Q-NEX Networked Digital Podium
NDP100

—— Datasheet ——

Product List

The Q-NEX Networked Digital Podium (NDP100) comes with a set of components to support versatile classroom and presentation needs.

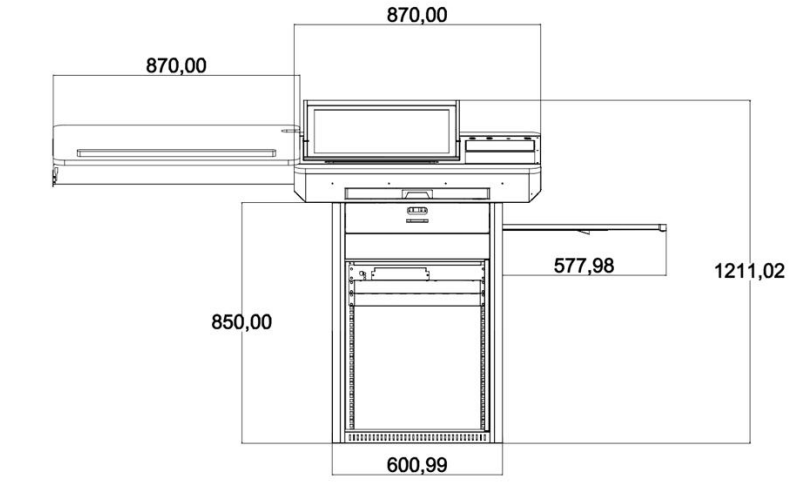
Product	Components
Podium	Podium Body * 1
Interactive Pen Display	Interactive Pen Display * 1
Networked Media Processor	NMP211 * 1 Touch Panel * 1 Wireless Microphone * 2
Built-in PC	Built-in PC * 1
Gooseneck Microphone	Gooseneck Microphone * 1
Full Gigabit Switch	Full Gigabit Switch * 1

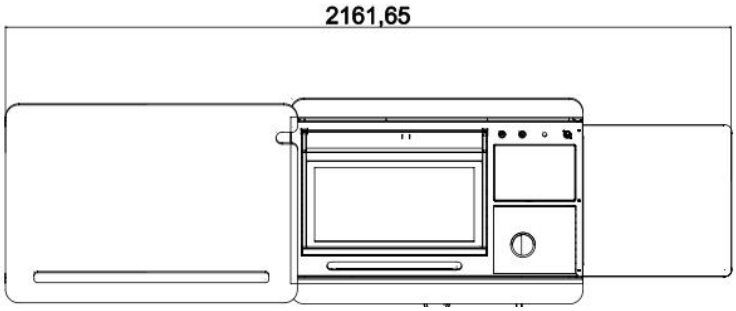
Below are several optional products listed that we suggest to take with NDP100.

Product(Optional)	Model	Components
Media Server		Media Server * 1
Lite Media Server	-	Lite Media Server * 1
Router	-	Router * 1
Document Camera	E4521/ E6511	Document Camera * 1

Podium

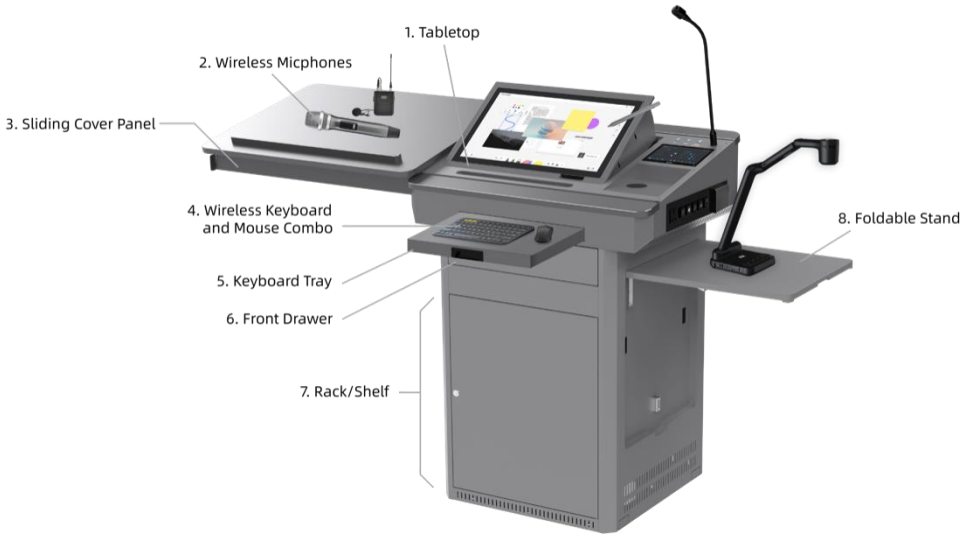
Dimension





No	Name	Description
1	Dimensions (mm)	870(L) x 609(W) x 1212(H) (closed) 2162(L) x 609(W) x 1212(H) (fully extended)
2	Weight (kg)	**Net Weight:** 90 kg **Gross Weight:** 131 kg
3	Materials	Reinforced steel plate structure with powder-coated anti-rust paint on the metal surface

Podium Body



No	Name	Description
1	Tabletop	Stable surface for teaching activities.
2	Wireless Microphones	Two high-quality wireless microphones for flexible voice capture during lectures or presentations. **Note**: Wireless receiver built into NMP for easy pairing.
3	Sliding Cover Panel	Protective storage cover, made of eco-friendly material with improved durability. Supports up to 30kg weight. **Dimensions**: 870(L) x 600(W) x 18(H) mm
4	Wireless Keyboard and Mouse Combo	Providing control for the built-in PC during lectures and presentations.
5	Keyboard Tray	Space-efficient tray designed for the wireless keyboard and mouse, ensuring convenient access during use. **Dimensions**: 507(L) x 180(W) mm
6	Front Drawer	Secure storage compartment with a combination lock and key, offering extra safety for sensitive devices or materials. **Dimensions**: 480(L) x 220(W) x 100(H) mm
7	Rack/Shelf	Spacious storage area for the NMP, built-in PC, and other necessary equipment. **Dimensions**: 500(L) x 490(W) x 590(H) mm
8	Foldable Stand	Versatile platform designed for supporting teaching equipment, such as document cameras or additional displays, with an ergonomic folding design for easy storage. **Dimensions**: 575(L) x 545(W) mm, Weight Capacity: 15kg

Tabletop

No	Name	Description
1	Interactive Pen Display	Central touchscreen supporting both finger touch and pen input. Positioned for interaction during lectures.
2	Groove	Holder for the Interactive Pen Display's active capacitive pen **Dimensions**: 390(L) mm
3	Secure Drawer with Combination Lock and Key	Storage drawer equipped with both combination lock and key for secure storage of important items.
4	Wireless Charging	Integrated wireless charging pad for smartphones, with a 15W output.
5	Interface	Input/output connections for device integration such as USB drives, laptops, or other peripherals.
6	Cabinet Antenna (5-in-1)	Antenna unit for Wi-Fi and UHF communications. Includes 2 antennas for built-in PC Wi-Fi, 2 antennas for NMP Wi-Fi, and 1 UHF antenna for wireless microphone.
7	Touch Panel	Central control interface for managing classroom devices and settings.
8	Touch Panel Button	An extension of the Touch Panel's power button on the tabletop. A short press puts the screen into sleep mode or wakes it, while a long press (over 3 seconds) powers the device on or off.
9	Up/Down Buttons	Motorized control for adjusting display height, with limit switch

No	Name	Description
		functionality. Red and blue indicator lights show the status: red means the sliding cover is not fully latched and the buttons won't respond, while blue allows normal operation.
10	Gooseneck Microphone	High-quality microphone for capturing clear audio during lectures.

Interactive Pen Display

Screen

No.	Item	Specification
1	Panel Type	TFT-LCD
2	Size	21.5 inch (16:9)
3	Resolution	250 cd/m²
4	Contrast Ratio	1000:1
5	Surface	6H tempered explosion-proof glass
6	View Angle	178° (H), 178° (V)

Touch

No.	Item	Specification
1	Technology	Capacitive
2	Pen	Active pen
3	Scanning Resolution	4096×4096
4	Voltage	DC+5V ±5%
5	Touch Points	10 points touch
6	Response Time	<15 ms

Ports

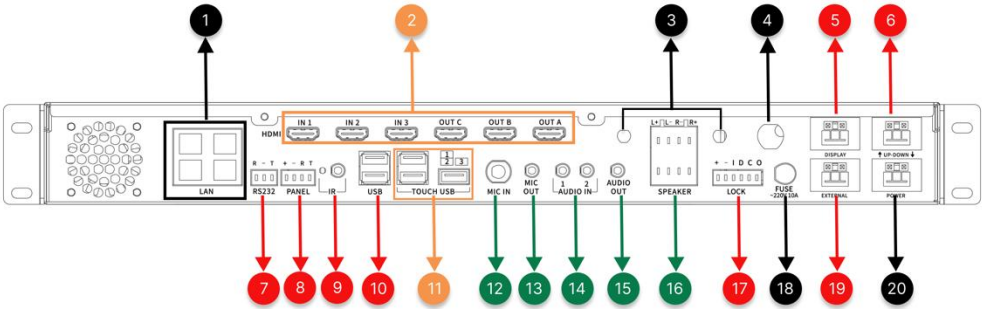
No.	Item	Specification
1	HDMI Input	1
2	VGA Input	1
3	VGA Audio Input	1
4	DC 12V Input	1
5	Capacitive Touch Interface	1 set

General Specifications

No.	Item	Specification
1	Built-in Speaker	4Ω 3W
2	Stand Adjustment	12° ~ 130°
3	Power Supply	External Power Adapter (input 100-240V AC, 50/60Hz, output 12V DC 4A)
4	Weight	8.5KG
5	Dimension	523.6×315.1×48mm
6	Working Environment	Working Temperature: 0~40℃; Working Humidity: 10~90%
7	Storage Environment	Storage Temperature: -20~60℃; Storage Humidity: 10~90%

Controller-NMP

The Networked Media Processor (NMP) serves as the central control unit responsible for managing and coordinating various functionalities of the digital podium.



No.	Interface	Description
1	RJ45 * 4	Ethernet ports (100Mbps, non-PoE) for NMP network connectivity; also enables NMP to function as a switch.
2	HDMI Matrix 3 x 2	Consists of 3 HDMI INs and 3 HDMI OUTs, the HDMI OUT A and HDMI OUT C output same content, forming the 3 x 2 video matrix for NMP.
3	2.4G Wi-Fi Antenna Interface * 2	Built-in 2.4G Wi-Fi RP Transceiver within NMP, allowing wireless device integration and control expansion with Q-NEX's CBX component.
4	UHF Wireless Microphone Antenna Interface * 1	Built-in receiver for UHF wireless microphones, supporting one-to-two wireless microphone setups for teaching/meeting scenarios.
5	Display (WAGO) * 1	Provides power output for connected devices, such as projectors, TVs, Interactive Flat Panels (IFP), and smart podiums.
6	UP-DOWN (WAGO) * 1	Offers up, pause, and down functions for connected devices like projector screens and motorized curtains.
7	RS232 * 1	Allows connection to devices equipped with standard RS232 ports, such as Pan-Tilt-Zoom (PTZ) cameras and Interactive Flat Panels (IFP), etc.
8	Panel * 1	Interface for connection to mechanical control panels, allowing direct control of basic devices and AV matrix switching without the need for network connectivity.
9	IR * 2	IR learner port * 1: Used for learning IR remote control codes. IR emitter port * 1: For infrared remote-control functionality.
10	USB * 2	Reserved for card reader
11	Touch USB * 3	TOUCH USB IN * 1: Receives touch signals from the Interactive Pen Display. TOUCH USB OUT * 2: Sends touch signals to OPS or Laptop for touch-following functionality.
12	6.35mm Wired Microphone In * 1	Interface for connecting a 6.35mm wired microphone.
13	3.5mm MIC Mixed Out * 1	Mixes audio from both the microphone input and the wireless microphones (handheld and lapel) for combined output.
14	Audio-IN * 2	Two 3.5mm line-in interfaces for connecting

No.	Interface	Description
		external audio devices such as laptops, smartphones etc.
15	Audio OUT	Audio output interface for connecting to speakers or amplifiers.
16	External Speaker Output	The NMP includes an integrated power amplifier, capable of delivering 2*(40w+40w) output, designed to connect with passive speakers. (Fixed impedance speakers only).
17	Built-in OPS Control (LOCK Interface) * 1	Be used to monitor and control the OPS within the Digital Podium, synchronized with NDP power management.
18	Power Fuse * 1	Power fuse for protection against electrical faults.
19	External Port (WAGO) * 1	External port interface for lighting control and other devices. there are two methods to control lighting and other devices: 1. **Direct Connection to NMP-External**: With this mode, users can directly manage lighting control using NMP. 2. **Integration with SPDT Switch**: By replacing the existing switch panel with a Single Pole Double Throw (SPDT) switch and connecting it to NMP, both NMP and the switch panel can control the lighting.
20	NMP Power Supply (WAGO) * 1	Power supply for NMP, supporting wide voltage range (110-240 V AC).

Networked AV Decoder

Requires a media server to decode and play networked media content on classroom devices, supporting both scheduled and instant playback.

No.	Item	Specification
1	Decoding Protocol	RTMP
2	Resolution	1080p@30fps (recommended), up to 4K@30fps
3	Media Source	Media server with Q-NEX streaming service system
4	Playback Options	Instant playback or scheduled playback on classroom media devices
5	Audio Formats Supported	MP3, WAV, FLAC, Ogg, Opus, and other

No.	Item	Specification
		mainstream audio formats
6	Video Formats Supported	MP4, MKV, RMVB, RM, MOV, AVI, FLV, WMV, and other mainstream video formats

Live AV Streaming

Supports live video streaming from various sources, including IP cameras, smartphones, PCs (using third-party software like OBS), and audio/video encoders. The RTMP protocol is used to transmit streams to the media server, which the NMP decodes for playback on display devices in classrooms and other locations.

No.	Item	Specification
1	Streaming Protocol	RTMP
2	Resolution	1080p@30fps (recommended), up to 4K@30fps
3	Source	IP cameras, smartphones with broadcasting software (e.g., OBS), PCs with OBS, audio/video encoders

General Specifications

No.	Item	Specification
1	Size (mm)	440(L)*292(W)*50(H)
2	Weight	3.9 Kg
3	Design	Standard 1U rack-mount, suitable for installation in various types of cabinets
4	Motherboard	Industrial-grade, high-speed 32-bit CPU with embedded operating system
5	Push Notification	Displays messages, alerts, and announcements from IT admin or teachers on classroom displays instantly or on schedule

Touch Panel

No.	Item	Specification
1	Model	CPL20
2	CPU	Quad-core, Main frequency 1.6GHz
3	GPU	Quad-core
4	RAM	2G
5	ROM	16G
6	O.S.	Android 10
7	Screen	10-inch 1280*800 IPS
8	Dimension (mm)	244*171.5*28mm(L*H*W)
9	Touch	Capacitive screen with tempered glass, 10-point touch Optical bonding
10	I/O Port	RJ45*1 (PoE supported) USB2.0 *3 Type-C OTG *1 Audio (3.5mm) *1 DC (12V) *1
11	Physical Button	Power *1
12	IC	Supported
13	Working	-20°C to 70°C
14	Working Humidity	<85%
15	Installation	Desktop stand

Built-in PC

No.	Item	Specification
1	Processor	Intel® Core™ i5 (12th Generation)
2	RAM	16GB 2x DDR4 slots, up to 32GB
3	Storage	1TB SSD
4	Graphics Card	CPU Integrated Graphics, HD Graphics

No.	Item	Specification
5	Network Card	1 × RJ45 LAN 10/100/1000M
6	Wi-Fi	IEEE 802.11 a/g/n/ac
7	USB	3 × USB3.0 3 × USB2.0
8	Power Button	1 × power button
9	Audio	1 × LINE-OUT & MIC-IN
10	LED Light	1 × Power light & 1 × Hard disk light
11	Power Supply Input	19V
12	Dimension	180mm (L) x 195mm (W) x 42mm (H)
13	Temperature	Operating temperature: 0°C ~ 50°C Storage temperature: -20~70°C
14	Humidity	5%~90% No condensation

Microphone

Handheld Microphone

No.	Item	Specification
1	Receiving Sensitivity	>=85dBm
2	Receiver Working Current	5V/180mA
3	Frequency Range	640MHz ~ 690MHz
4	Sensitivity	51dB ± 3dB (0dB = 1V/Pa 1 KHz)
5	Frequency Response	50Hz ~ 15KHz
6	Microphone Type	Dynamic cardioid microphone
7	SNR	>=65dB
8	Transmit Power	>20dBm
9	Distortion	<0.5%
10	Effective Distance	<40m
11	Latency	<5ms

No.	Item	Specification
12	Operating Temperature	-25°C ~ 60°C
13	Power Supply	2 * AA batteries
14	Microphone Working Current	100mA @ 3V
15	Battery Lifetime	12 Hours

Lapel Microphone

No.	Item	Specification
1	Receiving Sensitivity	>=85dBm
2	Receiver Working Current	5V/180mA
3	Frequency Range	640MHz ~ 690MHz
4	Sensitivity	51dB ± 3dB (0dB = 1V/Pa 1 KHz)
5	Frequency Response	50Hz ~ 15KHz
6	Microphone Type	Condenser microphone
7	SNR	>=105dB
8	Transmit Power	16 ~ 25dBm
9	Distortion	<0.5%
10	Effective Distance	<40m
11	Latency	<5ms
12	Operating Temperature	-25°C ~ 60°C
13	Power Supply	2 * AA batteries
14	Microphone Working Current	200mA @ 3V
15	Battery Lifetime	5 Hours

Gooseneck Microphone

No.	Item	Specification
1	Polar Pattern	Super cardioid

No.	Item	Specification
2	Frequency Response	70 ~ 20KHz
3	Sensitivity (0dB=1V/1Pa, 1KHz)	-45dB (±2dB)
4	Output Impedance	200 ohm Balanced
5	Power Supply	External Power Adapter (Input 100-220V AC, 50/60Hz, Output 10V DC 350 mA)
6	Anti-interference	Resistance to mobile phone interference and electromagnetic interference
7	Weight (g)	200

Full Gigabit Switch

No.	Item	Specification
1	RJ45 Ports	8 * 10/100/1000M self-adaptive Ethernet ports
2	Standards	IEEE802.3, IEEE802.3i, IEEE802.3u, IEEE802.3ab, IEEE802.3x
3	Protocol	CSMA/CD
4	Data Transfer Rate	2000Mbps (Full Duplex)
5	Network Media	Cat5e or above UTP/STP (<=100m)
6	Store and Forward	Supported
7	Switching Capacity	16Gbps
8	MAC Address Table Depth	4K
9	Power Input	External Power Adapter (Input: 100~240V AC, 50/60Hz; Output: 9V DC, 0.6A)

Media Server (Optional)

Note:

Media Server is a recommended option that works with NMP 211-G for AV Broadcasting and media files storage.

The table below shows the minimum recommended specifications:

No.	Item	Specification
1	Storage Type	ECC
2	RAM	16G
3	HDD Storage	4T * 4 SATA
4	CPU	4-core 8-thread CPU
5	System	Windows Server OS

Lite Media Server (Optional)

No.	Item	Specification
1	Processor	Intel® Core™ i5 4200M 2.5GHz
2	RAM	4GB DDR3
3	Storage	256G SSD
4	Network Card	1 × RJ45 LAN 10/100/1000M
5	Wi-Fi	IEEE 802.11 a/g/n/ac
6	Power Supply Input	19V
7	Dimension	180mm (L) x 195mm (W) x 42mm (H)
8	Temperature	Operating temperature: 0°C ~ 50°C Storage temperature: -20°C ~ 70°C
9	Humidity	5% ~ 90% No condensation

Note:

The Lite Media Server is intended for demonstration. For practical use, it is strongly recommended to choose a formal Media Server.

Router (Optional)

No.	Item	Specification
1	Protocol Standards	IEEE 802.3, IEEE 802.3u, IEEE 802.3x
2	Ports	4 x 10/100M RJ45 ports (with auto-flip)

No.	Item	Specification
		1 x 10/100M RJ45 port (with auto-flip)
3	LEDs	LAN port status lights WAN port status lights System status light (SYS)
4	Buttons	Reset button
5	Dimensions	158mm x 122mm x 34mm
6	Power Input	External Power Adapter (Input: 100~240V AC, 50/60Hz; Output: 5V DC, 0.6A)
7	Working/Storage Environment	Temperature: 0°C ~ 40°C Humidity: 10% ~ 90%RH (non-condensing) Storage Temperature: -40°C ~ 70°C Storage Humidity: 5% ~ 90%RH (non-condensing)

Doc Camera - E4521(Optional)

Please refer to the IQView E4521 brochure for details.