



## Networked Media Processor

— Datasheet —



| Features                                      | Product                                | Model         | Components   |
|---|--|---------------|--|
| Device control +<br>AV broadcast +<br>Storage | Networked Media<br>Processor (General) | NMP 211-G-L2U | NMP211*1   |
|   |  |               | Touch Panel CPL20*1                                |
|   |  |               | Wireless Microphone *2                             |
|   | Media Server                           | MS            | 16GB/4TB SATA*4/ DVDRW<br>Streaming Service System |
|   | Control Box                            | CBX100        | Connection up to 4 pcs for each NMP                |



## Features

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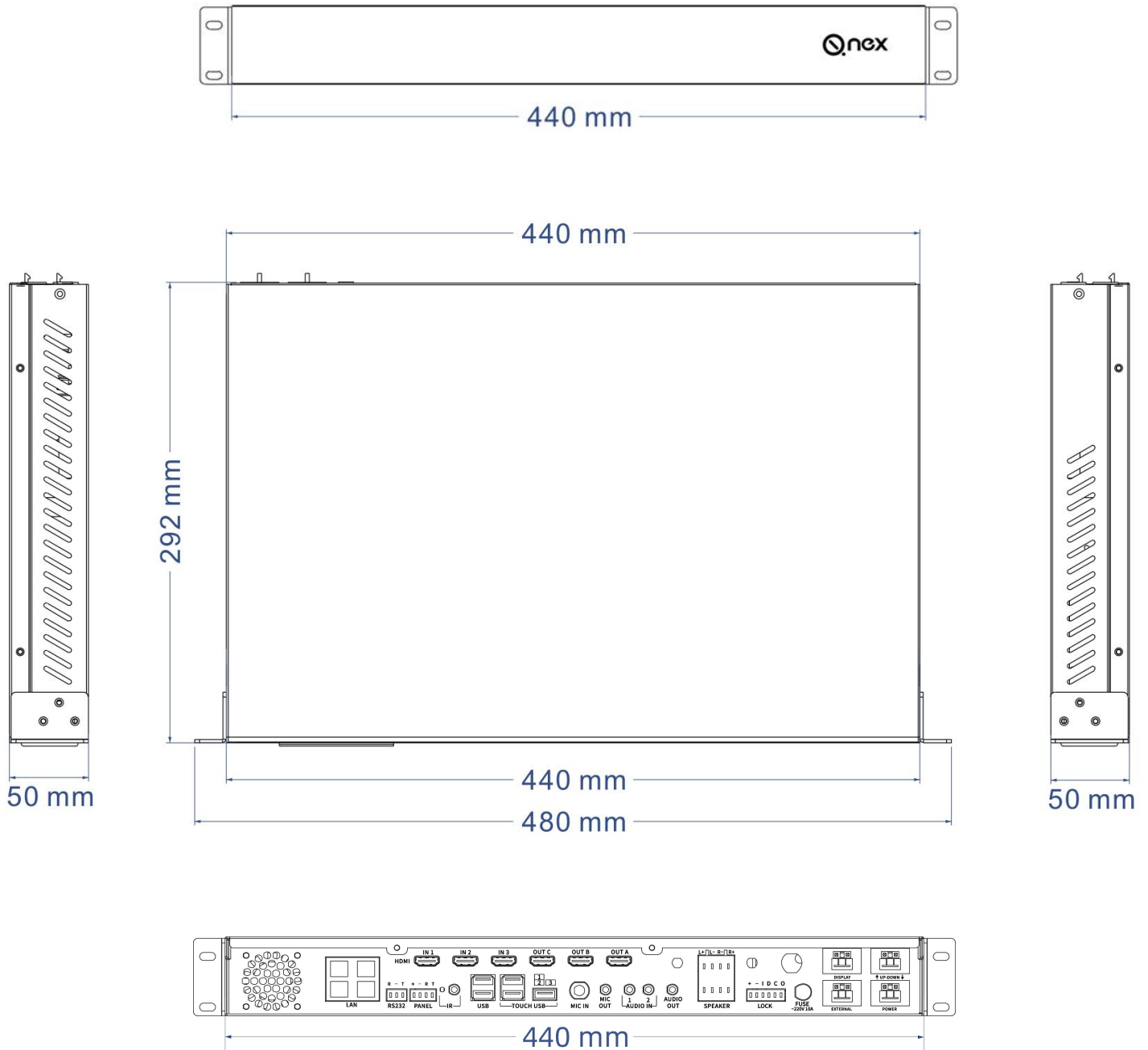
- Device Control
  - To control devices through the Touch Panel.
  - To control through web-based platform Q-NEX Console from anywhere with an Internet access.
- Access Control
  - With a built-in electronic lock control module for door security, it allows authorized access by swiping an IC card.
  - IC card could also be used for activating the Touch Panel, so that students without permission can't mess up with the facilities.
- AV Matrix Switch
  - To route audio and video signals from multiple input sources, to one or more display devices, like projector, TV, interactive flat panel.
- Networked AV Decoding
  - NMP can work as a LAN switch.
  - By setting NMP and a **Q-NEX Media Server** in the same LAN, NMP can decode AV contents/live streaming from the media server, and play in the classroom media devices instantly or on schedule.
- Push Notification
  - To display daily messages, emergency alerts, announcements etc., delivered by admin in the classroom.

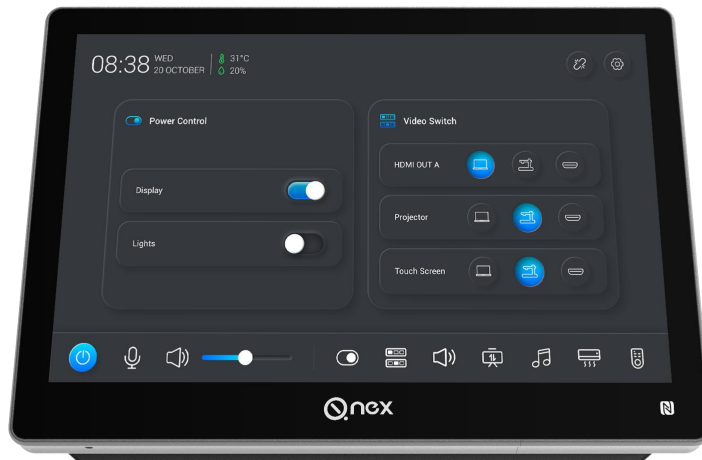
## Specifications

| Specification                           |   |
|---|---|
| Size(mm)L*W*H                           | 440*292*50mm  |
| Weight                                  | 3.9Kg   |
| Standard 1U rack-mount design           | Suitable for installation in various types of cabinets  |
| Industrial-grade embedded motherboard   | High-speed 32-bit CPU;<br>Embedded operating system;  |
| LAN switch                              | 4 * 10M / 100M RJ45 network switch ports  |
| Audio matrix module                     | 2*3.5mm line in;<br>1*3.5mm line mixed out;   |
| Microphone                              | 1*6.35mm wired MIC in;<br>2*UHF wireless MIC in;<br>1*3.5mm MIC out;  |
| HDMI matrix module (Input * Output)     | 3*3 HDMI 2.0 Matrix Module,<br>support 4K@60Hz,<br>support HDCP 2.2 and HDCP 1.x  |
| Communication interface                 | 1*RS232;<br>2*USB<br>1*USB-DEVICE In<br>2*USB-HOST Out<br>1*Phoenix 4-Pin for control panel<br>1 * IR OUT, for remote controlling IR devices like air conditioner, TV, projector etc.<br>1 * IR IN, for learning IR codes and store on the Cloud-based platform |
| Power amplifier                         | 2*(40W+40W), support to connect at least 2 pairs of passive speakers  |
| Access control                          | +: Power output, Voltage: 12V, Current: 800mA<br>-: Power ground (negative level)<br>I: Door switch interface<br>D: Door lock status interface<br>C: Relay common end, Load capacity: DC 3A at 30V<br>O: Relay normally open, Load capacity: DC 3A at 30V       |
| Power control                           | 1* power supply for NMP, support wide voltage ( 110-240ACV )<br>1* single pole double throw ( SPDT ) switch<br>1* power output for electric projection screen or electric curtain<br>1* power output for display or others<br>1* Power fuse                     |
| Antenna Ports                           | 1* antenna port for wireless microphone<br>2* antenna ports for Wi-Fi module  |
| Remote control & centralized management | Centralized control and management of classroom devices such as PCs, projectors, A/C, power supplies of external devices through the Internet   |
|   | Remote statistics on the usage and status of classroom devices, such as: equipment usage logs, energy consumption, etc.   |
| Push Notification                       | Display daily messages, important alerts and announcements delivered by IT admin or teachers in text format in the classroom displays instantly or on schedule.   |

| Specification         |                                      |   |
|-----------------------|--------------------------------------|---|
| Wireless module       | RF Transceiver                       | “Wi-Fi friendly” 2.4 GHz spread spectrum 2-way RF (2400 to 2483 MHz)  |
|                       | RF Transmitting Power                | 13.5dBm   |
|                       | Range                                | < 30 m, support to connect up to 4 units of control box for extended RS232/IR/Relay control   |
| Connection            | Control Box (CBX)                    | support RS232/IR/Relay control  |
| Wireless MIC Receiver | Power supply                         | 5-12V/500mA   |
|                       | Frequency bandwidth                  | 12MHz   |
|                       | Frequency response                   | 30hz-15KHZ  |
|                       | Frequency range                      | 640-690MHz  |
|                       | Maximum channels                     | 48  |
|                       | Receiving sensitivity                | <=-105dBm   |
|                       | SNR                                  | >= 80dB   |
|                       | Audio output level value             | 350 mV  |
|                       | Distortion (THD+N)                   | <0.5%   |
|                       | Latency                              | <3ms  |
|                       | Operating temperature                | -25C°-60C°  |
| Networked AV Decoder  | To decode networked AV media content | Support streaming protocols such as HLS, RTSP, RTMP, RTP etc. And with high-efficiency audio and video decoding function, it decodes AV media content (up to 1080P@60 fps) distributed from media server that is with Q-NEX streaming service system built-in, and plays instantly or on schedule in the classroom media devices. |
|                       | To decode live AV streaming          | Support streaming protocols such as HLS, RTSP, RTMP, RTP etc., and can play high-definition live streaming content ((up to 1080P@60 fps) from IP camera and the like, through media server that is with Q-NEX streaming service system built-in, to the classroom media devices instantly.  |

## Dimensions





## Features (CPL20)

| Features |                                |  |
|----------|--------------------------------|--|
| 1        | <b>Panel Control</b>           | Swipe IC card to unlock; click to lock panel                               |
|          |                                | Password to lock panel   |
| 2        | <b>Audio Control</b>           | Switch audio sources to HDMI out A / Audio 1/2                             |
| 3        | <b>Video Control</b>           | Matrix switch video input sources to THREE displays                        |
| 4        | <b>Volume Adjustment</b>       | Adjust the volume/treble/bass of speaker and microphone                    |
| 5        | <b>Power Control</b>           | The displays and external devices power on/off                             |
| 6        | <b>Curtain Control</b>         | Screen up/down/stop  |
| 7        | <b>A/C Control</b>             | Control air-con power, temperature, modes                                  |
| 8        | <b>Remote Control</b>          | Send commands for IR devices control                                       |
| 9        | <b>RS232 control</b>           | To control devices through RS232, E.g. projector / IFP / IQVideo           |
| 10       | <b>CBX control</b>             | To control devices that attach to control box                              |
| 11       | <b>Push Notification OFF</b>   | Exit non-mandatory Push Notification                                       |
| 12       | <b>Divisible Room</b>          | Turn on/off the divisible room mode, set the divisible room devices        |
| 13       | <b>CBX Control</b>             | Control NMP-connected CBX for extended device control                      |
| 14       | <b>Lecture Capture Control</b> | Control lecture capture system connected to NMP(Networked Media Processor) |

## Specifications

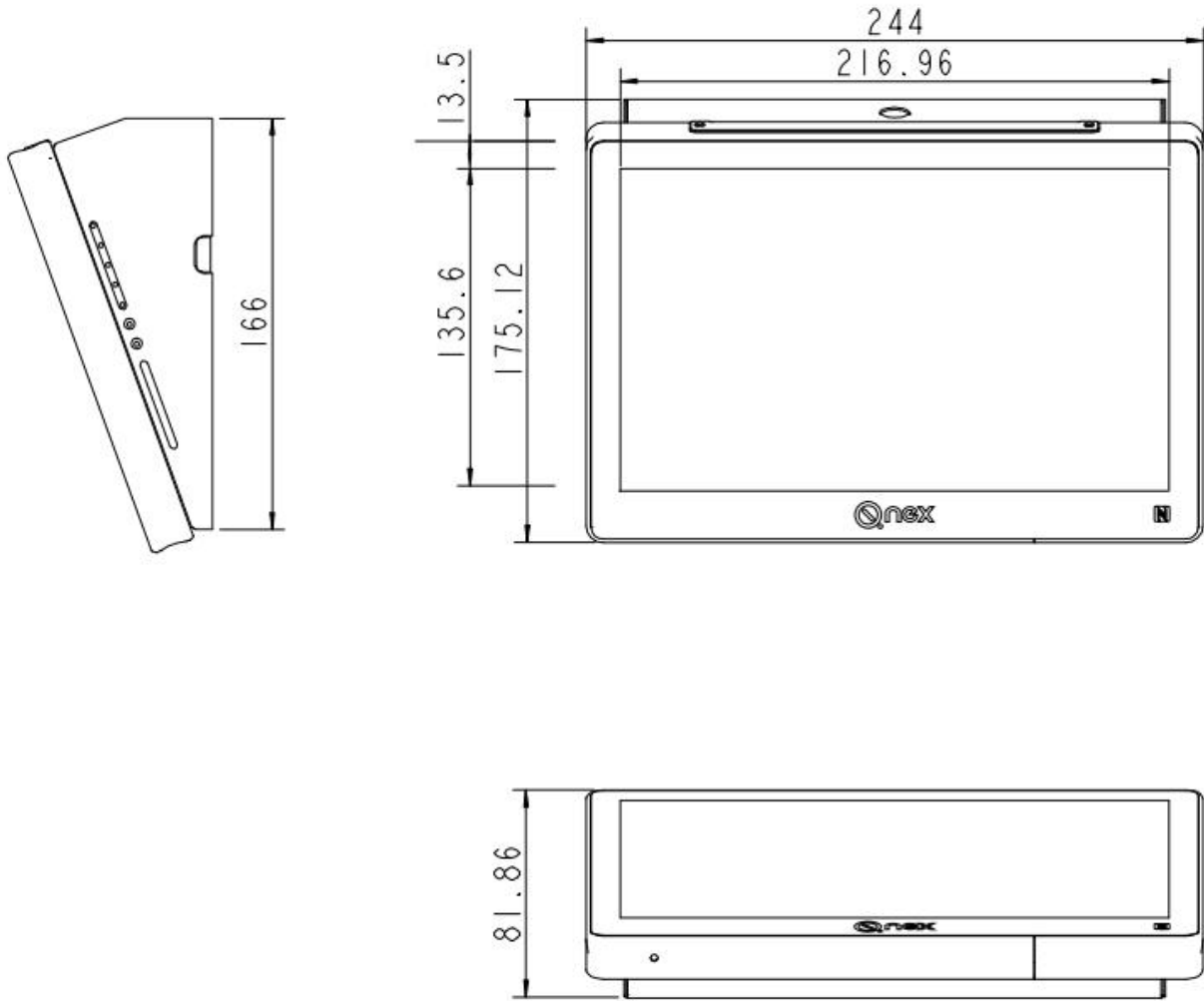
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| Specification              |   |
|----------------------------|---|
| <b>CPU</b>                 | Quad-core, Main frequency 1.6GHz                      |
| <b>GPU</b>                 | Quad-core   |
| <b>RAM</b>                 | 2G  |
| <b>ROM</b>                 | 16G   |
| <b>O.S.</b>                | Android 10  |
| <b>Screen</b>              | 10-inch 1280*800 IPS                                  |
| <b>Touch</b>               | Capacitive screen with tempered glass, 10-point touch |
|                            | Optical bonding                                       |
| <b>I/O Port</b>            | RJ45*1 (PoE supported)                                |
|                            | USB2.0 *3   |
|                            | Type-C OTG *1   |
|                            | Audio (3.5mm) *1                                      |
|                            | DC (12V) *1   |
| <b>Physical button</b>     | Power*1   |
| <b>NFC</b>                 | Supported   |
| <b>Dimension</b>           | 244*171.5*28mm(L*H*W)                                 |
| <b>Working temperature</b> | -20°C to 70°C   |
| <b>Working humidity</b>    | <85%  |
| <b>Installation</b>        | Desktop stand   |



## Dimensions

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## Features

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- Support wireless transmission up to 40 meters.
- UHF frequency band, anti-interference.
- LCD screen to check the signal strength, battery power, connected channel and other information.
- Support up to 24 channels connection without interference
- One channel supports simultaneous connection of two wireless microphones-one handheld microphone, one lapel microphone.
- Automatic frequency matching when powers on, simple operation.
- Lapel mic supports point-to-multipoint dynamic access, so that each teacher can own one lapel mic to pair with any NMP in any classroom, convenient for private use and good for personal hygiene.

## Specifications

| Parameter                  | Handheld Microphone             |
|----------------------------|---------------------------------|
| Receiving sensitivity      | $\geq -85\text{dBm}$            |
| Receiver working current   | 5V/180mA                        |
| Frequency range            | 640MHz ~690MHz                  |
| Sensitivity                | 51dB $\pm$ 3dB(0dB=1V/Pa 1 KHz) |
| Frequency response         | 50Hz~15KHZ                      |
| Microphone type            | Dynamic cardioid microphone     |
| SNR                        | $\geq -65\text{dB}$             |
| Transmit power             | $>20\text{dBm}$                 |
| Distortion                 | $<0.5\%$                        |
| Effective distance         | $<40\text{m}$                   |
| Latency                    | $<5\text{ms}$                   |
| Operating temperature      | -25C°-60C°                      |
| Power supply               | 2*AA batteries                  |
| Microphone working current | 100mA@3V                        |
| Battery lifetime           | 12 Hours                        |

## Specifications

| Parameter                  | Lapel microphone                |
|----------------------------|---------------------------------|
| Receiving sensitivity      | $\geq -85\text{dBm}$            |
| Receiver working current   | 5V/180mA                        |
| Frequency range            | 640MHz ~690MHz                  |
| Sensitivity                | 51dB $\pm$ 3dB(0dB=1V/Pa 1 KHz) |
| Frequency response         | 50hz~15KHZ                      |
| Microphone type            | Condenser microphone            |
| SNR                        | $\geq 105\text{dB}$             |
| Transmit power             | 16~25dBm                        |
| Distortion                 | <0.5%                           |
| Effective distance         | <40m                            |
| Latency                    | <5ms                            |
| Operating temperature      | -25C°-60C°                      |
| Power supply               | 2*AA batteries                  |
| Microphone working current | 200mA@3V                        |
| Battery lifetime           | 5 Hours                         |



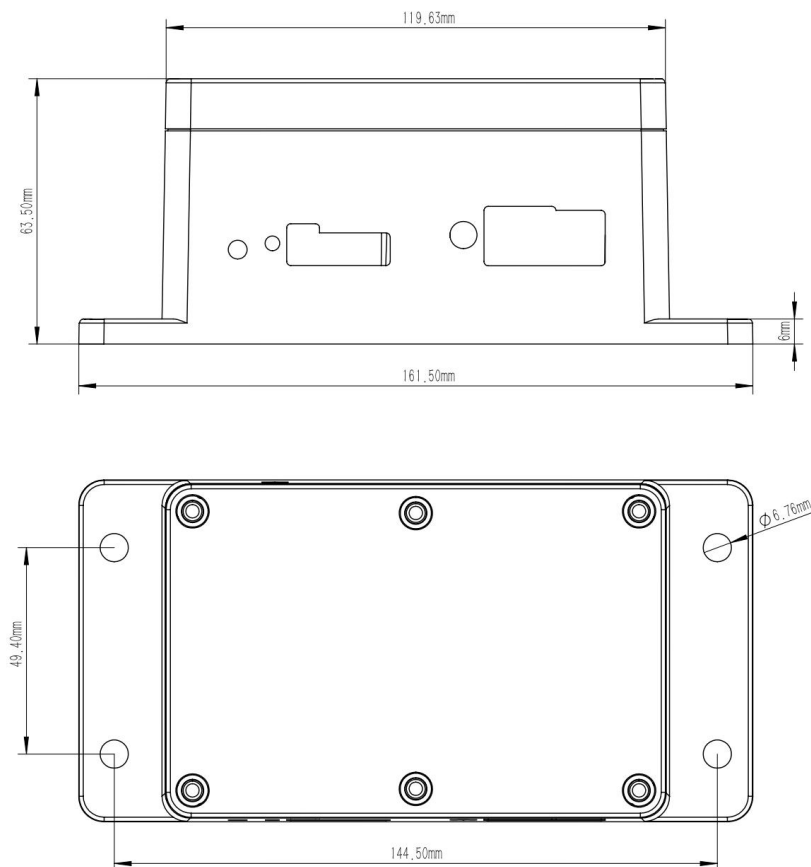
## Features (CBX100)

- **Wireless Connection**
  - Connect to Q-NEX NMP through 2.4GHz wireless transmission.
  - Convenient installation without wiring or change of existing electric wires in the room.
- **Unified Control**
  - Remote control devices anytime and anywhere on unified Q-NEX Console through Internet.
  - Support device control by Touch Panel (CPL20), mobile APP or Web browser on PC instantly or on schedule.
- **Multiple Control Interface**
  - Wireless control of various devices with RS232, IR and Relay interfaces supported.
  - Each CBX can apply one of the controls of RS232, IR and Relay.
- **Device Control Extension for Q-NEX NMP**
  - Extended control interfaces for NMP, to allow more devices being controlled by NMP.
  - Each NMP can get 4 more CBXs connected.

## Specification

| Specification             |                               |
|---------------------------|-------------------------------|
| AC power supply           | 90-300VAC                     |
| Input power consumption   | <3W                           |
| Working environment       | -20°C~85°C                    |
| WiFi                      | IEEE 802.11 b/g/n 1T1T 2.4GHz |
| Relay interface           | SPDT                          |
| Maximum load (resistance) | 250VAC, 10A                   |
| Maximum switching power   | 2500VA                        |
| Communication interface   | 1*RS232, 1*IR remote control  |

## Dimension



**\*Media Server is a recommended option that works with NMP 211-G for AV Distribution and Storage.**



Based on a scalable network framework, Q-NEX Campus solution allows the Media Server to be deployed over private network OR public network for AV distribution.

## Recommended Minimum Specifications

|                         |                     |
|-------------------------|---------------------|
| Storage type            | ECC                 |
| Maximum extended memory | 64G                 |
| RAM                     | 16G                 |
| HDD Storage             | 4T*4 SATA           |
| CPU                     | 4-core 8-thread CPU |
| System                  | Windows Server OS   |



Get in touch with the simple but functional system:

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