Wireless Device Technical Approval Notification - In Confidence

Manufacturer	Nordic Semiconductor
Model	nRF9161
Market Name	nRF9161
Device Type	Embedded Module
Nature of Approval	New Release
Status	Conditional Approval
Conditional item	1 (Please refer "Conditions of Approval" section on Page 7 for details)
Software detail	mfw_nrf91x1_2.0.0
OS detail	Not Applicable
4G Network	Supported
3G Network	Not Supported
2G Network	Not Supported
Roaming	Supports Roaming to Europe and the Americas. (Not tested as M2M devices not expected to roam)
Approval Re-assessment Date	25 March 2026
Main Device Strengths and Key Features	None
Main Device Weaknesses	None

Date	25 March 2024
To	Bobby Geldens – Strategic Partnerships Devices COE Jouni Korhonen – Nordic Semiconductor
CC	Chu, Jeremy – Devices COE Hampshire Sophy - Devices COE
From	Neel Daware Network Application & Cloud | Converged Core Engineering | Device Certification and Accreditation Address: 242 Exhibition Street | Melbourne VIC 3000 | Australia Mobile: +61 477 361 364; (Insert 0 for +61 within Australia)

ADDITIONAL INFORMATION

- Device does not comply with Telstra's pre-configuration requirements (Version 78) of disabling the "*datainactivitymonitor*" timer in the CATM1 network. There is no immediate impact as Telstra's network does not support the "*dataInactivitymonitor*" timer, however, the device interoperability with respect to this feature cannot be ascertained at this stage.

SOFTWARE INFORMATION

Device Software	mfw_nrf91x1_2.0.0
Software Interrogation Sequence	Using AT Command (AT+CGMR)
TAC	35269695, 35829984
Locked to Telstra Network	No
SVN	2

HARDWARE INFORMATION

HARDWARE Version of Engineering Sample	nRF9161-LACA-ADA
HARDWARE Version of production Sample	nRF9161-LACA-A0A
Hardware Interrogation Sequence	Using AT Command (AT%HWVERSION)

RF PLATFORM

Chipset	nRF9121
Chipset Firmware Version	mfw_nrf91x1_2.0.0
Application Processor	ARM Cortex-M33
Application Processor Firmware Version	NCS SDK version 2.5.0. Zephyr RTOS v3.4.99
RF Platform Used/Radio processor models	Integrated transceiver in nRF9121
Flash Chipset Type and Size	Integrated 1MB Flash and 256kB SRAM for application processor

ANTENNA

Is this device a blue tick?	There will not be a Data Device coverage performance rating.
External RF connection	To be determined by product integrating the module

RADIO TECHNOLOGY SUPPORT

eMTC	
Category	CAT M1
Duplex Operation Mode	Half Duplex
Coverage Enhancement Support	Yes (CE Mode A)
Connected Mode Mobility (CMM)	Yes
Power Saving Mode (PSM)	Yes (Disabled by default)
Extended Discontinuous Reception (eDRX)	Yes (Disabled by default)
NB -IOT	
Category	CAT NB2
Power Saving Mode (PSM)	Yes (Disabled by default)
Extended Discontinuous Reception (eDRX)	Yes (Disabled by default)
CIoT Control Plane Optimisation	Yes
CIoT User Plane Optimisation	No
2HARQ Process	Yes

BAND SUPPORT

4G Network	Band 3(1800), Band 28(700)
3G Network	Not applicable
2G Network	Not applicable

DATA THROUGHPUT CATEGORY

4G Network	CAT M1- Half Duplex (DL - 375 Kbps, UL - 375 Kbps) * CAT NB2 (DL - 127 Kbps, UL – 158.5 Kbps) *
3G Network	Not applicable

* Speed mentioned is network peak theoretical throughput

POWER CLASS

Power Class UMTS 850/ 2100	Not applicable
Power Class LTE 700/850/900/1800	3

AUDIO CODEC SUPPORTED

EFR	No
HR	No
AMR	No
AMR-WB	No
EVS	No

CONNECTIVITY

NFC	No
Wi-Fi	No
Bluetooth	No
DLNA	No

EXTRA FEATURE

External Memory	No
3G VOICE	No
4G Voice (VoLTE and E000 Call)	No
VoWiFi	No
Telstra Messaging (RCS)	No
4G Video calling (ViLTE)	No
SMS-MT	Yes
SMS-MO	Yes
MMS	No
GPS	Yes -Not tested
AGPS	No
PAP	Yes
CHAP	Yes
USIM-OTAC	Yes
Single Stack IPv6	Yes
Dual Stack IPv4v6	Yes
Single Stack IPv6 Tethering/Wi-Fi hotspot	No
Dual Stack IPv4V6 Tethering/Wi-Fi hotspot	No
Roaming PDN/PDP Type Option	No
Device OTAC	No
USIM Variant	Integrating product dependent
SIM Toolkit	Yes
BIP	Yes
FOTA	Yes (Remote upgrade possible via proprietary procedure)
Simultaneous PDP	No
Multiple RAB Support	No

REPORTS AND DOCUMENTS

Vendor provided documents.

SAR	Not Applicable
SDoC	The Vendor has provided the SDoC report (Report attached below). Note that the vendor is responsible for the content of this report (and not Telstra) **PDF** RCM_DOC_nRF9161. pdf [RCM_DOC_nRF9161.pdf]
Hardware declaration document	**PDF** hardware_declaration _nrf9161.pdf [hardware_declaration_nrf9161.xlsx]
GCF/ PTCRB	GCF-CC 3.90.0
Additional Device Specification	**PDF** nRF9161_Objective_ Product_Spec.pdf [nRF9161_Objective_Product_Spec.pdf]
Vendor Customisation File	**X** mfw_2.0.x_features_t elstra_v10.xlsx [mfw_2.0.x_features_telstra_v10.xslx]

TELSTRA documents

Pre-configuration Document	MSR0295_v78
Issues Register	**X** Nordic Semiconductor_nRF9 [Nordic Semiconductor_nRF9161 (nRF9161)_Issue register_03252024.xlsx]

ENDORSEMENT AND SIGN-OFF

Domain Engineering

Converged Core Engineering	Neel Daware for	**TPO / Chapter Lead – Device Certification & Approval**
	Sinthu Sri Ganeshwaran	**Group Owner – Converged Core Engineering**

CONDITIONS OF APPROVAL

- Approval is provided based on the hardware and software variants submitted to, tested by, and technically approved by Telstra.
- Any changes to hardware and software are to be formally submitted to Telstra in writing prior to implementation so Telstra can evaluate and/or validate the impact of the change/s
- Approval is given on the basis that future software upgrades will have updated SVN values.
- Data devices Approval status will be reassessed two (2) years after initial Telstra Technical Approval.
  - Re-assessment Date: 25 March 2026

Nordic to address the following issue in the Next Maintenance Release.
All issues have an acceptance from Telstra Engineering/Devices COE

Condition No	Issue No	Issue description	End Customer / Network Impact
1	10580	Device does not comply with Telstra's pre-configuration requirements (Version 78). In CATM1, the device declares the support of dataInactivitymonitor in the UE Capability message.	Network Impact: Device interoperability with Telstra's network cannot be ascertained as Telstra's network doesn't currently support this feature. Customer Impact: None

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