent and operates over the remote control interface.

## LINK-11 HIGHLIGHTS

- Meets MIL-STD-188-203-1A
- Conventional Link-11 Waveform (CLEW)
- Single-Tone Link 11 Waveform (SLEW) per SPAWAR-S-850
- Optional built-in Link Monitoring System (LMS)

## LINK-22 HIGHLIGHTS

- Meets Segment Specification for the Signal Processing Controller (SPC) of the Link-22 (NILE) System, Appendix A
- HF FF Media, STANAG 4539 Appendix B and G, UHF FF Media
- Software upgradeable to STANAG 4539 Annex E, F, and G
- Software upgradeable to UH EPM

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