



KONGSBERG

RL532A – Tactical Radio Link

A new generation Eurocom and IP radio

The RL532A Radio Link provides reliable and secure communications in a hostile electronic warfare (EW) environment.

Unique ECCM/EPM methods include automatic output power control, adaptive frequency hopping, AFE and PJP techniques.

ECCM/EPM

For data rates 256 to 2048 kbit/s RL532A offers Basic-, Double-Rate,- and Adaptive Frequency hopping. In the unique AFH mode, a jammed frequency will automatically be removed from the hop set.

Fixed frequency narrow band radio connections at 2048, 8448 and (opt.)16384 kbit/s are provided to accommodate modern network structures and data transfer needs.

ECCM/EPM features for fixed frequency services (16QAM) include **APC** - Automatic Power Control: Power output is automatically reduced to the minimum needed - to avoid detection, and automatic step-up at jamming or interference).

AFE - Automatic Frequency Evasion: at interference - automatic switchover to a good frequency pair.

PJP - PulseJammer Protection: Advanced channel coding techniques (FEC and Interleaving) in combination with a pulse-jammer detection algorithm that prevents loss of synchronization.

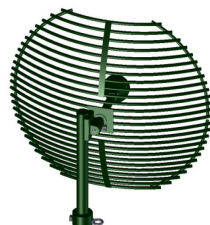


MMI

The RL532A is self-instructing with a high degree of automatic functions for ease of operation. A radio link can be configured and established in a very short time.

The terrestrial interface-type is selectable by operator for flexible network integration.

An integral Network Data Carrier system provide quick and easy network establishment and elimination of operator errors. The operator has access to all radio parameters and O&M-information using a local PC or (opt.)remotely from the EriTac System CMS computer (Communication Management System).



High gain grid antenna
1350 - 2700 MHz
Typical gain: 26dBi

Features:

- Light weight and small – Easy handling
- Narrow band modulation – 16 QAM available for 2048, 8448 and (opt.)16384 kbit/s
- Quick Deployment – Efficient link establishment and planning
- Field proven equipment – Reliable principles of operation
- Advanced Frequency Hopping algorithms (FSK) from 256 up to 2048 kbit/s.
- Designed for a multi-vendor System Environment (international standards) – Flexible data interface and (option) SNMP based management
- SW defined modulation
- Interfacing of routers in an IP-based network – two separate IEEE 802.3 Ethernet interface are available, one dedicated to data traffic and one for RL management

Specifications

General	
Frequency Range	1,35 – 2,69 GHz
Duplex Space	Minimum 50 MHz
Channel Spacing	125 kHz (500kHz for 16384 kbit/s)
Transmission Capacity	256, 512, 1024, 2048, 8448, and (opt.)16384 kbit/s, *
Modulation	FSK / 16 QAM *
Order Wire	Digital 16 kbps ADPCM

Transmitter	
Output Power	5 W (+37dBm)
Auto mode dynamic range	20 dB
Spurious Attenuation	80 dB
Harmonic Attenuation	60 dBc for 2nd & 3rd harmonics 80 dBc for higher order

Receiver	
Spurious Attenuation	80 dB for freq outside $f_c \pm 3\%$
Sensitivity	
256 kbit/s	-100 dBm (B-FSK)
512 kbit/s	-97 dBm (B-FSK)
1024 kbit/s	-94 dBm (B-FSK)
2048 kbit/s	-91 dBm (B-FSK)
2048 kbit/s	-92 dBm (16 QAM)
8448 kbit/s	-86 dBm (16 QAM)
16384 kbit/s(opt)	-82 dBm (16 QAM)

Port Interfaces	
Router Interface:	
IEEE802.3 Ethernet 10/100 baseT	
ITU V.11	
Eurocom "D/1"	
Physical Interface	4 balanced pairs
Level Data	1V p-p (AMI) $\pm 15\%$
Level Clock	1V p-p (NRZ) $\pm 15\%$
Impedance	130 ohm balanced
ITU V.11	
Physical Interface	4 balanced pairs
Level Data	4V p-p (NRZ) $\pm 15\%$
Level Clock	4V p-p (NRZ) $\pm 15\%$
Impedance	100 ohm balanced
G.703 HDB3	
Physical Interface	2 balanced pairs
Level Data	$\pm 2,37 V \pm 10\%$
Impedance	120 ohm balanced

* **Options (opt.):** Other modulation methods and 34 Mbit/s data rate

Power Supply	
Input Voltage:	19-32 V DC
Power consumption, typical	120W



Rack with RL532A, Bulk Encryption Unit CD510 and Multimedia Switch CPX300

ECCM	
In Conventional FH Mode:	
256 kbps	13 dB
512 kbps	13 dB
1024 kbps	10 dB
2048 kbps	7 dB
In Adaptive FH Mode:	
256, 512, 1024 and 2048 kbps	
A fixed partial band jammer, blocking 70% of the spreading BW with jammer channel ≥ 20 dB stronger than wanted signal, shall be excluded within 2 seconds for all data rates.	

Dimensions and Weight	
Height	177 mm
Width (total)	483 mm
Depth (total)	385 mm
Weight:	<21 kg

This publication is not to be regarded as a complete system specification, or to be used as a contract document. We reserve the right to change the design or specifications without prior notice.

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