



TYPE 1
PROGRAMMABLE
ENCRYPTION

Harris Sierra™ II

Programmable Cryptographic ASIC



KEY BENEFITS

- Legacy algorithm support
- Low power consumption
- JTRS compliant
- Compliant with NSA's Crypto Modernization Program
- Compact form factor

When embedded in radios and other voice and data communications equipment, the Harris Sierra II Programmable Cryptographic ASIC encrypts classified information prior to transmission and storage. NSA-certified, it is the foundation for the Harris Sierra II family of products—which includes two package options for the ASIC and supporting software.

The Sierra II ASIC offers a broad range of functionality, with data rates greater than 300 Mbps, legacy algorithm support, advanced programmability and low power consumption.

Its software programmability provides a low-cost migration path for future upgrades to embedded communications equipment—without the logistics and cost burden normally associated with upgrading hardware. Plus, it's totally compliant with all Joint Tactical Radio System (JTRS) and Crypto Modernization Program requirements.

The Sierra II ASIC's small size, low power requirements, and high data rates make it an ideal choice for battery-powered applications, including military radios, wireless LANs, remote sensors, guided munitions, UAVs and any other devices that require a low-power, programmable solution for encryption.



Specifications for: Harris SIERRA II™ Programmable Cryptographic ASIC

GENERAL

Type 1 – Cryptographic Algorithms*	BATON/MEDLEY SAVILLE/PADSTONE KEESEEE/CRAYON/WALBURN GOODSPEED ACCORDION FIREFLY/Enhanced FIREFLY JOSEKI Decrypt High Assurance AES
Type 3 – Cryptographic Algorithms*	DES, Triple DES AES Digital Signature Standard (DSS) Secure Hash Algorithm (SHA)
Type 4 – Cryptographic Algorithms*	CITADEL®
Key Management	SARK/PARK (KY-57, KYV-5 and KG-84A/C OTAR) DS-101 and DS-102 Key Fill SINCGARS Mode 2/3 Fill Benign Key/Benign Fill

*Other algorithms can be added later.

TECHNICAL

Data rates	Up to 300 Mbps (dependent on mode)
Programmable Cryptographic ASIC	Package 1: 280-ball µBGA (16 mm x 16 mm) Package 2: 608-ball BGA (31 mm x 31 mm)
Operating Temperature	–40° to +85°C
Supply Voltage	1.8 V (ASIC) or 3.3 V (Module)
Low Power	For battery-powered applications
Field Software	Reprogrammable
Cryptographic Bypass	
Non-CCI	Prior to Type 1 programming
Protects Voice/Data Traffic	Up to TS/SCI

APPLICATIONS

JTRS radio products (e.g., vehicular, manpack, handheld, airborne, etc.)
Handheld & mobile law enforcement (battery-powered) radios
Guided munitions and UAV applications
Telemetry and military sensor systems
Network interface cards and IP security products (HAIPE-compliant)
Secure wireless networks (Harris SecNet products)
Homeland Security applications
Next-generation key management modules

LEARN MORE

To learn more about the Harris Sierra II Programmable Cryptographic ASIC and its advanced features, contact Harris at TacticalCommunications@harris.com

Harris is dedicated to developing best-in-class *assured communications*® products, systems and services.

