



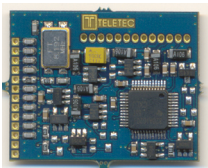
## TL-905 GUARDIAN Advanced Encryption For Analog Radio



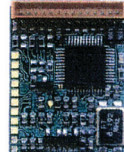
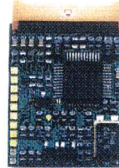
**Overview:** *The TL-905 GUARDIAN* is a **FIPS 140-2 validated** Digital Subscriber Encryption Module (SEM). Meeting today's critical need for secure communications, the Advanced Encryption Technology of the **TL-905** provides the attributes of digital voice technology to analog voice without the expense of replacing a radio system or buying digital radios. **The Results: Affordable, Reliable and Completely Secure Communications.** The **TL-905 GUARDIAN** provides the Ultimate Level of Security for analog radio applications for Government Agencies, First Responders, Military/Law Enforcement Agencies and Business.

**What does FIPS validation mean?** The United States government requires the use of validated cryptographic modules for all unclassified uses of cryptography. **FIPS** validation assures the user a specific technology has passed a series of stringent security validation processes developed by the U. S. Department of Commerce, National Institute of Standards (NIST) and performed by an accredited third party as set out by NIST. It ensures a product has been designed to meet independent and widely accepted security guidelines.

### TL-905 (Solder in)



### TL-905 (Wire in – Horizontal or vertical connector)



### Programming Cable



### TCR Controller with OTAR



### Features and Functions

- 256 bit AES (Advanced Encryption Standard)
- Programmable via a PC or OTAR
- Plug in installation in for most hand held and mobile radios (Relm, Tait, ICOM, Kenwood, Vertex and Motorola)
- Voice compression algorithm
- Total length of the key – True 256 bit
- Number of user keys - 4 billion
- Custom made modules available for most OEM radios
- Dramatically reduces interference even from other users on the same channel
- Digital (white noise) high-level encryption module
- Plug in and wire in version available

### **General Specifications:**

Operating Temperature:	-22 to +140F
Supply Voltage:	3.3V to 9V, regulated to 3.3 Vdc

### **Security Specification:**

Encryption Method	AES 256 bit encryption
Number of User Access Codes	2 <sup>48</sup> -2 <sup>256</sup> (Depends on mode)
Transmit Coded/Clear	Manual Select
Key Select	User Selection by Optical Radio Button
Key Storage	Stored in Module NVRAM -Up to 16
Receive Coded/ Clear	Programmable flexible auto detect with indication of non-coincidence of modes

### **Radio Systems Management:**

Key Loader	Required for initial programming
Key Load Software	Required for initial programming
Key Management Facility	Yes, by PC with special modem and radio
OTAR (Over-the-Air-Reprogramming)	Yes, with Traffic Encryption
Enable/Disable Radio	Yes, RX and/or TX
Kill Radio	Yes, keys and other sensitive information will be destroyed. Board must be restored at factory.
Change Encryption Codes	Yes
Spy	Yes
Check radio	Yes

### **Install Methods/Options:**

Install Method	Soldering/Plug-In
Programming Method	OTAR or Cable
Compatibility Modes	Frequency Inversion

\*Specifications/Features subject to change.

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