

# NB-IoT Functional and Performance Report

3GPP and Qualcomm Based Tests

Classification: Confidential

Doc. Type: Report

Revision: Rev. 02

Date: 09/06/2024

Code: Tests, Report, Performance

## Report Info

Operator: Sergio  
DUT: HTNB32L-0XX  
Batch: NB2PT07-02-1  
Testplan: ['Yield\_Platform\_for\_Production\_1.0.ini']  
Plat SW Ver.: Yield-Alpha 0.1  
Plat HW Ver.: 1.0 ID1

## Summary

Test Start Time: 09/06/2024 10:44:21  
Test End Time: 09/06/2024 10:47:13  
Total Test Time: 0:02:52  
Test Items Passed: 56  
Test Items Failed: 3  
Number of Test Items: 59

## Tests Resume

| Test item      | Qty | Set Lower | Set Upper | Res Lower | Res Mean | Res Upper | Unit | Judg |
|----------------|-----|-----------|-----------|-----------|----------|-----------|------|------|
| Short Open     | 13  | 8         | 340       | 10.0      | 213.8    | 330.0     | kΩ   | PASS |
| Firmware Flash | 5   | -         | -         | -         | -        | -         | -    | PASS |
| Interleaved    | 22  | -         | -         | -         | -        | -         | -    | PASS |
| Peripherals    | 11  | -         | -         | -         | -        | -         | -    | PASS |
| DeepSleep      | 4   | 0.4       | 25.0      | 0.7       | 5.6      | 12.7      | μA   | PASS |
| Calibration    | 4   | -         | -         | -         | -        | -         | -    | FAIL |

## Tests Details #01

### Test HT criteria - ShortOpen in Default configuration

| Pin Name    | Lower | Upper | Result | Unit | Judgement |
|-------------|-------|-------|--------|------|-----------|
| VCC         | 8     | 340   | 10.0   | kΩ   | PASS      |
| NRST        | 8     | 340   | 330.0  | kΩ   | PASS      |
| BOOT        | 8     | 340   | 330.0  | kΩ   | PASS      |
| UART1_TX    | 8     | 340   | 330.0  | kΩ   | PASS      |
| UART1_RX    | 8     | 340   | 330.0  | kΩ   | PASS      |
| USIM_VCC    | 8     | 340   | 40.1   | kΩ   | PASS      |
| ESIM_VCC    | 8     | 340   | 54.6   | kΩ   | PASS      |
| IO_1833_SEL | 8     | 340   | 261.1  | kΩ   | PASS      |
| USIM_IO     | 8     | 340   | 57.9   | kΩ   | PASS      |
| ESIM_IO     | 8     | 340   | 330.0  | kΩ   | PASS      |
| USIM_CLK    | 8     | 340   | 330.0  | kΩ   | PASS      |
| ESIM_CLK    | 8     | 340   | 330.0  | kΩ   | PASS      |
| SIM_NRST    | 8     | 340   | 45.3   | kΩ   | PASS      |

## Tests Details #01

### Test HT criteria - Firmware Flash in Default configuration

| ID               | Lower | Upper | Result | Unit | Judgement |
|------------------|-------|-------|--------|------|-----------|
| Erase            | -     | -     | PASS   | -    | PASS      |
| Bootload         | -     | -     | PASS   | -    | PASS      |
| App Data         | -     | -     | PASS   | -    | PASS      |
| Merge RF Table 1 | -     | -     | PASS   | -    | PASS      |
| Merge RF Table 2 | -     | -     | PASS   | -    | PASS      |

## Tests Details #01

### Test HT criteria - Interleaved in Default configuration

| ID              | Lower | Upper | Result | Unit | Judgement |
|-----------------|-------|-------|--------|------|-----------|
| GPIO2 [Int0]    | 0     | -     | 0      | -    | PASS      |
| GPIO3 [Int0]    | 0     | -     | 0      | -    | PASS      |
| GPIO5 [Int0]    | 0     | -     | 0      | -    | PASS      |
| SWD_CLK [Int0]  | 0     | -     | 0      | -    | PASS      |
| GPIO6 [Int0]    | 0     | -     | 0      | -    | PASS      |
| GPIO10 [Int0]   | 0     | -     | 0      | -    | PASS      |
| GPIO7 [Int0]    | 0     | -     | 0      | -    | PASS      |
| GPIO1 [Int0]    | -     | 1     | 1      | -    | PASS      |
| GPIO4 [Int0]    | -     | 1     | 1      | -    | PASS      |
| SWD_IO [Int0]   | -     | 1     | 1      | -    | PASS      |
| AON_GPIO [Int0] | -     | 1     | 1      | -    | PASS      |
| GPIO2 [Int1]    | -     | 1     | 1      | -    | PASS      |
| GPIO3 [Int1]    | -     | 1     | 1      | -    | PASS      |
| GPIO5 [Int1]    | -     | 1     | 1      | -    | PASS      |
| SWD_CLK [Int1]  | -     | 1     | 1      | -    | PASS      |
| GPIO6 [Int1]    | -     | 1     | 1      | -    | PASS      |
| GPIO10 [Int1]   | -     | 1     | 1      | -    | PASS      |
| GPIO7 [Int1]    | -     | 1     | 1      | -    | PASS      |
| GPIO1 [Int1]    | 0     | -     | 0      | -    | PASS      |
| GPIO4 [Int1]    | 0     | -     | 0      | -    | PASS      |
| SWD_IO [Int1]   | 0     | -     | 0      | -    | PASS      |
| AON_GPIO [Int1] | 0     | -     | 0      | -    | PASS      |

## Tests Details #01

### Test HT criteria - Peripherals in Default configuration

| ID       | Lower | Upper | Result | Unit | Judgement |
|----------|-------|-------|--------|------|-----------|
| UART0 TX | -     | -     | PASS   | -    | PASS      |
| UART0 RX | -     | -     | PASS   | -    | PASS      |
| UART2 TX | -     | -     | PASS   | -    | PASS      |
| UART2 RX | -     | -     | PASS   | -    | PASS      |
| I2C0 TX  | -     | -     | PASS   | -    | PASS      |
| I2C0 RX  | -     | -     | PASS   | -    | PASS      |
| I2C1 TX  | -     | -     | PASS   | -    | PASS      |
| I2C1 RX  | -     | -     | PASS   | -    | PASS      |
| SPI1 TX  | -     | -     | PASS   | -    | PASS      |
| SPI1 RX  | -     | -     | PASS   | -    | PASS      |
| USIM     | -     | -     | PASS   | -    | PASS      |

## Tests Details #01

Test HT criteria - DeepSleep in Default configuration

| Sleep Mode | Lower | Upper | Result | Unit | Judgement |
|------------|-------|-------|--------|------|-----------|
| HIB2       | 0.4   | 1.5   | 0.7    | μA   | PASS      |
| HIB1       | 2.0   | 4.0   | 2.6    | μA   | PASS      |
| SLEEP2     | 5.0   | 10.0  | 6.2    | μA   | PASS      |
| SLEEP1     | 10.0  | 25.0  | 12.7   | μA   | PASS      |

## Tests Details #01

Test Qualcomm criteria - Calibration in Default configuration

| ID  | Lower | Upper | Result | Unit | Judgement |
|-----|-------|-------|--------|------|-----------|
| AFC | -     | -     | PASS   | -    | PASS      |
| AGC | -     | -     | FAIL   | -    | FAIL      |
| APC | -     | -     | SKIP   | -    | SKIP      |
| DPD | -     | -     | SKIP   | -    | SKIP      |