



# Device Summary Report

## 1. Conformance

**GSRN No.** : 950110126000000841  
**Product Name** : QR2233  
**Trade Mark** : Quanray  
**Product ID** : N/A  
**Manufacturer** : Shanghai Quanray Electronics Co., Ltd  
**Client** : Shanghai Quanray Electronics Co., Ltd  
**Standard(s)** : EPCglobal Class-1 Generation-2 UHF Protocol V1.0.9. for Communications at 860MHz to 960 MHz and EPCglobal Radio Frequency Identity Protocols Class-1 Generation-2 UHF RFID Conformance Requirements, Version 1.0.4

Tag Conformance Badge	
Frequency Range	860 - 960 MHz
Backscatter Modulation Type	ASK
Temperature range	-40C to +65C
Optional Command Support	Access

## 2. Interoperability

### IC

Name/GSRN of Certified IC	QR2233 IC 950110126000000841
Tag Used(model #)	Qstar (model No. 2233M3T01G1)
Frequency Bands Tested	862-870 MHz <input checked="" type="checkbox"/> 902 – 928 MHz <input checked="" type="checkbox"/>
*Tested Range:	1 meter
Notes	Tag configurations that utilize the identical certified IC may be as interoperable as the tested tag. See tag manufacturer for selection of tags for this IC.

IC – Integrated Circuit

\* The distance between the reader antenna and tag used for testing

Backscatter Encoding	M	Backscatter Data Rate (kbps)	Tari (µs)			
			6.25 – 12.5	12.5 – 18.75	18.75 – 25	
FM0	1	640 – 320	Mod: PR PIE:2:1 DR:64/3 Funct: P, U Sirit INfinity 510 RFID Reader			
		320 -256				
		256 – 160				
		160 – 40				
Subcarrier	2	320 – 128				
		128 – 20				
	4	160 – 64				
		64 – 10	Mod: DS PIE:1.5:1 DR:8 Funct: P, U Sirit INfinity 510 RFID Reader		Mod:PR PIE:2:1 DR:64/3 Funct: P, U Impinj Speedway RFID Reader	
		8	80 – 32	Mod: PR PIE:2:1 DR:64/3 Funct: P, U Sirit INfinity 510 RFID Reader		
			32 – 5			



**Appendix: Keys**

DS	DSB-ASK
SS	SSB-ASK
PR	PR-ASK
X:1	PIE ratio

**Optional Gen 2 functionality indicated under Funct:**

- P Access passwords supported
- U User memory supported
- WT Write-able TID supported