



DMR Association Interoperability Certificate

Document 10056

Note to readers: This DMR Association Interoperability Certificate documents that the TB9315 product as detailed in Table A below:

| TABLE A : DMR EQUIPMENT TESTED | | |
|--------------------------------|---|---|
| Manufacturer | Tait International Ltd | |
| Model | TB9315-B3H0-B3H0-A1AA-10 & TN9300-1101-0000-0000-10 | |
| Firmware | ID | Version |
| | Base Station: QBC30RFS Node Controller: Q9391NC | Base Station: 2.50.01 Node Controller: 2.22.06 |

has successfully passed the DMR Association Tier 3 mandatory and optional interoperability tests outlined in the DMR Association test specification documents: *Interoperability Testing for DMR Tier 3 Systems V3.2 July 2018* carried out on 3rd September 2018 with the DP990 product referenced in Table B below with tests undertaken as indicated in the following pages.

| TABLE B : DMR EQUIPMENT TESTED | | |
|--------------------------------|-----------------------------------|----------------|
| Manufacturer | Shenzhen Excera Technology Co Ltd | |
| Model | EP8100 | |
| Firmware | ID | Version |
| | N/A | R1.4.00.05D |

The DMR Association hereby declares that the product in Table A when tested with the product in Table B passed interoperability Test Cases as set out in the test list below.



The DMR Association hereby declares that the testing took place according to the procedures and in a laboratory meeting the criteria set out in the DMR Association document: *Interoperability Laboratory Recognition Process and Test Session Procedures, V 2.04 of June 2018*.

All products belonging to the same model classes, meaning equipment that Tait International Ltd / Shenzhen Excera Technology Co Ltd have determined, through engineering analysis or internal functional testing, to be functionally equivalent to the products in Table A and Table B, may be declared interoperable by Tait International Ltd and Shenzhen Excera Technology Co Ltd.

Issue Date: 12th December 2018

Chairman of the DMR Association Technical Working Group

The following summary details which tests have been carried out.

ETSI STANDARD SUPPORTED

| | |
|--------------------------------|----------------------------|
| ETSI Standard Supported | TS 102 361-4 V1.9.1 |
|--------------------------------|----------------------------|

Mandatory Tests

Registration

(Note: Vendors may elect to select either the Registration Refused or Registration Denied test case)

| Function (Test Case) | Test case | Reference | Verdict ② |
|----------------------------------|-------------------------|------------------|---------------------|
| Registration ([2] 2.3.1) | Registration accepted | [1] 6.4.4.1.2 | PASS |
| | Registration MS refused | [1] 6.4.4.1.3 | PASS |
| | Registration MS denied | [1] 6.4.4.1.4 | TEST NOT UNDERTAKEN |
| | De-registration | [1] 6.4.6 | PASS |

Talkgroup voice call services: Message Trunking

(Note: Vendors may elect to select either Message Trunking mode or Transmission Trunking mode or optionally both modes)

| Function (Test Case) | Test case | Reference | Verdict ② |
|---|---------------------|---------------------|------------------|
| Talkgroup voice call services single site message trunking ([2] 2.3.2) | Call granted | [1] 6.6.1 and 6.6.2 | PASS |
| | Call refused | | PASS |
| | Call request queued | | PASS |
| | Broadcast call | | PASS |

Talkgroup voice call services: Transmission Trunking

(Note: Vendors may elect to select either Message Trunking mode or Transmission Trunking mode or optionally both modes)

| Function (Test Case) | Test case | Reference | Verdict ② |
|---|---------------------|---------------------|-----------|
| Talkgroup voice call services single site transmission trunking ([2] 2.3.3) | Call granted | [1] 6.6.1 and 6.6.2 | PASS |
| | Call refused | | PASS |
| | Call request queued | | PASS |

Individual voice call services

| Function (Test Case) | Test case | Reference | Verdict ① |
|--|----------------------------------|---------------------------|-----------|
| Individual voice call services single site single frequency pair using OACSU ([2] 2.3.4) | See below | [1] 4.6.2.1.1 and 4.9.1.1 | |
| | Call Granted : Calling party end | [1] 6.6.1 and 6.6.2 | PASS |
| | Call Granted: Called party end | | PASS |
| Individual voice call services single site using OACSU ([2] 2.3.5) | See below | [1] 4.6.2.1.1 and 4.9.1.1 | |
| | Call granted | [1] 6.6.1 and 6.6.2 | PASS |
| | Call refused | | PASS |
| | Call request queued | | PASS |
| Individual voice call services single site using FOACSU ([2] 2.3.6) | See below | [1] 4.6.2.1.2 and 4.9.1.2 | |
| | Call accepted | [1] 6.6.1 and 6.6.2 | PASS |
| | Call refused by user | [1] 6.6.2.2.5 | PASS |

Other

| Function | Test case | Reference | Verdict ① |
|------------------------------------|-------------|----------------|-----------|
| Hunting ([2] 2.3.7) | Site Change | [1] 6.3, 6.4.4 | PASS |
| Short Data Single Site ([2] 2.3.8) | Short data | [1] 6.6.4 | PASS |
| | | | |

Optional Tests

Talkgroup voice call services: Message Trunking

(Note: Vendors may elect to select either Message Trunking mode or Transmission Trunking mode or optionally both modes)

| Function | Test case | Reference | Verdict  |
|---|--|---------------------|---|
| Multisite Group Voice Call ([2] 2.4.1) | Call granted | [1] 6.6.1 and 6.6.2 | PASS |
| | Call request queued, origin site busy | | PASS |
| | Call request when all or some destination sites are busy | | PASS |
| | Broadcast call | | PASS |
| | | | Note: 2.4.1.4.3: Performed in fast start and all start mode |

Talkgroup voice call services: Transmission Trunking

(Note: Vendors may elect to select either Message Trunking mode or Transmission Trunking mode or optionally both modes)

| Function | Test case | Reference | Verdict  |
|---|--|---------------------|---|
| Multisite Group Voice Call ([2] 2.4.2) | Call granted | [1] 6.6.1 and 6.6.2 | PASS |
| | Call request queued, origin site busy | | PASS |
| | Call request when all or some destination sites are busy | | PASS |
| | | | Note: 2.4.2.4.3: Performed in fast start and all start mode |

Individual voice call services

| Function | Test case | Reference | Verdict ② |
|---|----------------------|---------------------------|-----------|
| Multisite using OACSU ([2] 2.4.3) | See below | [1] 4.6.2.1.1 and 4.9.1.1 | |
| | Call granted | [1] 6.6.1 and 6.6.2 | PASS |
| | Call request queued | [1] 6.6.1 | PASS |
| Multisite using FOACSU ([2] 2.4.4) | See below | [1] 4.6.2.1.2 and 4.9.1.2 | |
| | Call accepted | [1] 6.6.1 and 6.6.2 | PASS |
| | Call refused by user | [1] 6.6.2.2.5 | PASS |

Short Data Multi Site

| Function | Test case | Reference | Verdict ② |
|--|------------|-----------|-----------|
| Short Data Multi Site ([2] 2.4.5) | Short data | [1] 6.6.4 | PASS |

Notes

- ① Valid options for this column are either PASS or FAIL
- ② Valid options for this column are either PASS, FAIL or TEST NOT UNDERTAKEN

LIABILITY DISCLAIMER

The DMR Association declares that the IOP validation process has been carried out with the best possible endeavour in order to ensure the most reliable Verdicts. Nevertheless, the DMR Association takes no responsibility for, and shall have no liability as a Verdict of damages, losses, or injuries of any kind that may be caused by non-coherence to the functions listed in the certificates of products that are awarded a DMR Interoperability Certificate.

Individual manufacturers are responsible for ensuring that the behaviour of any equipment for which Interoperability is claimed is identical to that of the equipment that passed the DMR Association interoperability certification process.

References

[1] ETSI TS 102 361-4 : Digital Mobile Radio (DMR) Systems: Part 4 DMR Trunking Protocol V1.9.2 (2018-04)

[2] DMR Association TIER III INTEROPERABILITY TEST CASES Version 3.2; July2018