**NWi Firmware Change Log**

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| **Firmware ID** | NBT-MB-002\_A20\_B02 |
| **Description** | BLE firmware. Main requirements came from,  HTAS Technical Specifications for Rotary Laser(ToolConnect)  NWi SmartTools Protocol for SBD  NWi Device BLE Specification- for SBD  SBD PPS-00549 |
| **Hardware** | NBT-MB-002\_A20\_B02 |
| **Device** | DW080LRS, DW080LGS  DCE080RS, DCE080GS  DW0743RS, DW0743GS  TLM165s, TLM165si, TLM330s, DW0165S, DW0330S |

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| **Version** | **Log** | **Date** | **By** |
| V0.10.0 | Initial Version, 1st sample version.   1. BLE Control Functions. 2. Radio Control Functions. 3. Firmware OTA Functions. 4. Advertising data and interval. | 2017.12.15 |  |
| V0.20.0 | * 1．Advertising data and ble device information can be   [configured.](javascript:void(0);)  2．Advertising mode switch between ADV\_INTERVAL\_FAST\_20\_MS，  ADV\_INTERVAL\_FAST\_152\_MS and stop broadcast when LRL is un-commissioned.  3．Advertising mode switch between ADV\_INTERVAL\_FAST\_20\_MS，  ADV\_INTERVAL\_FAST\_152\_MS and ADV\_INTERVAL\_SLOW\_2000\_MS when LRL is commissioned.  4．STATUS byte(in advertisement) indicates un-commissioned, BLE BUTTON Pushed, lockTool, enableTool status.  5. ADV\_INTERVAL\_SLOW\_2000\_MS is always broadcasting when LRL is power off as the LRL is commissioned.  6. Remote Power On via BLE -> Remote Power Off via BLE. | 2017.12.15 | WANG ZHONGXIN |
| V0.20.1 | * 1．Add LDM ble interval switch between ADV\_INTERVAL\_FAST\_70\_MS and ADV\_INTERVAL\_FAST\_320\_MS.   2．Add Rotary Detector ble interval switch between ADV\_INTERVAL\_FAST\_20\_MS and ADV\_INTERVAL\_FAST\_152\_MS.   * 3．Fix the bug that Flash Data Storage(FDS). | 2017.12.27 | WANG ZHONGXIN |
| V0.20.2 | * 1．Change init NWitool advertising interval witch ADV\_INTERVAL\_FAST\_152\_MS. | 2017.12.27 | WANG ZHONGXIN |
| V0.20.3 | * 1．Fix the bug that usart tx. | 2017.12.29 | WANG ZHONGXIN |
| V0.20.4 | * 1．Bug fixed- sometimes the Main MCU OTA packet will be blocked by BLE firmware. | 2018.1.3 | WANG ZHONGXIN |
| V0.20.5 | * 1．Change LDM ble interval to ADV\_INTERVAL\_FAST\_200\_MS and ADV\_INTERVAL\_FAST\_400\_MS. * 2．Add function that turn on and turn off Push button bit in STATUS byte of advertisement. | 2018.1.15 | WANG ZHONGXIN |
| V0.20.6 | * 1．Add MCU battery level notify function. * 2．Add coincell battery voltage detection. * 3．Add RTC and Synchronize Device Time function. * 4．Bug fixed- Incorrect System ID with extera 00 added in BLE Device Information Service. * 5．ADD COMMAND “BLE INFORMATION RESET”. | 2018.1.20 | WANG ZHONGXIN |
| V0.20.7 | 1．BLE protocol add “0x00040000”for securing Nordic DFU mode by replacing public DFU trigger characteristic with an internal command.   * 2．Added watch dog , if system halted, it will reset within 30s. * 3．Added Characteristic FFF3 with Notification support for Angle(LDM).   4．Feed watch dog in bootloader. | 2018.1.22 | WANG ZHONGXIN |
| V0.20.8 | 1．Added characteristic with Notification for LASER and DETECTOR to give back current settings.   * 2．Connection timeout of 30 seconds for LASER and DETECTOR if client has not done safe login within 30 seconds. * 3．Connected Indicator (5th bit in STATUS byte) in Advertisement for LASER and DETECTOR, and do non-connectable advertisement when its connected.   4. Added characteristic with Notification for LASER main board temperature.  5. Complete the command functions “Pair LRL to HUB 0x0404” and “Un-pair LRL from HUB 0x0405”.  6. Change the default unique id to be the BLE MAC address of the LASER and DETECTOR (this is also in Device Info System Id). This function will be effective only if not configured unique ID. | 2018.1.31 | WANG ZHONGXIN |
| V0.20.9 | Disabled the code in V0.20.8 which is related to LASER and DETECTOR. The purpose of doing so is for the LDM production test . | 2018.1.31 | WANG ZHONGXIN |
| V0.20.10 | * Bug fixed- sometimes the common notify, angle notify and battery level notify will be confused if two notifications are generated at the same time. | 2018.2.5 | WANG ZHONGXIN |
| V1.00.0 | * Released version for LDM production. | 2018.2.5 | WANG ZHONGXIN |
| V1.00.1 | Cleaned the code before generate HEX files in KEIL development tool . | 2018.2.6 | WANG ZHONGXIN |
| V1.00.2 | Enabled the code in V0.20.8 which is related to LASER and DETECTOR. | 2018.2.7 | WANG ZHONGXIN |
| V1.01.1 | Enabled the code in V0.20.8 which is related to LASER and DETECTOR.  Known Issue,  LASER status will not be passed to DETECTOR status byte of advertisement. | 2018.2.7 | WANG ZHONGXIN |
| V1.10.0 | Added register configure UICR\_ADDR\_0x18 for bootloader update. | 2018.3.12 | WANG ZHONGXIN |