

## Device Summary Report

### 1. Conformance

**GSRN No.** : 950110126000001558  
**Product Name** : TRW-USM-01/TRW-CNM-01/TRW-AUM-01  
**Trade Mark** : N/A  
**Product ID** : N/A  
**Manufacturer** : Toshiba Tec Corporation  
**Client** : Toshiba Tec Corporation  
**Standard(s)** : EPCglobal Class-1 Generation-2 UHF Protocol V1.0.9. for Communications at 860MHz to 960 MHz, EPCglobal Radio Frequency Identity Protocols Class-1 Generation-2 UHF RFID Conformance Requirements Version 1.0.4 and Interoperability Test Methodology V1.2.5

<b>Reader Conformance Badge</b>	
<b>Reader or Module:</b>	Module
<b>Intended Operating Region:</b>	US, CN, AU
<b>Frequency Range:</b>	902-928 MHz, 920.5-924.5 MHz, 918-926 MHz
<b>Modulation Types:</b>	DSB-ASK
<b>Tari's:</b>	25us
<b>Backscatter Encoding Support:</b>	FM0
<b>Frequency Scheme:</b>	FHSS
<b>Temperature Range:</b>	-25C to 40C
<b>Environment:</b>	Single
<b>Optional Command Support:</b>	Access, BlockWrite, BlockErase

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Backscatter Encoding	M	Backscatter Data Rate (kbps)	Tari (µs)				
			6.25	12.5	25		
FM0	1	40			DS/1.75:1/8		
	1						
	1						
	1						
	1						
	1						
Sub carrier							
Sub carrier (DI environment)							

Key:

- Dense interrogator mask met
- Multiple interrogator mask met
- Single interrogator mask met

- DS      DSB-ASK
- SS      SSB-ASK
- PR      PR-ASK
- X:1      PIE ratio
  
- 8        DR=8
- 64      DR=64/3

## 2. Interoperability

### Reader

Manufacturer:	Toshiba Tec Corporation
Product Name/Model:	TRW-USM-01/TRW-CNM-01/TRW-AUM-01
Frequency Bands Tested:	862-870 MHz <input type="checkbox"/> 902 – 928 MHz <input checked="" type="checkbox"/> 950 – 956 MHz <input type="checkbox"/>
*Tested Range:	20 cm

\* 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			
		320 -256			
		256 – 160			
		160 – 40			Mod: DS PIE:1.75:1 DR:8 Funct: P **Monza Tag, Monza 2; Large Rigid Tag- 1T04U004TT001A, Monza IC
Subcarrier	2	320 – 128			
		128 – 20			
	4	160 – 64			
		64 – 10			
	8	80 – 32			
		32 – 5			

\*\* Tag name, certified IC

**Note:** A waiver for homogeneous and in-homogeneous interoperability test cases were issued by EPCglobal due to the fact that these reader modules submitted for certification will only be used in printers.

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