

ALR-9930 (TTL) / ALR-9932 (RS-232)



EPC GLOBAL CLASS 1 UHF READER/PROGRAMMER OEM MODULE

The Alien Technology™ ALR-9930 and ALR-9932 RFID reader/programmer modules allow rapid integration of EPC Class 1 capability into printers, handhelds, applicators, shelf readers and other devices. A library of "C" language APIs allows for quick prototyping and development. Reference designs of antennas for typical applications are also available to ease the integration process.



FLEXIBLE AND POWERFUL

The ALR-9930 and ALR-9932 deliver the full FCC-allowance of output power for maximum sensitivity, while software power attenuation allows OEM customers to dial in the optimal power level for their application. Engineers can choose the serial interface that best supports their design requirements – TTL (ALR-9930) or RS-232 (ALR-9932). Furthermore, a choice of 6 serial data rates from 19.2 to 230 Kbaud provides maximum integration flexibility.

KEY FEATURES

- Provides Read & Write (Program) functionality
- Allows for unlicensed operation under FCC Part 15
- "Global Scroll" feature optimizes high-speed single tag operations
- Anti-collision protocol allows for efficient reading of multiple tags
- Two antenna ports offer additional flexibility in meeting application requirements

Product Specifications

MODEL: ALR-9930 (TTL)/ALR-9932 (RS-232)

PROTOCOL: EPCglobal UHF Class 1

FREQUENCY: 902.8-927.6 MHz (ISM)

CARRIER: Frequency Hopping Spread Spectrum

MAX RF OUTPUT POWER: 1W (Software controllable)

POWER CONTROL: 12.5 dB Range

SPURIOUS: Per FCC part 15.247

ANTENNA PORTS: Selectable Ant0 or Ant1

COMMUNICATION:

ALR-9930 5V TTL @ 19.2, 38.4, 57.6, 76.8, 115.2 or 230.4 KBaud

ALR-9932 RS-232 @ 19.2, 38.4, 57.6, 76.8, 115.2 or 230.4 KBaud

POWER (RECOMMENDED RANGE): 5.5 Vdc to 6.3 Vdc

CURRENT: Typical (reading tags): 650mA, Typical (power save mode): 20mA

COMMANDS: Sleep, Wake, Verify, Global Scroll, Inventory, Program, Erase, Kill, Lock

DIMENSIONS: 3.361 x 2.121 x 0.295 in (8.537 x 5.388 x 0.749 cm)

WEIGHT: 3 Ounces

OPERATING TEMPERATURE: -20 to +60 DEG °C

STORAGE TEMPERATURE: -40 to +85 DEG °C

CONNECTIONS: Antenna 0, 1: MMCX

Interface (Power, I/O, RS-232/TTL): JST 14 pin, 1mm pitch

INTERFACE:

PIN NUMBER	SIGNAL DEFINITION
1	+Vdc
2	+Vdc
3	Ground
4	Ground
5	MCLR -Vpp (Used for boot loader, normally not used by OEM's)
6	PGD (Used for boot loader, Optionally used as secondary I/O)
7	PGC (Used for boot loader, Optionally used as secondary I/O)
8	General Purpose I/O #2
9	General Purpose I/O #1
10	In-phase raw receive signal (Not normally used by OEM's)
11	Quadrature raw receive signal (Not normally used by OEM's)
12	Ground
13	Rx (RS232 or TTL) Receive (from host to module)
14	Tx (RS232 or TTL) Transmit (from module to host)