



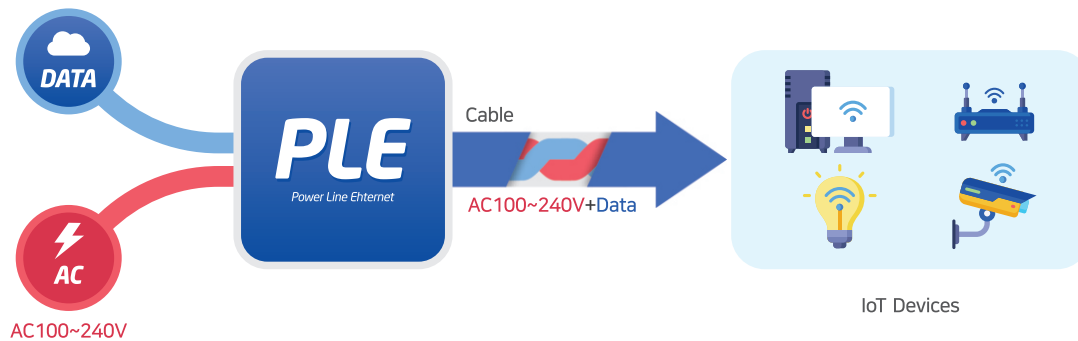
**Next-Generation Transmission Infrastructure
for AI Technology**

PLE / MPoE Solution



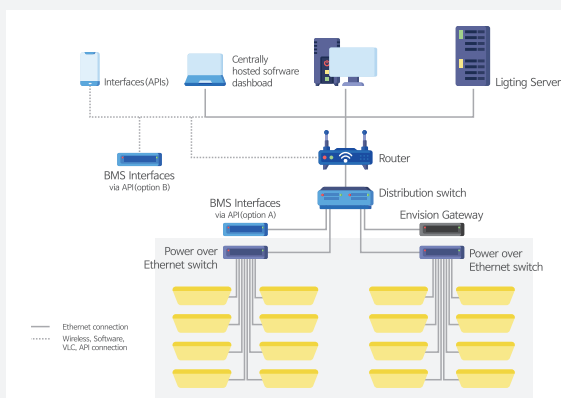
What is a PLE Solution?

- A technology that enables the simultaneous transmission of power (AC 100–240V) and data (Ethernet) over a single cable.
- Supports high-power delivery of over 10 kW while maintaining full compatibility with standard Ethernet protocols.



PLE Solution Application

Smart Lighting System



Current PoE Lighting System

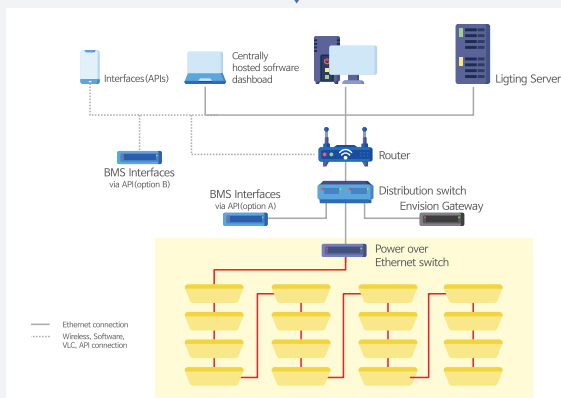
Challenges (Before Solution)

1. One device installed per cable
2. High initial installation cost
3. Complex network structure
4. Limited installation due to low power transmission
5. Only PoE-compatible lighting can be used
6. Installation limited to new buildings due to excessive UTP cabling



PLE Solution

Install Multiple Devices on a **Single Cable**

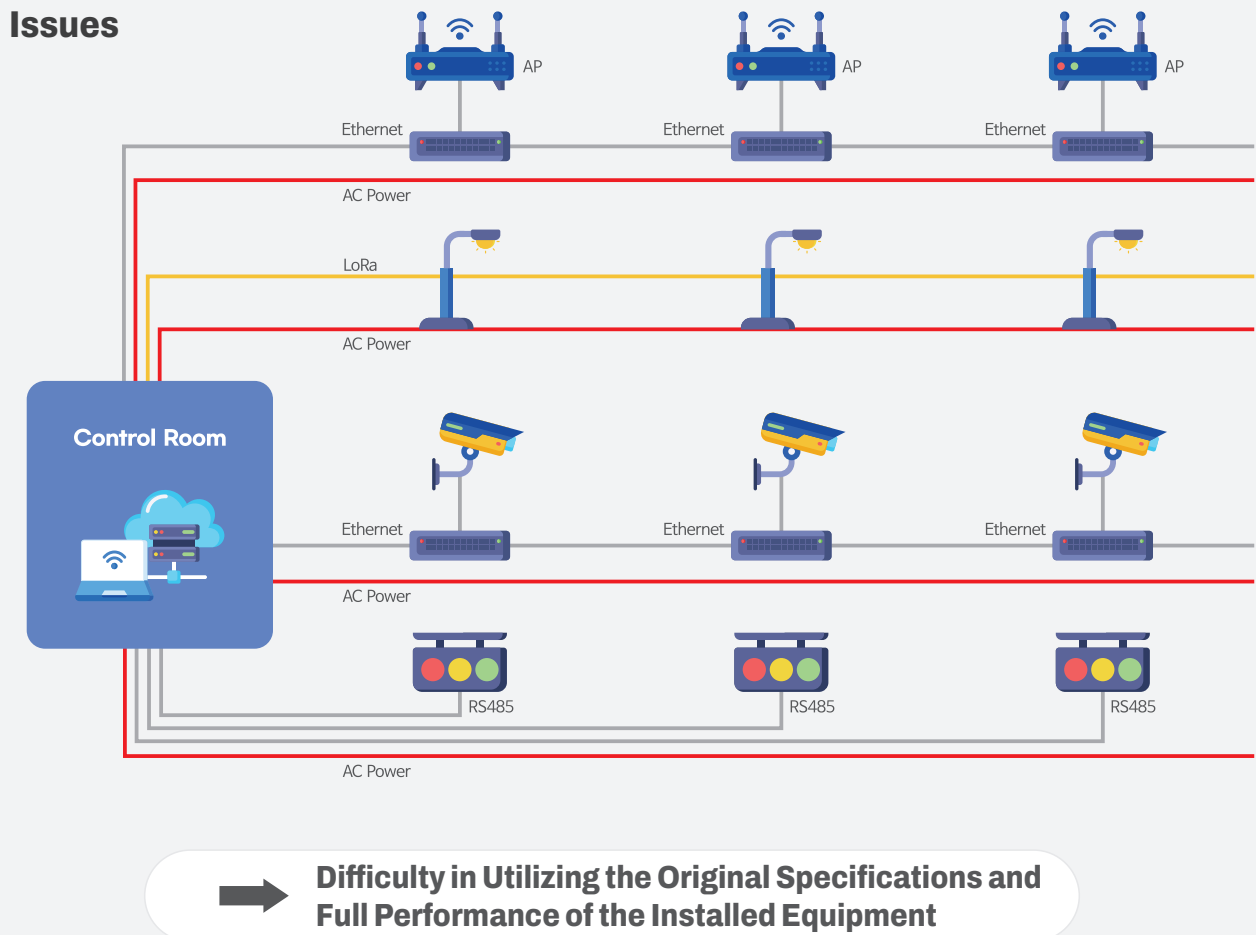


Future PLE Lighting System

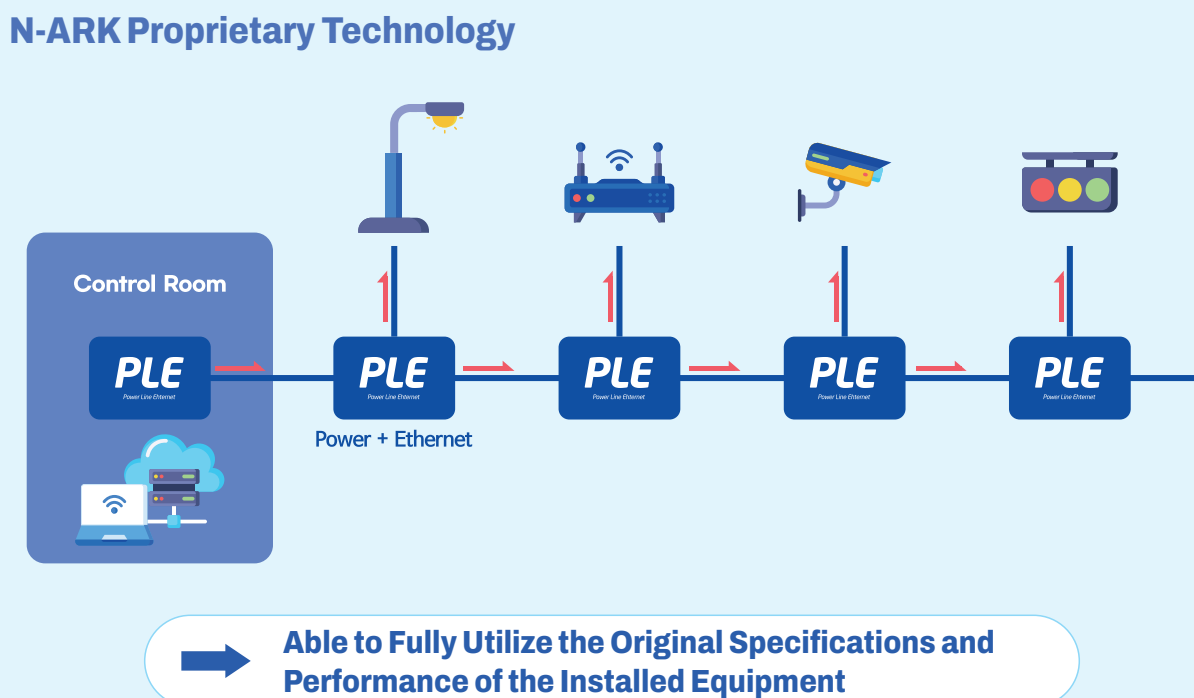
Solutions (After Implementation)

1. Lower initial installation cost
2. Simplified network structure
3. No installation limitations due to high power transmission
4. Supports installation of all smart lighting, including standard lighting
5. Applicable to existing buildings as well

Current Installation Issues

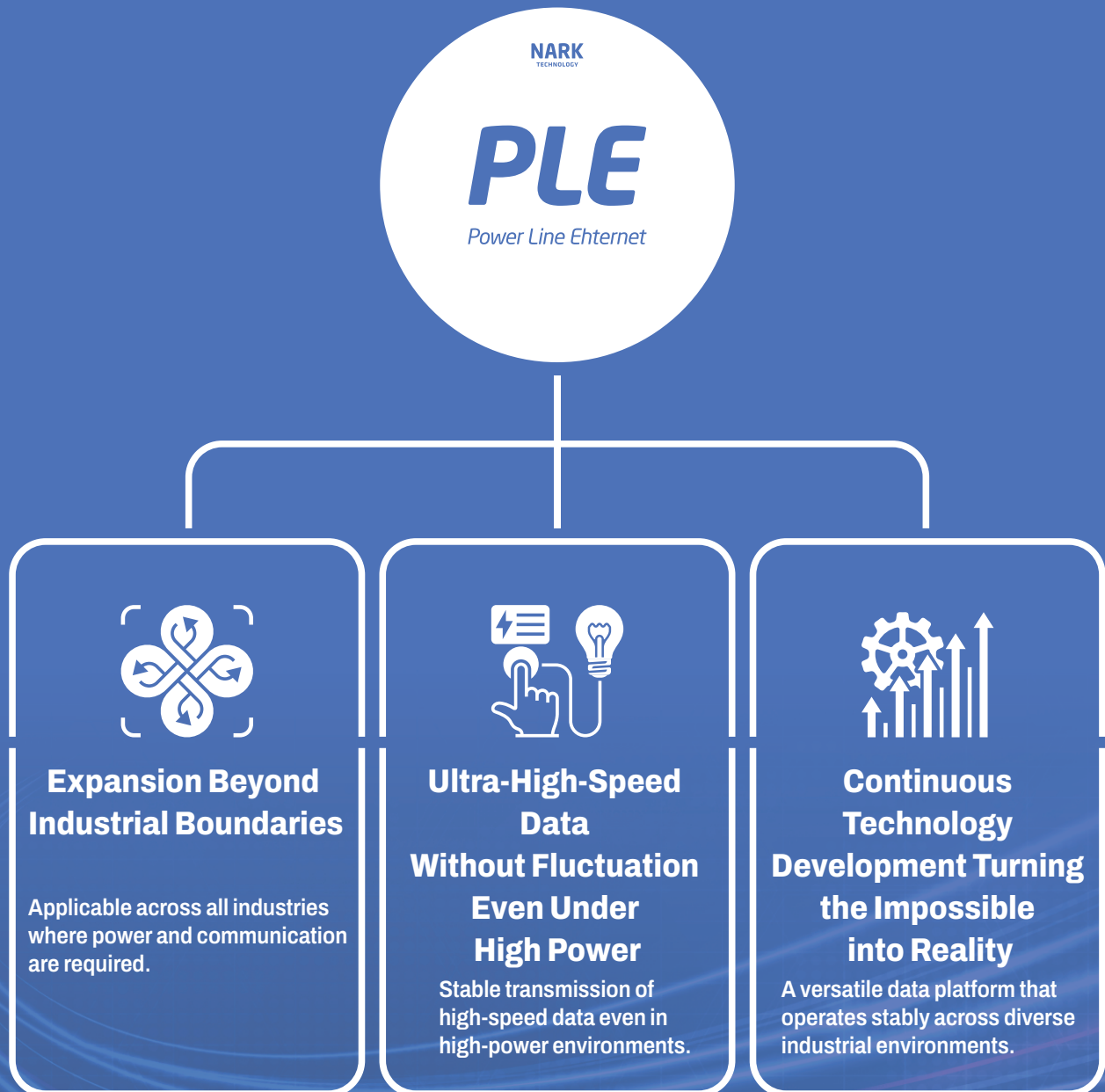


Problem Solving: PLE



The Future Shaped by the PLE Solution

PLE Sets a New Standard for Power & Data



Introduction to N-ARK Product : PLE



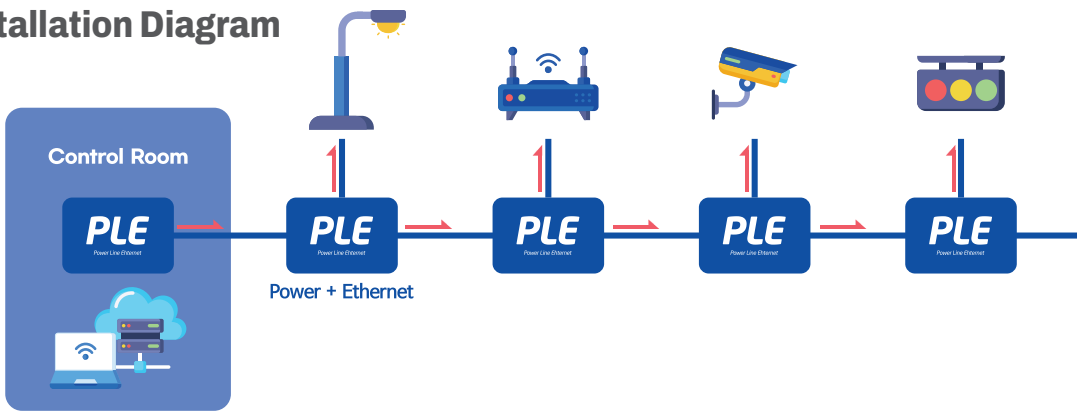
NRK-PLE4000

1. Features

- Integrated Transmission of AC Power + Ethernet
- Up to 3kW Output
- 10/100/1000 Base-T Auto Detection
- Overload Protection



2. Installation Diagram



3. Specifications

Model	NRK-PLE4000
Input	100~240VAC, 50/60Hz
Output	100~240VAC, 50/60Hz, 3kW
Standard	IEEE 802.3a, IEEE 802.3i, IEEE 802.3u IEEE 802.3x, IEEE 802.3az, IEEE 802.3ab
Port	LAN : 10/100/1000Mbps Base-T(DATA) AC I/O : 100~240VAC, 50/60Hz P/E 1 : 10/100/1000Mbps Base-T(DATA) + 100~240VAC, 50/60Hz P/E 2 : 10/100/1000Mbps Base-T(DATA) + 100~240VAC, 50/60Hz
LED Indicator	Red(Input), Green(Data)
Dimensions(W,D,H)	185x165x70mm
Weight	758g
Operating Temp. / Storage Temp.	-10 to 60℃ / -20 to 70℃
Operating Hum. / Storage Hum.	10% to 90% / 5% to 95%
Certification	KC

Introduction to N-ARK Product : MPoE

Injector



Model	NRK-GP6494
Input	100~240VAC, 50/60Hz
Output	64VDC. 0.94A, 60W
Standard	IEEE 802.3a, IEEE 802.3i, IEEE 802.3u IEEE 802.3x, IEEE 802.3az
Port	LAN : 10/100Mbps Base-T (DATA) MPoE : 10/100Mbps Base-T (Power / DATA) Auto-Negotiation RJ45
LED Indicator	Red LED(Input), Green LED(MPoE)
Dimensions(W,D,H)	170x75x45mm
Certification	KC

Repeater



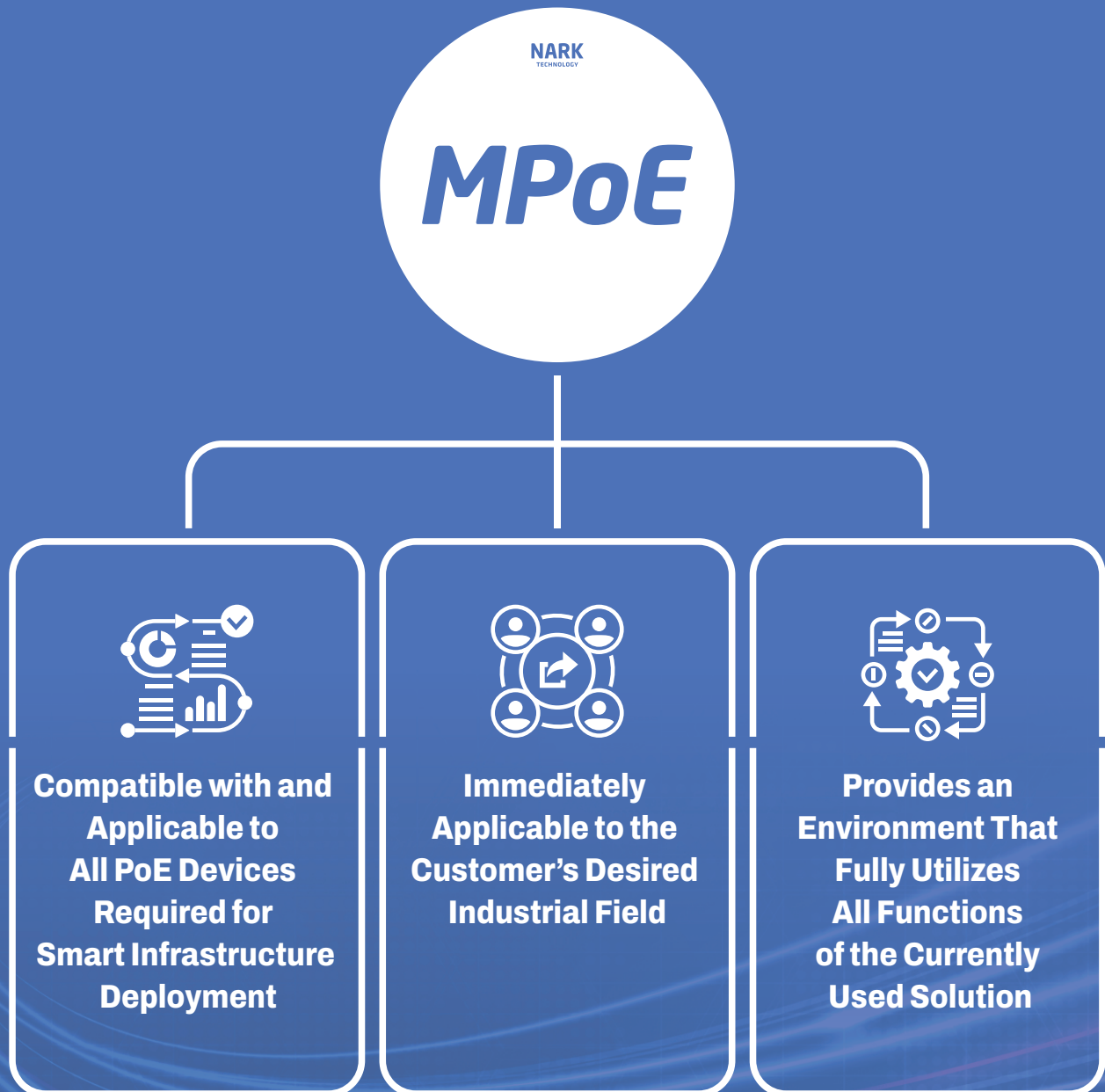
Model	NRK-MR100
Input	DC35 ~ 63V
Output	60W Max.
Standard	IEEE 802.3a, IEEE 802.3i, IEEE 802.3u, IEEE 802.3x, IEEE 802.3az
PoE Standard	IEEE 802.3af, IEEE 802.3at, IEEE 802.3bt
Port	MPoE IN : 10/100Mbps Base-T (Power / DATA) MPoE OUT : 10/100Mbps Base-T (Power / DATA) PoE OUT : 10/100Mbps Base-T (Power / DATA) Auto-Negotiation RJ45
LED Indicator	Green LED(DATA), Orange LED(Power)
Surge Protection	6kV
Dimensions(W,D,H)	65x70x31mm
Certification	KC

Introduction to N-ARK Product : MPoE

	Model	NRK-MR500
	Input	DC35 ~ 63V
	Output	60W Max.
	Standard	IEEE 802.3a, IEEE 802.3i, IEEE 802.3u, IEEE 802.3x, IEEE 802.3az
	PoE Standard	IEEE 802.3af, IEEE 802.3at, IEEE 802.3bt
	Port	MPoE IN : 10/100Mbps Base-T (Power / DATA) MPoE OUT : 10/100Mbps Base-T (Power / DATA) PoE OUT : 10/100Mbps Base-T (Power / DATA) Auto-Negotiation RJ45
	LED Indicator	Green LED(DATA), Orange LED(Power)
	Surge Protection	6kV
	Dimensions(W,D,H)	130x70x29mm
	Certification	KC

	Model	NRK-MR501
	Input	DC35 ~ 63V
	Output	60W Max.
	Standard	IEEE 802.3a, IEEE 802.3i, IEEE 802.3u, IEEE 802.3x, IEEE 802.3az
	PoE Standard	IEEE 802.3af, IEEE 802.3at, IEEE 802.3bt
	Port	MPoE IN : 10/100Mbps Base-T (Power / DATA) PoE OUT : 10/100Mbps Base-T (Power / DATA) Auto-Negotiation RJ45
	LED Indicator	Green LED(DATA), Orange LED(Power)
	Surge Protection	6kV
	Dimensions(W,D,H)	130x70x29mm
	Certification	KC

Smart Solution Maximizing Convenience

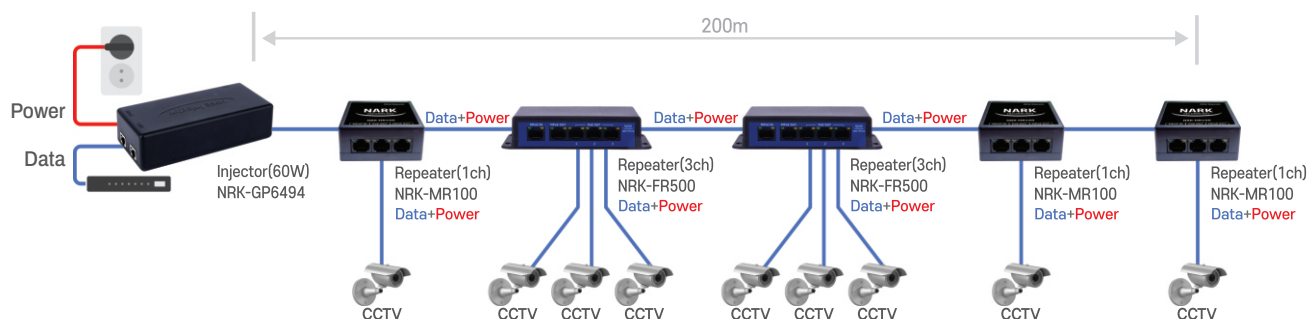


**Build a Fast, Convenient Smart Environment
with Low Deployment Cost**

MPoE Solution Implementation Method

MPoE Solution Application Example

Underground Parking Lot of a Large Shopping Mall or Large Office Building (Applicable to Various Other Environments)



1) Installed Devices : CCTV (6W) - 9 Units

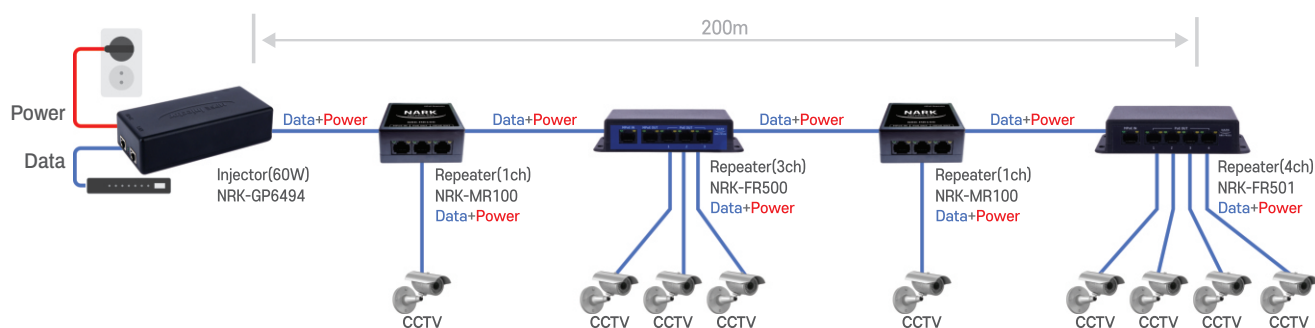
2) Installation Distance : 200m

3) Key Advantages

- Install up to **9 units** at once on a single line
- Simultaneous installation of various devices such as IoT, VoIP, and Wi-Fi **without signal interference**
- Install up to **3 devices** at the desired installation point

MPoE Solution Application Example

Large Logistics Warehouse or Smart Factory (Applicable to Various Other Environments)



1) Installed Devices : CCTV (6W) - 9 Units

2) Installation Distance : 200m

3) Key Advantages

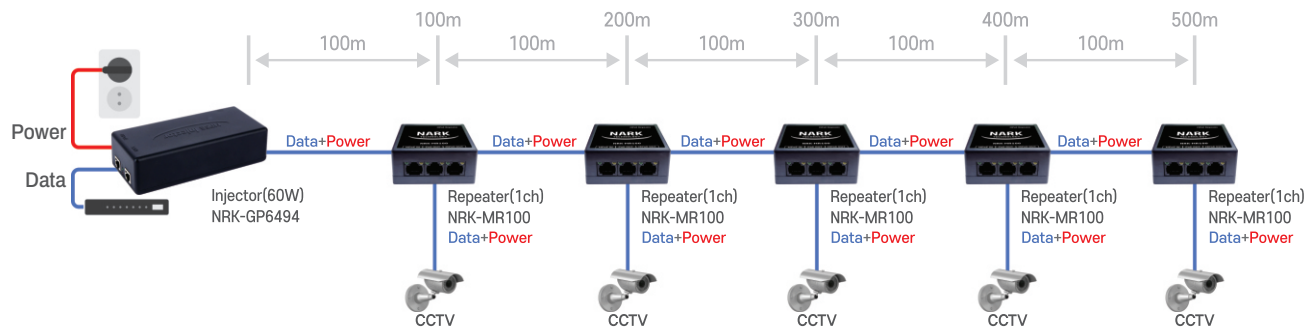
- Efficient **space utilization** with single-line installation
- Reliable use of installed devices **without signal interference**
- Install up to **4 devices** at the desired installation point

MPoE Solution Implementation Method

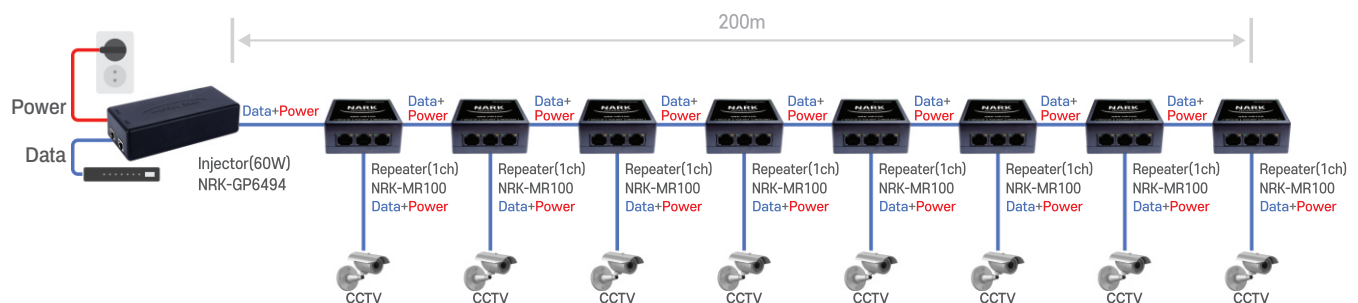
MPoE Solution Application Example

Others

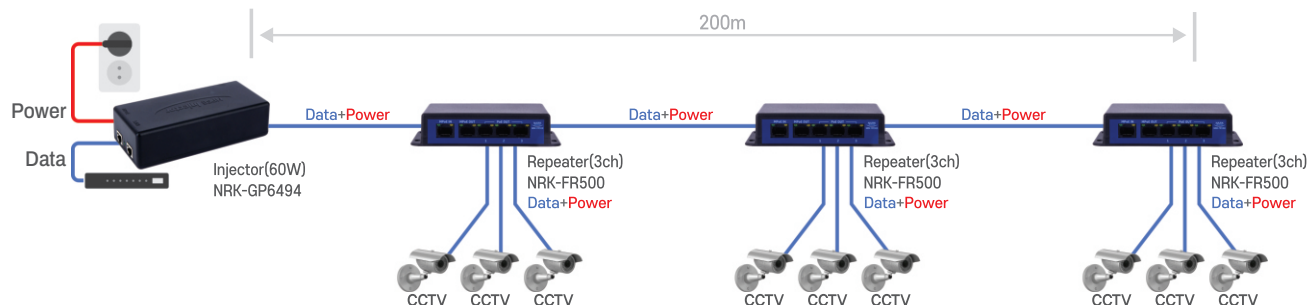
(Flexible Design and Installation Depending on Site Conditions and Installed Devices)



The MPoE solution supplies power and data through 1 line, enabling the installation of **5 devices** over a distance of up to **500 m**.



The MPoE solution supplies power and data through 1 line, enabling the installation of **8 devices** over a distance of up to **200 m**.

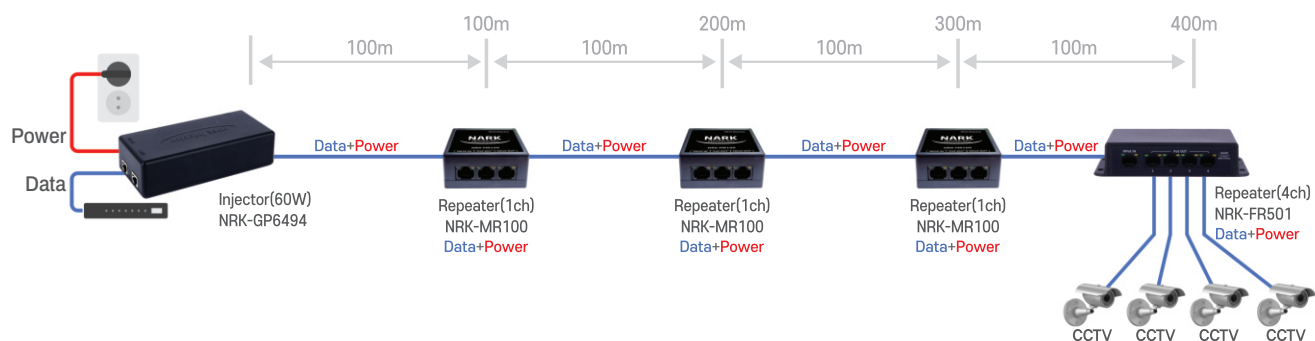


The MPoE solution supplies power and data through 1 line, enabling the installation of **9 devices** over a distance of up to **200 m**.

MPoE Solution Implementation Method

MPoE Solution Application Example

Underground Parking Lot of a Large Shopping Mall or Large Office Building (Applicable to Various Other Environments)



The MPoE solution supplies power and data through 1 line, enabling the installation of **8 devices** over a distance of up to **200 m**.



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