Category 1.0N – Thin and Light Notebook

a) Intel Core i5-1145G7 or AMD Ryzen 5 Pro 5650U
b) CPU upgrades to Intel Core i7-1185G7 or AMD Ryzen 7 Pro 5850U available (please indicate if upgrade is required)
c) 16.0 GB of DDR4 or LPDDR3 RAM
d) 256GB PCIe NVMe SSD, upgradeable to 512GB & 1TB (please choose size required)
e) Intel Iris Xe or AMD Radeon Graphics
f) 13.3 to 14 inches display with a resolution of 1920x1080 (FHD), 10 point capacitive touchscreen
g) Built-in stereo speakers / high definition audio controller.
h) Wireless 802.11 AX, Bluetooth 5.0, user facing web camera, Noise-reducing dual array microphone
i) 1 x USB-C port with PD2 Power delivery, 2 x full size USB-A or Type C ports, 1 x full size digital video port, 1 x Audio combo jack
j) Keyboard - QWERTY keyboard available in both English layout and bilingual layout (Microsoft CF) with control keys in both languages (please choose one or both layout(s) required. LoD will reflect each quantity if both are required)
k) Internal Lithium Ion Battery
l) Pointing Device - integrated multi-point glide pad with left and right mouse button functionality.
m) Security – FIPS 140-2 compliant and TCG certified TPM (Trusted Platform Module) vers. 2.0, NIST SP 800-147 compliant secure UEFI including Pre-Boot and Multi-factor authentication set up option, Ability to secure by a cable lock
n) Optional upgrades available for FIPS 201 compliant contacted Smart Card reader Windows Hello enabled camera & Windows Hello static fingerprint reader (please choose one or none)
o) Minimum EPEAT 2018 Silver level certified
p) Traditional Clamshell form factor
q) Max Weight: 3.7lbs not including AC Adapter

For complete technical details on all NMSO products please refer to the NMSO Benchmark Report
http://canada.nstl.com/SipssWebSites/Report/m20/NotebookCategory.asp

Category 2.0N – Ultra Thin and Light Notebook

a) Intel Core i5-1145G7 or AMD Ryzen 5 Pro 5650U
b) CPU upgrades to Intel Core i7-1185G7 or AMD Ryzen 7 Pro 5850U available (please indicate if upgrade is required)
c) 16.0 GB of DDR4 or LPDDR3 RAM
d) 256GB PCIe NVMe SSD upgradeable to 512GB & 1TB. (please choose size required)
e) Intel Iris Xe or Radeon Graphics
f) 13.3 to 14 inches display with a resolution of 1920x1080 (FHD), 10 point capacitive touchscreen
g) Display upgrade to a minimum of 2560x1440 resolution available (please indicate if upgrade is required)
h) Built-in stereo speakers / high definition audio controller.

i)   Wireless 802.11 AX, Bluetooth 5.0, user facing web camera, Noise-reducing dual array microphone

j)   1 x USB-C port with PD2 Power delivery or proprietary port, 1 x full size USB-A or USB-C ports, 1 x full size digital or mini video port, 1 x Audio combo jack

k)   Keyboard - QWERTY keyboard available in both English layout and bilingual layout (Microsoft CF) with control keys in both languages (please choose one or both layout(s) required. LoD will reflect each quantity if both are required)

l)   Internal Lithium Ion Battery

m)   Pointing Device - integrated multi-point glide pad with left and right mouse button functionality.

n)   Security – FIPS 140-2 compliant and TCG certified TPM (Trusted Platform Module) vers. 2.0 or PTT (Platform Trust Technology) firmware, NIST SP 800-147 compliant secure UEFI including Pre-Boot and Multi-factor authentication set up option (if two levels of authentication are deployed), Absolute Data & Device Security (not-enabled), Ability to secure by a cable lock.

o)   Optional upgrades available Windows Hello enabled camera or Windows Hello static fingerprint reader (please choose one or none)

p)   Minimum EPEAT 2018 Silver level certified

q)   Traditional Clamshell form factor or 360° hinged convertible design

r)   Max Weight: 3.0bs if clamshell, 3.2lbs if convertible design (not including AC Adapter)

For complete technical details on all NMSO products please refer to the NMSO Benchmark Report
http://canada.nstl.com/SipssWebSites/Report/m20/NotebookCategory.asp

Category 3.0N – 15 inch Notebook

a)   Intel Core i5-1145G7 or AMD Ryzen 5 Pro 5650U

b)   CPU upgrades to Intel Core i7-1185G7 or AMD Ryzen 7 Pro 5850U available (please indicate if upgrade is required)

c)   16.0 GB of DDR4 RAM upgradeable to 32GB (please indicate if upgrade is required)

d)   256GB PCIe NVMe SSD upgradeable to 512GB & 1TB. (please choose size required)

e)   Intel Iris Xe or Radeon Graphics with optional discrete video controller upgrade

f)   15.6 inches display with a resolution of 1920x1080 (FHD), 10 point capacitive touchscreen

g)   Built-in stereo speakers / high definition audio controller.

h)   Wireless 802.11 AX, Bluetooth 5.0, user facing web camera and world facing if convertible design, Noise-reducing dual array microphone

i)   1 x USB-C port with PD2 Power delivery, 2 x full size USB-A or USB-C ports, 1 x digital video port, 1 x Audio combo jack

j)   Keyboard - QWERTY keyboard available in both English layout and bilingual layout (Microsoft CF) with control keys in both languages (please choose one or both layout(s) required. LoD will reflect each quantity if both are required)

k)   Native keyboard comes with a separate numeric keypad.

l)   Internal Lithium Ion Battery

m)   Pointing Device - integrated multi-point glide pad with left and right mouse button functionality.

n)   Security – FIPS 140-2 compliant and TCG certified TPM (Trusted Platform Module) vers. 2.0, NIST SP 800-147 compliant secure UEFI including Pre-Boot and Multi-factor authentication set up

option (if two levels of authentication are deployed), Absolute Data & Device Security (not-enabled), Ability to secure by a cable lock.
o) Minimum one of the following Security option included, additional options can be included as upgrades. FIPS 201 compliant contacted Smart Card reader, Windows Hello enabled camera and Windows Hello static fingerprint reader (please choose one or none)
p) Minimum EPEAT 2018 Silver level certified
q) Traditional Clamshell form factor or 360º hinged convertible.
r) Max Weight: 5.2lbs not including AC Adapter

For complete technical details on all NMSO products please refer to the NMSO Benchmark Report
http://canada.nstl.com/SipssWebSites/Report/m20/NotebookCategory.asp

Category 4.0N – 12 inch Detachable 2-in-1 Mobile Device

a) Intel Core i5-1135G7 or AMD Ryzen 5 Pro 5650U
b) CPU upgrades to Intel Core i7-1180G7 or AMD Ryzen 7 Pro 5850U available (please indicate if upgrade is required)
c) 16.0 GB of DDR4 or LPDDR4x RAM
d) 256GB PCIe NVMe SSD upgradeable to 512GB & 1TB. (please choose size required)
e) Intel Iris Xe or Radeon Graphics
f) 12 to 13.3 inches display with a resolution of 1920x1080 (FHD), 10 point capacitive touchscreen
g) Built-in stereo speakers / high definition audio controller.
h) Wireless 802.11 a/g/n/ac, Bluetooth 4.1, user facing web and world facing camera, Noise-reducing dual array microphone
i) 1 x USB-C port with PD2 Power delivery or proprietary port, 1 x full size USB-A or additional USB-C port,   1 x Audio combo jack
j) Gyroscope, Ambient light sensor, eCompass/Magnetometer or Accelerometer
k) Keyboard - QWERTY keyboard available in both English layout and bilingual layout (Microsoft CF) or French Layout (please choose one or both layout(s) required. LoD will reflect each quantity if both are required)
l) Internal Lithium Ion Battery
m) Pointing Device - integrated multi-point glide pad with left and right mouse button functionality.
n) Security – FIPS 140-2 compliant and TCG certified TPM (Trusted Platform Module) vers. 2.0, NIST SP 800-147 compliant secure UEFI including Pre-Boot and Multi-factor authentication set up option, Ability to secure by a cable lock.
o) Minimum one of the following Security option included, additional options can be included as upgrades: Windows Hello enabled camera and/or Windows Hello static fingerprint reader (please choose one or none)
p) Minimum EPEAT Silver Bronze level certified
q) User-detachable keyboard design
r) Max Weight: 2.9lbs for both display and keyboard

For complete technical details on all NMSO products please refer to the NMSO Benchmark Report
http://canada.nstl.com/SipssWebSites/Report/m20/NotebookCategory.asp

Category 5.0N – 12 inch Advanced Detachable 2-in-1 Mobile Device

a) Intel Core i5-1135G7 or AMD Ryzen 5 Pro 5650U
b) CPU upgrades to Intel Core i7-1165G7 or AMD Ryzen 7 Pro 5850U available (please indicate if upgrade is required)
c) 16.0 GB of DDR4 or LPDDR3 RAM
d) 256GB PCIe NVMe SSD upgradeable to 512GB & 1TB. (please choose size required)
e) Intel Iris Xe or Radeon Vega Graphics
f) 12 to 13.5 inches display with a minimum resolution of 2150x1440, 10 point capacitive touchscreen
g) Built-in stereo speakers / high definition audio controller.
h) Wireless 802.11 a/g/n/ac, Bluetooth 4.2, user facing web and world facing camera, Noise-reducing dual array microphone
i) 1 x USB-C port with PD2 Power delivery or proprietary port, 1 x full size USB-A or additional USB-C ports, 1 x Audio combo jack
j) Gyroscope, eCompass/Magnetometer or Accelerometer
k) Keyboard - QWERTY keyboard available in both English layout and bilingual layout (Microsoft CF) or French Layout (please choose one or both layout(s) required. LoD will reflect each quantity if both are required)
l) Internal Lithium Ion Battery
m) Pointing Device - integrated multi-point glide pad with left and right mouse button functionality.
n) Security – FIPS 140-2 compliant and TCG certified TPM (Trusted Platform Module) vers. 2.0, NIST SP 800-147 compliant secure UEFI including Pre-Boot and Multi-factor authentication set up option, Ability to secure by a cable lock.
o) Minimum one of the following Security option included, additional options can be included as upgrades: Windows Hello enabled camera, Windows Hello static fingerprint reader (please choose one or none)
p) Minimum EPEAT 2018 Silver level certified
q) User-detachable keyboard design
r) Max Weight: 2.9lbs for both display and keyboard

For complete technical details on all NMSO products please refer to the NMSO Benchmark Report
http://canada.nstl.com/SipssWebSites/Report/m20/NotebookCategory.asp

Category 6.0N – 12 inch Convertible 2-in-1 Mobile Device

a) Intel Core i5-1145G7 or AMD Ryzen 5 Pro 5650U
b) CPU upgrades to Intel Core i7-1185G7 or AMD Ryzen 7 Pro 5850U (please indicate if upgrade is required)
c) 16.0 GB of DDR4 or LPDDR3 RAM
d) 256GB PCIe NVMe SSD upgradeable to 512GB & 1TB (please choose size required)
e) Intel Iris Xe or Radeon Graphics
f) 12 inches display with a resolution of 1920x1080 (FHD), 10 point capacitive touchscreen
g) Built-in stereo speakers / high definition audio controller.

h) Wireless 802.11 AX, Bluetooth 5.0, user facing web camera, Noise-reducing dual array microphone
i) 1 x USB-C port with PD2 Power delivery or a proprietary port, 1 x full size USB-A or additional USB-C port, 1 x Audio combo jack
j) Gyroscope, eCompass/Magnetometer or Accelerometer
s) Keyboard - QWERTY keyboard available in both English layout and bilingual layout (Microsoft CF) or French Layout (please choose one or both layout(s) required. LoD will reflect each quantity if both are required)
k) Internal Lithium Ion Battery
l) Pointing Device - integrated multi-point glide pad with left and right mouse button functionality.
m) Security – FIPS 140-2 compliant and TCG certified TPM (Trusted Platform Module) vers. 2.0, NIST SP 800-147 compliant secure UEFI including Pre-Boot and Multi-factor authentication set up option, Ability to secure by a cable lock (please choose one or none)
n) Minimum one of the following Security option included, additional options can be included as upgrades: Windows Hello enabled camera, Windows Hello static fingerprint reader (please choose one or none)
o) Minimum EPEAT 2018 Silver level certified
p) Convertible 360° hinged design
q) Max Weight: 3.4lbs for both display and keyboard

For complete technical details on all NMSO products please refer to the NMSO Benchmark Report
http://canada.nstl.com/SipssWebSites/Report/m20/NotebookCategory.asp

Category 7.0N – 10 inch Slate Tablet

a) Microsoft Windows 10Pro, or Apple iOS 12 or Android Knox 3.2
b) Intel Pentium 4415Y or Apple A10 Fusion or Qualcomm Octo Core
c) 8.0GB RAM if Windows 10 Pro, 4.0GB RAM if Android Knox
d) 128GB if Windows 10 Pro or Apple iOS or 64GB if Android
e) 9.7 inches display with a resolution of 1800x1200 with a 1400:1 contrast ratio, 10 point capacitive touchscreen
f) Windows 10 Pro based tablet include an integrated stand
g) Built-in stereo speakers / high definition audio controller and UAJ audio port or USB-C port supporting digital video.
h) Wireless 802.11 a/g/n/ac, Bluetooth 4.1, user facing and world facing web camera, integrated microphone
i) Gyroscope, eCompass/Magnetometer, Ambient Light Sensor
j) Windows 10 Pro device includes one USB-C, one docking station port, Apple iOS device includes Lightning or USB-C connector, Android Knox device includes a USB-C port.
k) Internal Lithium Ion or Lithium Polymer Battery
l) Security –Windows 10 Pro device includes TPM 2.0 module, Apple iOS device includes bio-metric touch ID sensor or Apple Face ID authentication, Android device includes Knox Security Platform.
m) Traditional Slate tablet
n) Max Weight: 1.2lbs for display between 9.7 to 11.5 inches, 1.7lbs for display greater than 11.5 inches

Category 8.0N – 15 inch Mobile Workstation

a) Intel Core i7-11850H
b) CPU upgrades to Intel Core i9-11950H
c) Intel WM590 chip set
d) 16.0 GB of DDR4 RAM upgradeable to a maximum of 128 GB (please indicate if upgrade is required)
e) 256GB PCIe NVMe SSD upgradeable to 512GB & 1TB (please choose size required)
f) Nvidia Quadro T1200 video controller with optional video controller upgrades (please indicate if upgrade is required)
g) 15.6 inches display with a resolution of 1920x1080 (FHD), 10 point capacitive touchscreen
h) Display upgrade to 3840x2160 resolution available (please indicate if upgrade is required)
i) Built-in stereo speakers / high definition audio controller.
j) Wireless 802.11 AX, Bluetooth 5.1, user facing web camera, Noise-reducing dual array microphone
k) 1 x USB-C port with PD2 Power delivery, 2 x USB-C or USB-A ports, 1 x full size digital video port, 1 x Audio combo jack
l) Keyboard - QWERTY keyboard available in both English layout and bilingual layout (Microsoft CF) with control keys in both languages (please choose one or both layout(s) required. LoD will reflect each quantity if both are required)
m) Native keyboard comes with a separate numeric keypad.
n) Internal Lithium Ion Battery
o) Pointing Device - integrated multi-point glide pad with left and right mouse button functionality.
p) Security – FIPS 140-2 compliant and TCG certified TPM (Trusted Platform Module) vers. 2.0, NIST SP 800-147 compliant secure UEFI including Pre-Boot and Multi-factor authentication set up option, Ability to secure by a cable lock.
r) Minimum one of the following Security option included, additional options can be included as upgrades - FIPS 201 compliant contacted Smart Card reader, Windows Hello enabled camera, Windows Hello static fingerprint reader (please choose one or none)
q) Minimum EPEAT 2018 Silver level certified
r) Traditional Clamshell form factor.
s) Max Weight: 6.4lbs not including AC Adapter

For complete technical details on all NMSO products please refer to the NMSO Benchmark Report
http://canada.nstl.com/SipssWebSites/Report/m20/NotebookCategory.asp

Category 9.0N – 15 inch Thin and Light Mobile Workstation

a) Intel Core i7-10850H or Intel Core i7-1065G7 capable of 20 watt TDP burst mode
b) Intel WM490 chip set if Quadro based or QM480 or SoC chip set if GeForce based.
c) 16.0 GB of DDR4 RAM upgradeable to 32 GB. (please indicate if upgrade is required)
d) 256GB PCIe NVMe SSD upgradeable to 512GB & 1TB (please choose size required)
e) Nvidia Quadro T2000 or Nvidia Geforce GTX 1650 video controller with optional video controller upgrades available (please indicate if upgrade is required)
f) 15.6 inches display with a resolution of 3840x2160 (UHD), 10 point capacitive touchscreen
g) Built-in stereo speakers / high definition audio controller.

h) Wireless 802.11 AX, Bluetooth 5.0, user facing web camera and world facing camera if convertible design, Noise-reducing dual array microphone
i) 1 x USB-C port with PD2 Power delivery, 2 x full size USB-A or USB-C ports, 1 x digital video port, 1 x Audio combo jack
j) Keyboard - QWERTY keyboard available in both English layout and bilingual layout (Microsoft CF) or French layout (please choose one or both layout(s) required. LoD will reflect each quantity if both are required)
k) Internal Lithium Ion Battery
l) Pointing Device - integrated multi-point glide pad with left and right mouse button functionality.
m) Security – FIPS 140-2 compliant and TCG certified TPM (Trusted Platform Module) vers. 2.0, NIST SP 800-147 compliant secure UEFI including Pre-Boot and Multi-factor authentication set up option
n) Minimum one of the following Security option included, additional options can be included as upgrades: Windows Hello enabled camera, Windows Hello static fingerprint reader (please choose one or none)
o) Minimum EPEAT 2018 Silver level certified
p) Traditional Clamshell or convertible form factor.
q) Max Weight: 5.0lbs if Quadro video based and 4.3lbs if GTX video based (not including AC Adapter)

For complete technical details on all NMSO products please refer to the NMSO Benchmark Report
http://canada.nstl.com/SipssWebSites/Report/m20/NotebookCategory.asp

Category 10.0N – 17 inch Mobile Workstation

a) Intel Core i7-11850H
b) CPU upgrades to Intel Core i9-11950H available (please indicate if upgrade is required)
c) Intel WM590 chip set
d) 16.0 GB of DDR4 RAM upgradeable to a maximum of 128 GB (please indicate if upgrade is required)
e) 256GB PCIe NVMe SSD upgradable to 512GB & 1TB. or multiple drives (please choose size/number required)
f) Nvidia Quadro RTX 1200 video controller with optional video controller upgrades (please indicate if upgrade is required)
g) 17 inches display with a resolution of 1920x1080 (FHD)
h) Display upgrade to 3840x2160 (UHD) resolution available (please indicate if upgrade is required)
i) Built-in stereo speakers / high definition audio controller.
j) Wireless 802.11 AX, Bluetooth 5.0, user facing web camera, Noise-reducing dual array microphone
k) 1 x USB-C port with PD2 Power delivery, 2 x full size USB-C or USB-A ports, 1 x full size digital video port, 1 x Audio combo jack
l) Keyboard - QWERTY keyboard available in both English layout and bilingual layout (Microsoft CF) with control keys in both languages (please choose one or both layout(s) required. LoD will reflect each quantity if both are required)
m) Native keyboard comes with a separate numeric keypad.
n) Internal Lithium Ion Battery

o) Pointing Device - integrated multi-point glide pad with left and right mouse button functionality.
p) Security – FIPS 140-2 compliant and TCG certified TPM (Trusted Platform Module) vers. 2.0, NIST SP 800-147 compliant secure UEFI including Pre-Boot and Multi-factor authentication set up option
q) Minimum one of the following Security option included, additional options can be included as upgrades - FIPS 201 compliant contacted Smart Card reader, Windows Hello enabled camera, Windows Hello static fingerprint reader (please choose one or none)
r) Minimum EPEAT 2018 Silver level certified
s) Traditional Clamshell form factor.
t) Max Weight: 7.5lbs not including AC Adapter

For complete technical details on all NMSO products please refer to the NMSO Benchmark Report
http://canada.nstl.com/SipssWebSites/Report/m20/NotebookCategory.asp

Category 11.0N – Ruggedized Notebook

a) Intel Core i5-10310U
b) 16.0 GB of DDR4 RAM
c) 256GB OPAL 2.0 SSD
d) 12 to 15 inches display with a resolution of 1920x1080 (FHD), 10 point, gloved, multi-touch enabled.
e) Outdoor viewable, minimum 1000 nits
f) Wireless 802.11 a/g/n/ac, Bluetooth 4.1, user facing web camera
g) Optional integrated GPS available (please indicate if upgrade is required)
h) 2 x full size USB ports, 1 x RJ-45, 1 x digital video port, 1 x RS-232 serial, Docking station connector
i) Keyboard – Backlit, QWERTY keyboard available in both English layout and bilingual layout (Microsoft CF) or French layout (please choose one or both layout(s) required. LoD will reflect each quantity if both are required)
j) Two user-removable internal 22Whr or single 50Whr Lithium Ion batteries.
k) Pointing Device - integrated multi-point glide pad with left and right mouse button functionality.
l) Security – FIPS 140-2 compliant and TCG certified TPM (Trusted Platform Module) vers. 2.0, NIST SP 800-147 compliant secure UEFI including Pre-Boot and Multi-factor authentication set up option (if two levels of authentication are deployed), Absolute Data & Device Security (not-enabled), Ability to secure by a cable lock.
m) Minimum one of the following Security option included - Windows Hello enabled camera, Windows Hello static fingerprint reader (please choose one or none)
n) Minimum EPEAT 2018 Bronze level certified
o) Traditional Clamshell or detachable display form factor.
p) Max Weight: 7.6 lbs not including AC Adapter
q) Ruggedized to meet MIL-STD-810G and IP65 Ingress test and procedures.

For complete technical details on all NMSO products please refer to the NMSO Benchmark Report
http://canada.nstl.com/SipssWebSites/Report/m20/NotebookCategory.asp

Category 12.0N – Ruggedized Detachable 2-in-1 Mobile Device

a) Intel 7th generation Core i5-7Y57 or Core i5-7300U

b) 16.0 GB of DDR3L RAM
c) 512GB OPAL 2.0 SSD
d) 10 to 12 inches display with a resolution of 1920x1080 with a non-reflective matte finish, 5 point, gloved, multi-touch enabled.
e) Outdoor viewable, minimum 800 nits or 600 nits if Direct-View LED technology.
f) Wireless 802.11 a/g/n/ac, Bluetooth 4.1, user facing web camera
g) Built-in speaker and integrated microphones
h) Optional internal WWAN cellular modem and GPS available (please indicate if upgrade is required)
i) Gyroscope, eCompass/Magnetometer, Ambient Light Sensor
j) 1 x full size USB-A or Type C, 1 x digital video port, one UAJ audio jack, Docking station connector. Optional RS-232 serial port.
k) Keyboard – Backlit, QWERTY keyboard available in both English layout and bilingual layout (Microsoft CF) or French layout (please choose one or both layout(s) required. LoD will reflect each quantity if both are required)
l) 26Whr Internal Lithium Ion battery with the facility for a second internal battery.
m) Pointing Device - integrated multi-point glide pad with left and right mouse button functionality.
n) Security – FIPS 140-2 compliant and TCG certified TPM (Trusted Platform Module) vers. 2.0, NIST SP 800-147 compliant secure UEFI including Pre-Boot and Multi-factor authentication set up option (if two levels of authentication are deployed), Absolute Data & Device Security (not-enabled), Ability to secure by a cable lock.
o) Minimum one of the following Security option included - Windows Hello enabled camera, Windows Hello static fingerprint reader (please choose one or none)
p) Minimum EPEAT 2018 Bronze level certified
q) User-detachable keyboard design
r) Max Weight: 6.1 lbs including display, keyboard and single internal battery.
s) Rugged to meet MIL-STD-810G and IP65 Ingress test and procedures.

For complete technical details on all NMSO products please refer to the NMSO Benchmark Report
http://canada.nstl.com/SipssWebSites/Report/m20/NotebookCategory.asp

Category 13.0N – 10 inch Ruggedized Slate Tablet

a) Intel Core i5-7300U
b) 8GB of DDR3L RAM
c) 256GB OPAL 2.0 SSD
d) 10 inches display with a resolution of 1920x1080 with a non-reflective matte finish, 5 point, gloved, multi-touch enabled.
e) Outdoor viewable
f) Wireless 802.11 a/g/n/ac, Bluetooth 4.1, user facing web camera
g) Built-in speaker and integrated microphones
h) Optional internal WWAN cellular modem and GPS available (please indicate if upgrade is required)
i) Gyroscope, eCompass/Magnetometer, Ambient Light Sensor
j) 1 x full size USB-A or Type C, 1 x digital video port, one UAJ audio jack, Optional RS-232 serial port.

k) Keyboard – Backlit, QWERTY keyboard available in both English layout and bilingual layout (Microsoft CF) or French layout
l) 34Whr Internal Lithium Ion battery
m) Pointing Device - integrated multi-point glide pad with left and right mouse button functionality.
n) Security – FIPS 140-2 compliant and TCG certified TPM (Trusted Platform Module) vers. 2.0, NIST SP 800-147 compliant secure UEFI including Pre-Boot and Multi-factor authentication set up option (if two levels of authentication are deployed), Absolute Data & Device Security (not-enabled), Ability to secure by a cable lock.
o) Minimum one of the following Security option included - Windows Hello enabled camera, Windows Hello static fingerprint reader (please choose one or none)
p) Minimum EPEAT 2018 Bronze level certified
q) Slate Tablet
r) Max Weight: 3.0 lbs including display and single internal battery.
s) Rugged to meet MIL-STD-810G and IP65 Ingress test and procedures.

For complete technical details on all NMSO products please refer to the NMSO Benchmark Report
http://canada.nstl.com/SipssWebSites/Report/m20/NotebookCategory.asp

Category 14.0N – Semi-Ruggedized Notebook

a) Intel Core i5-8350U or AMD Ryzen Pro 3500U
b) CPU upgrades to Intel Core i7-8650U or AMD Ryzen 7 Pro 3700U available (please indicate if upgrade is required)
c) 16.0 GB of DDR4 RAM upgradable to 32GB (please indicate if upgrade is required)
d) 256GB SSD upgradeable to 512GB & 1TB. (please indicate if upgrade is required)
e) 14 inches display with a resolution of 1920x1080, 10 point, gloved, multi-touch enabled.
f) Outdoor viewable, minimum 800 nits
g) Upgradable to a discrete video with a minimum of 2GB of dedicated video RAM. (please indicate if upgrade is required)
h) Wireless 802.11 a/g/n/ac, Bluetooth 4.2, user facing web camera with integrated privacy shutter.
i) Optional integrated GPS/WWAN available (please indicate if upgrade is required)
j) 3 x full size USB ports, , 1 x digital video port, 1 x RS-232 serial, SIM or Micro or Nano SIM slot, Midea Card slot,
k) Keyboard – Backlit, QWERTY keyboard available in both English layout and bilingual layout (Microsoft CF) or French layout (please choose one or both layout(s) required. LoD will reflect each quantity if both are required)
l) 46Whr Lithium Ion battery and be able to accommodate second identical battery simultaneously.
m) Pointing Device - integrated multi-point glide pad with left and right mouse button functionality.
n) Security – FIPS 140-2 compliant and TCG certified TPM (Trusted Platform Module) vers. 2.0, NIST SP 800-147 compliant secure UEFI including Pre-Boot and Multi-factor authentication set up option (if two levels of authentication are deployed), Absolute Data & Device Security (not-enabled), Ability to secure by a cable lock.

o) Minimum one of the following Security option included - Windows Hello enabled camera, Windows Hello static fingerprint reader (please choose one or none)
p) Minimum EPEAT 2018 Bronze level certified
q) Traditional Clamshell form factor.
r) Max Weight: 6.1 lbs not including AC Adapter
s) Rugged to meet MIL-STD-810G and IP-xx Ingress test and procedures.
t) Available optional USB-C Office Docking Station, Ruggedized Vehicle Mount & Universal Vehicle Mount.

For complete technical details on all NMSO products please refer to the NMSO Benchmark Report http://canada.nstl.com/SipssWebSites/Report/m20/NotebookCategory.asp

On the NMSO there coexists two levels of device (e.g. notebook, desktop) security, identified as Medium and Advanced. The medium designation represents the minimum level of security as defined by GoC security authorities. The advanced level introduces additional hardware resiliency as well as formal assurances of the OEM's (Original Equipment Manufacturer) secure supply chain infrastructure.

It is the client's discretion to select which criteria is appropriate for their business needs and is invited to choose accordingly prior to their RVD solicitation. Please inform the assigned PVR contract authority of your choice prior to that solicitation. If no choice is made the security level will default to Medium. Information on the device's security status is available on the NMSO Benchmark Report under "BIOS/UEFI SECURITY AND AUTHENTICATION".

Medium Security Criteria

a) Integrated embedded FIPS 140-2 compliant and TCG certified TPM (Trusted Platform Module) vers. 2.0. PTT (Platform Trust Technology) firmware TPM is acceptable for Category 2.0N only.

b) All devices must have a NIST SP 800-147 compliant, secure UEFI.

c) Absolute Data & Device Security (not-enabled))

d) The device must have the ability to be secured by a cable lock.

e) Second level user authentication must be available through at least one the following methods:

   (i) Integrated ISO/IEC 14443 compliant smart card reader (contacted or contactless)

   (ii) Windows Hello enabled camera.

   (iii) Windows Hello static fingerprint reader.

Advanced Security Criteria

The Advanced security level must meet all the criteria listed above as well as all of the following:

a) System unit OEM must have in place a process for verifying the authenticity and integrity of BIOS updates and a mechanism for ensuring that the BIOS is protected from modification outside of that secure update process. The update mechanism shall ensure that the BIOS update image has been digitally signed and that the digital signature can be verified using a key in the RTU (Root of Trust) before updating. The system unit must be designed to permit only IT administrative (prohibiting individual users) control over updates by counter-signing with an IT administration controlled key. The secure update BIOS update process described herein must conform to the ISO/IEC 19678:2015 standard;

b) System unit must be able to detect and provide notification when the system BIOS has been corrupted and must recover from a backup firmware image stored in a separate storage location from the primary system BIOS (e.g., a second, internal NVRAM, a hidden partition on the SSD or OEM provided and authorised USB key).

c) System unit OEM must have available an image verification utility which must:

   (i) Verify the security and quality of the image prior to or following deployment;

   (ii) Verify the authenticity and OEM authorised source of installed device drivers, firmware, patches and BIOS;

   (iii) Identify issues and anomalies and recommend remediation;

   (iv) Operate under Microsoft Windows 10 Pro;

   (v) Be authored and approved by the device OEM;

   (vi) Be free of charge and be exclusively available from the OEMs' support web site or have the same utility available from the Microsoft App store.

d) System unit OEM must have a mature and comprehensive **Supply Chain Integrity (SCI) process** in place. This process must involve the mitigation of the infiltration of fraudulent, maliciously tainted or counterfeit components as well as the mitigation of the introduction of hardware-based threat vectors during the manufacturing process and throughout the subsequent supply chain and delivery channel up to final delivery (design, sourcing, build, fulfilment and distribution). This OEM conducted process must adhere to and include the principals, and be currently an active participant, in the conformance to (if the standard development does not include industry participation) or development of (if industry participation is integral to the standard's development) at the least three of the following related international secure supply chain standards, initiatives and best practices:

   (i) ISO/IEC 20243:2015 - Open Trusted Technology Provider Standard (O-TTPS)

   (ii) ISO 28000 – Supply Chain Resiliency

   (iii) ISO – 15408 – Common Criteria

   (iv) NIST 800-161 – Supply Chain Risk Management

   (v) NIST Cybersecurity Framework

(vi)   TAPA – Transported Asset Protection Association

(vii)   ISO 27036-2 and ISO 27036-3 Information technology – Security techniques

(viii)   C-TPAT tier 3 certification