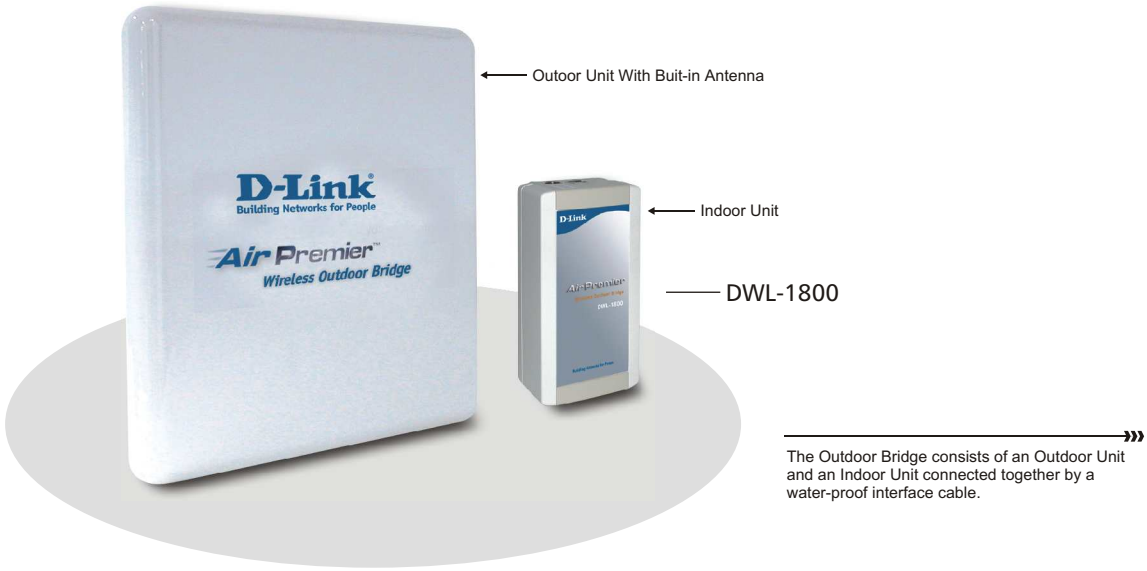
D-Link®

2.4GHz Wireless LAN

AirPremier™



11Mbps 2.4GHz Wireless LAN Outdoor Bridge

The DWL-1800 series of 802.11b Wireless Outdoor Bridges connect LANs located in distant buildings at 11Mbps speed. These bridges operate without any network wires and have unique features designed specially for outdoor applications, making them an ideal solution for wireless building-to-building connection.

Point-to-Multipoint Architecture

The DWL-1800 Wireless Outdoor Bridge series consists of a Base Station Bridge DWL-1800B that is used to connect a single remote site or multiple remote sites to a central server or Internet connection. In a multipoint configuration, it is the central unit; in point-to-point configurations, it must be installed at one end of the link. The Remote Station Bridge is a DWL-1800R. Up to 128 Remote Station Bridges can be simultaneously connected to a single Base Station Bridge, forming a single wireless LAN.*

Indoor/Outdoor Architecture

Each Base Station Bridge DWL-1800B and Remote Station Bridge DWL-1800R consists of an Indoor and an Outdoor unit. The Indoor unit supplies power, interfaces to the LAN inside the building through an Ethernet port, provides data connectivity to the outdoor unit. The Outdoor unit (normally installed on rooftop) is connected the Indoor unit through a sealed, water-proof interface cable, which can run up to 90 meters long. The Outdoor unit also has a front-end radio with integrated 16 dBi flat panel antenna capable to transmitting data up to 25 km in FCC and 10km in ETSI. This antenna is mounted on the front cover of the Outdoor unit, which also functions as a protective sun cover.

Weather-proof Design

The Outdoor unit and its baseband (Ethernet) interface cable to the Indoor unit are completely sealed for water-proof, and can withstand extreme temperatures and harsh summer/winter weather. Power Over Ethernet is built in, allowing power to be supplied to the Outdoor unit via the interface cable. The Outdoor unit thus can be placed on a rooftop or other where no power outlets are available.

Easy Installation

Extensive LED diagnostics are provided, including 10-LED RSSI bar display for easy antenna alignment. Easy maintenance allows multiple units to be configured and remotely upgraded. A user friendly configuration and management utility is provided.

Features

- *IEEE 802.11b DSSS 2.4GHz standard*
- *Up to 11Mbps data transfer rate*
- *Indoor-outdoor architecture for maximum range and reliability*
- *Optimized for outdoor building-to-building point-to-point, point-to-multipoint applications*
- *Up to 25 km (15 miles) in FCC, 10 km in ETSI building-to-building transmission range*
- *Built-in Power Over Ethernet*
- *WiFi™ compliance*
- *Maximum sensitivity of -85 dBm at 11 Mbps*
- *Data security with standard-based WEP encryption*
- *Easy multiple unit remote configuration*
- *Extensive diagnostic LEDs with 10-LED RSSI bar display*
- *SNMP management, TFTP firmware upgradeable*

* Base Station Bridge DWL-1800B is a required product in all installations, Remote Station Bridges can only communicate with each other through DWL-1800B.

DWL-1800

Technical Specifications

802.11b Outdoor Bridge

Radio

Frequency Range
2.4-2.4835GHz ISM band (ETSI, FCC)

Radio Type
Direct Sequence Spread Spectrum (DSSS)

Wireless LAN Standard
Compliant with IEEE 802.11b HR

Selectable Sub-channels
- FCC: 1 - 11
- ETSI: 1 - 13
- France: 10 - 13

Output Power
(at the antenna port)
- FCC: -4, -2, 4, 6, 12, 14, 20, 24 (dbm)
- ETSI: -4, -2, 4, 6, 12, 14 (dbm)

Sensitivity (BER 1E10-6)
(Data Rate/Sensitivity/Modulation)
- 11Mbps/-85dBm/256CCK
- 5.5Mbps/-88dBm/16CCK
- 2Mbps/-90dBm/DQPSK
- 1Mbps/-93dBm/DBPSK

Processing Gain
10.4db (nominal)

Integrated Antenna Type
- Flat Panel 16dBi, 20˚
- Vertical/Horizontal

Range

- Europe/ETSI (20dBm EIRP): up to 10km
- US FCC: up to 25km

Security

Authentication & Data Encryption
64-bit RC4 WEP

Configuration & Management

Management & Setup
SNMP based enhanced Windows platform configuration utility

Site Survey Tool
Integrated into the configuration utility

SNMP Agents
- MIB II
- Bridge MIB
- DWL-1800 Private MIBs

Software Upgrade
- Simultaneous multiple units software upgrade using the configuration utility
- TFTP download

LED Indicators
Indoor Unit:
- Power status
- End-to end Ethernet status

Outdoor Unit:
- Power status
- 10-LED display bar
  RSSI in the RB/Load Gauge in BU
  Ethernet status/traffic
  Wireless link status/traffic

Outdoor Unit-to-Indoor Unit Communication

Cable Type
Cat 5 STP 4 x 2 x 24 double jacket

Maximum Cable Length Between Indoor and Outdoor Units
90 m (280 feet)

Interface

RF (Antenna) Connector in Outdoor Unit
N-Type jack, lightning protected

Baseband (Indoor to Outdoor Units)
- Outdoor unit: shielded RJ-45
- Indoor unit: shielded RJ-45

Ethernet (indoor unit only)
10BASE-T RJ-45 with 2 embedded LEDs

Physical & Environmental

Power Supply
Internal (110 - 120VAC or 220 - 240VAC, unregulated, inside Indoor Unit)

Power Consumption
500/250mA

Dimensions
Outdoor Unit: 305 x120 x 50 mm (12 x 4.7 x 2 inches)
Outdoor Unit with Integrated Antenna: 300 x 300 x 72 mm (12 x 12 x 2.8 inches)
Indoor Unit: 154 x 84 x56 mm (6.1 x 3.3 x 2.2 inches)

Operating Temperature
- Indoor Unit: 0˚ - 40˚C
- Outdoor Unit: -40˚ - 55˚C

Operating Humidity
- 5% - 95% non-condensing
- Outdoor units are weather-protected

EMI Certification
- EN300-385
- FCC Part 15

Safety
- EN60950
- UL1950
- C-Tick

Environment
- ETS300 019
- Bellcore GR-63-CORE

Wireless LAN Standard Compliance
- ETSI ETS 300 328
- FCC Part 15

Package Contents

Each Base Station Bridge DWL-1800B and Remote Station Bridge DWL-1800R contains:
- Indoor Unit
- Outdoor Unit with integrated antenna
- Pole mounting kit for the Outdoor Unit (includes 2 brackets, 4 sets of screws, nuts and washers)
- 20-meter indoor-to-outdoor interface cable
- 3 shielded RJ-45 connectors

ACN 052 202 838

Ordering Information

Base Station Bridge	
DWL1800B/ANA	North America frequency channel, US standard AC power
DWL1800B/EEU	EU & France frequency channel, EU & UK standard AC power
DWL1800B/CN	EU frequency channel, China & Australia standard AC power
Remote Station Bridge	
DWL1800R/ANA	North America frequency channel, US standard AC power
DWL1800R/EEU	EU & France frequency channel, EU & UK standard AC power
DWL1800R/CN	EU frequency channel, China & Australia standard AC power

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U.S.A.	TEL: 1-949-788-0805	FAX: 1-949-753-7033
Canada	TEL: 1-905-829-5033	FAX: 1-905-829-5095
Europe	TEL: 44-20-8731-5555	FAX: 44-20-8731-5511
U.K.	TEL: 44-20-8731-5555	FAX: 44-20-8731-5511
Germany	TEL: 49-61- 96779900	FAX: 49-61-967799300
France	TEL: 33-1-30238688	FAX: 33-1-30238689
Italy	TEL: 39-02-2900-0676	FAX: 39-02-2900-1723
Iberia	TEL: 34-93-4090770	FAX: 34-93-4910795
Sweden	TEL: 46-(0)8-564-61900	FAX: 46-(0)8-564-61901
Norway	TEL: 47-22-991890	FAX: 47-22-207039
Denmark	TEL: 45-43-969040	FAX: 45-43-424347
Finland	TEL: 358-9-2707-5080	FAX: 358-9-2707-5081
Singapore	TEL: 65-6774-6233	FAX: 65-6774-6322
Australia	TEL: 61-2-9417-7100	FAX: 61-2-9417-1077
Japan	TEL: 81-3-5434-9678	FAX: 81-3-5434-9868
China	TEL: 86-010-8518-2533	FAX: 86-010-8518-2250
India	TEL: 91-22-652-6696	FAX: 91-22-652-8914
Middle East	TEL: 202-2456176	FAX: 202-2456192
South America	TEL: 56-2-232-3185	FAX: 56-2-232-0923
Brasil	TEL: 55-11-3094-2910	FAX: 55-11-3094-2921
South Africa	TEL: 27(0)126652165	FAX: 27(0)126652186
Russia	TEL: 7-095-737-3389	FAX: 7-095-737-3390
Taiwan	TEL: 886-2-2910-2626	FAX: 886-2-2910-1515
D-Link Corp.	TEL: 886-2-2916-1600	FAX: 886-2-2914-6299

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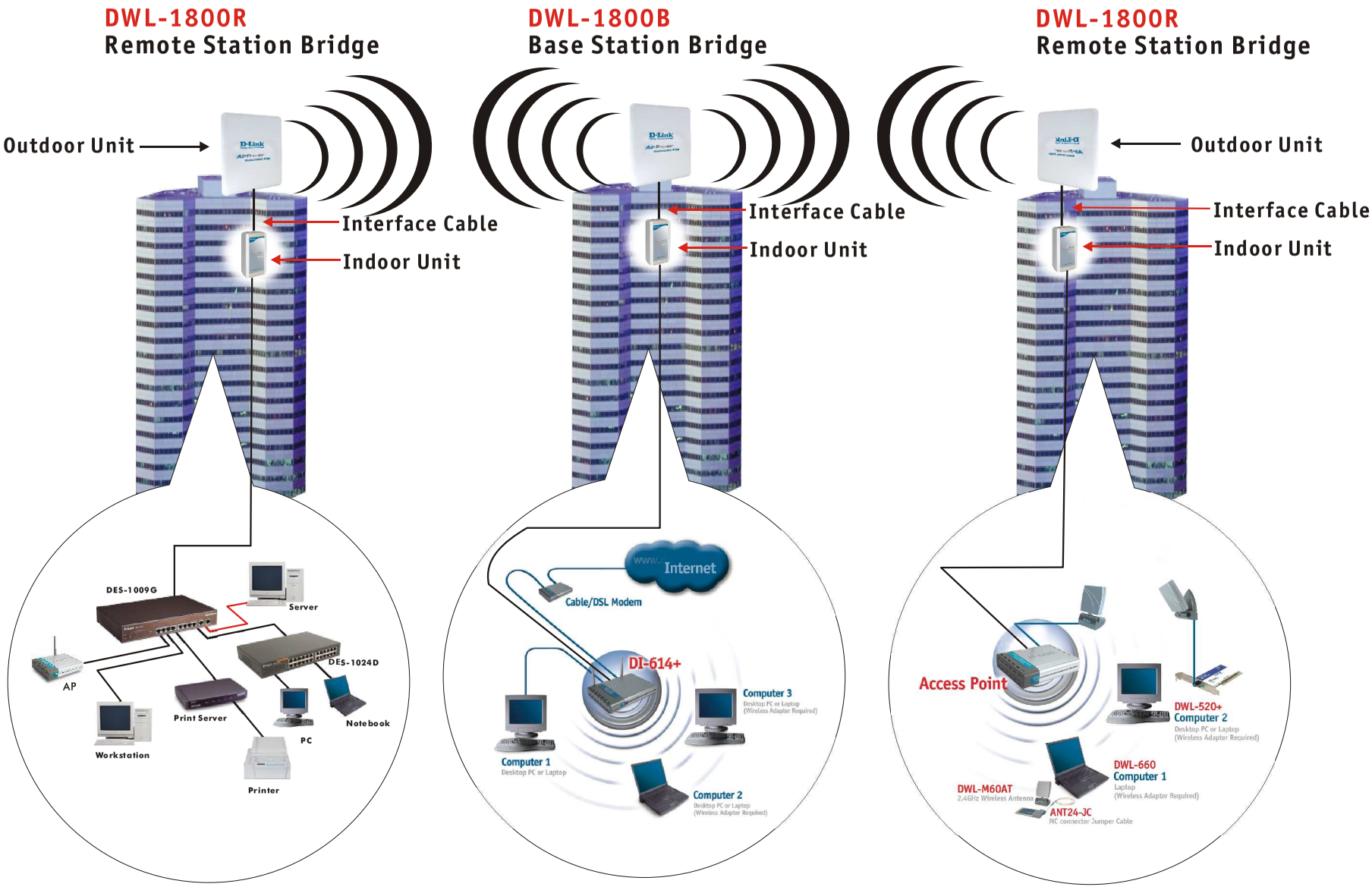
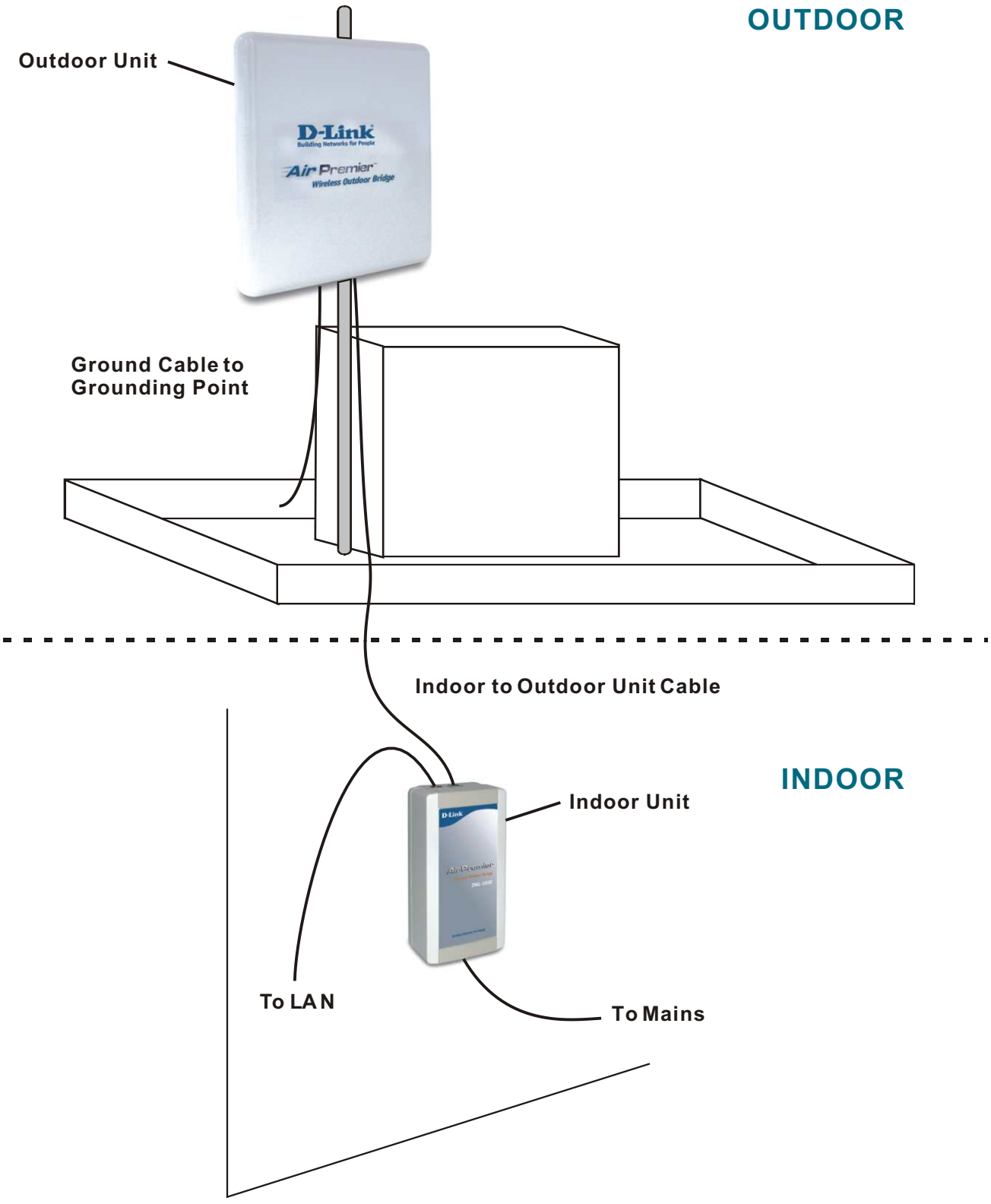


Point-to-Multipoint Architecture

A Base Station Bridge DWL-1800B at the central site connects multiple DWL-1800R Remote Station Bridges at the remote sites to form a single wireless LAN.

* Base Station Bridge DWL-1800B is a required product in all installations, Remote Station Bridges can only communicate with each other through DWL-1800B.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Air Premier
Wireless Outdoor Bridge
Ground Cable to
Grounding Point
Indoor to Outdoor Unit Cable
INDOOR
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