

Case	Delta Industrial Ethernet Solution Applied to Leaky Coaxial Cable System				
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Applicable to	Industrial Ethernet Solution DVW-W02W2-E2 Series, PLC AH500 Series, AC Motor Drive VFD-C200 Series				
Key words	Leaky coaxial cable, rail guided vehicle (RGV) system, factory automation, wireless communication, Wi-Fi				

Introduction

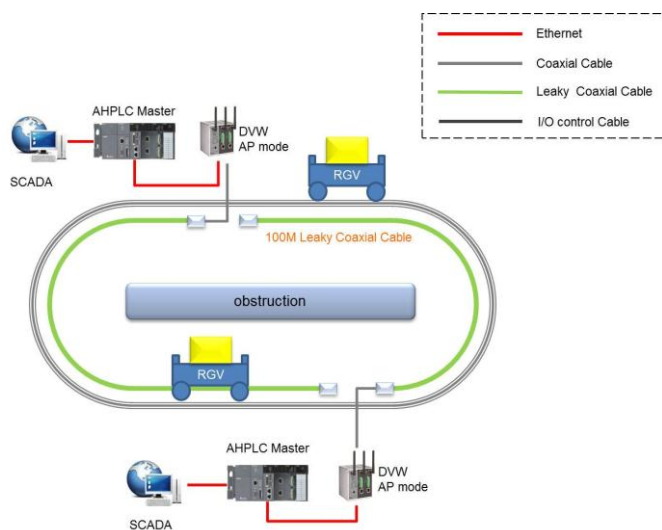
Delta Industrial Automation has developed an industrial Ethernet solution for leaky coaxial cable using Delta's wireless AP, the DVW-W02W2-E2 Series. The solution helps operators transfer materials to specific locations on a track with a Rail Guided Vehicle (RGV) system.

The solution can be applied to:

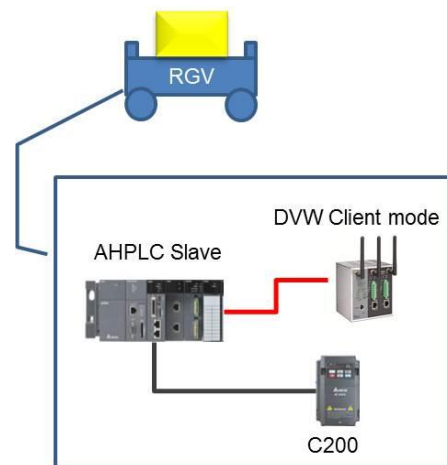
1. Long distance Wi-Fi signal transmission.
2. Spaces that are long and narrow or that have obstructions to Wi-Fi transmissions, such as machines, pillars, or other objects.
3. Problems with Wi-Fi signals that share the same space
4. Certain routes to install RGV systems with LCX.

Leaky Coaxial Cable, also called LCX or Radiating Cable, is widely applied in tunnels, subways, and underground buildings. It provides for more stable radio transmissions that are especially important for firefighters and policemen whose radio signals are easily effected by harsh environments or emergency situations. LCX is also applied in industrial wireless local area network (IWLAN) where Wi-Fi is easily hindered by long distance transmission or barriers such as machines, walls, or pillars, since LCX can stretch or create a torsion field for Wi-Fi signals.

System Structure



Feature 1: Leaky Coaxial Cable System Architecture



Feature 2: RGV Controller

Delta Industrial Ethernet Solution

Products/ Materials	Models	Features
Wireless AP	DVW-W02W2-E2	- Compliant with IEEE 802.11n wireless technology capable of up to 450Mbps data rate - Enhanced wireless security : 64/128-bit WEP, WPA / WPA2, WPA-PSK / WPA2-PSK (TKIP/AES) and 802.1X Authentication - Multiple wireless modes: AP, Client, WDS P-T-P, WDS P-T-MP, Repeater
PLC	AH500 Series	- Utilizes dual-core multi-tasking processor - Excellent program execution speed: 0.3ms / 1k steps - CPU built-in with fully isolated RS-232/422/485, Mini-USB, Ethernet, and abundant selection of modules
AC Motor Drive	C200 Series	Applications: food packaging machinery, conveyors, textile machinery, woodworking machinery, fans, pumps
Leaky Cable	1/2"	Wireless communication extension cables for underground shopping malls, tunnels, subway systems, buildings, and factory automation
Accessories	For 1/2" LCX	Accessories for different installation approaches that best suit the applications, such as connectors, and more.

With solid experience and advanced technology, Delta Industrial Automation offers efficient and reliable solutions and services – we are your most trustworthy partner.

DVW-W02W2-E2

IEEE 802.11 a/b/g/n Industrial Ethernet AP/WDS/Client/Gateway

Ethernet, with its advantages of high speed, high stability and high compatibility, has become the most popular and widely used communication protocol. Based on Delta's accumulated customer service experience and industrial know-how, the Delta Industrial Ethernet Total Solution helps customers construct an industrial Ethernet system that will satisfy their requirements in a wide range of applications. The intelligent alarm function and a wide-operating temperature of -40°C to 75°C help in constructing a reliable industrial wireless network. DVW-W02W2-E2 has many interfaces which are adaptable to harsh environments. In addition, all of Delta's Ethernet products are certified to UL, CE and FCC standards.



Features

High Transmission Capacity

- Compliant with IEEE 802.11n wireless technology capable of up to 450 Mbps data rate. 3×3 MIMO technology increases data rate
- Backward compatible with 802.11 a/b/g standard for seamless integration
- Multiple wireless modes: AP, Client, WDS P-T-P, WDS P-T-MP, Repeater
- Supports 2-port RS-232/422/485-to-Ethernet Device Server
- Built-in 2-port MODBUS ASCII/RTU to MODBUS TCP gateways

Highly Reliable

- Provides 12 to 48VDC redundant terminal block input, 1 set digital input, 1 alarm contact
- Operating temperature: -40°C to 75°C (-40°F to 167°F)
- Storage temperature: -40°C to 85°C (-40°F to 185°F)
- Ambient relative humidity: 5% to 95% (non-condensing)
- Housing: IP40 aluminum metal case

For more information on Delta's industrial automation products, please visit our website at: www.delta.com.tw/ia