

XRAG2 – RFID UHF chip

EPCglobal Class 1, based on EPC Gen2 specification



Using its extensive experience in UHF Electronic Product Code (EPC)[™] Generation 1, **STMicroelectronics** has developed the XRAG2 – an innovative EPC Class 1 device based on EPC Gen2 specification.

As an active member of EPCglobal, ST has ensured the XRAG2's interoperability within the EPC Generation 2 (RFID) infrastructure, to help drive the accelerated adoption of EPC Generation 2 solutions in the global retail supply chain.

Wide range of benefits

EPC Generation 2 offers increased benefits over the first-generation EPC Class 1 standard, including global interoperability, the ability to optimize performance in a variety of regulatory environments, read/write field programmability, faster tag read/write rates, the ability to operate in dense reader environments, and migration to future EPC classes.

Huge potential for the retail supply chain

Extended range labels will be instrumental in creating low-cost RFID solutions for new supply chain management systems, logistics and merchandise tracking. This will deliver improved efficiency, accuracy and security for major manufacturers, retailers, and their customers.

Leading technology and superior performance

Developed using established and reliable CMOS technology with embedded EEPROM, the XRAG2 is perfectly suited to addressing high volume, cost-driven markets. Its non-volatile memory technology provides 40 years data retention to support long life application requirements and more than 10000 write/erase cycles.

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Ultra high-frequency (UHF) RFID features

- Based on EPC Gen2 specification
- UHF frequencies from 860 to 960MHz for:
 - North American regulation
 - European regulation
 - All other countries with similar directives
- 432-bit memory with two potential configurations:
 - 3 memory banks: 64-bit TID, 304-bit EPC code and 64-bit reserved
 - 4 memory banks: 128-bit user, 64-bit TID, 176-bit EPC code and 64-bit reserved
- Multi-session protocol
- Anti-collision functionality
- Inventory, read, write and erase functions
- Kill command
- 100ms programming time (max) for 288-bit (EPC code)
- To the XRAG2: Asynchronous 90% SSB-ASK, DSB-ASK or PR-ASK modulation using pulse interval encoding (up to 128-Kbit)
- From the XRAG2: Backscattered reflecting answers using FM0 or Miller-bit coding (up to 640-Kbit)
- Low-cost tag (barcode comparison)
- UHF technology
- XRAG2 is available in thin wafers: unsawn and unbumped or sawn and bumped

Part number	Protocol	User memory size	Unique ID	Anti-collision	Package
XRAG2	Based on EPCglobal CIG2	432-bit	TID	•	Wafers



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Full product information at www.st.com

Order code: FLXRAG20206

