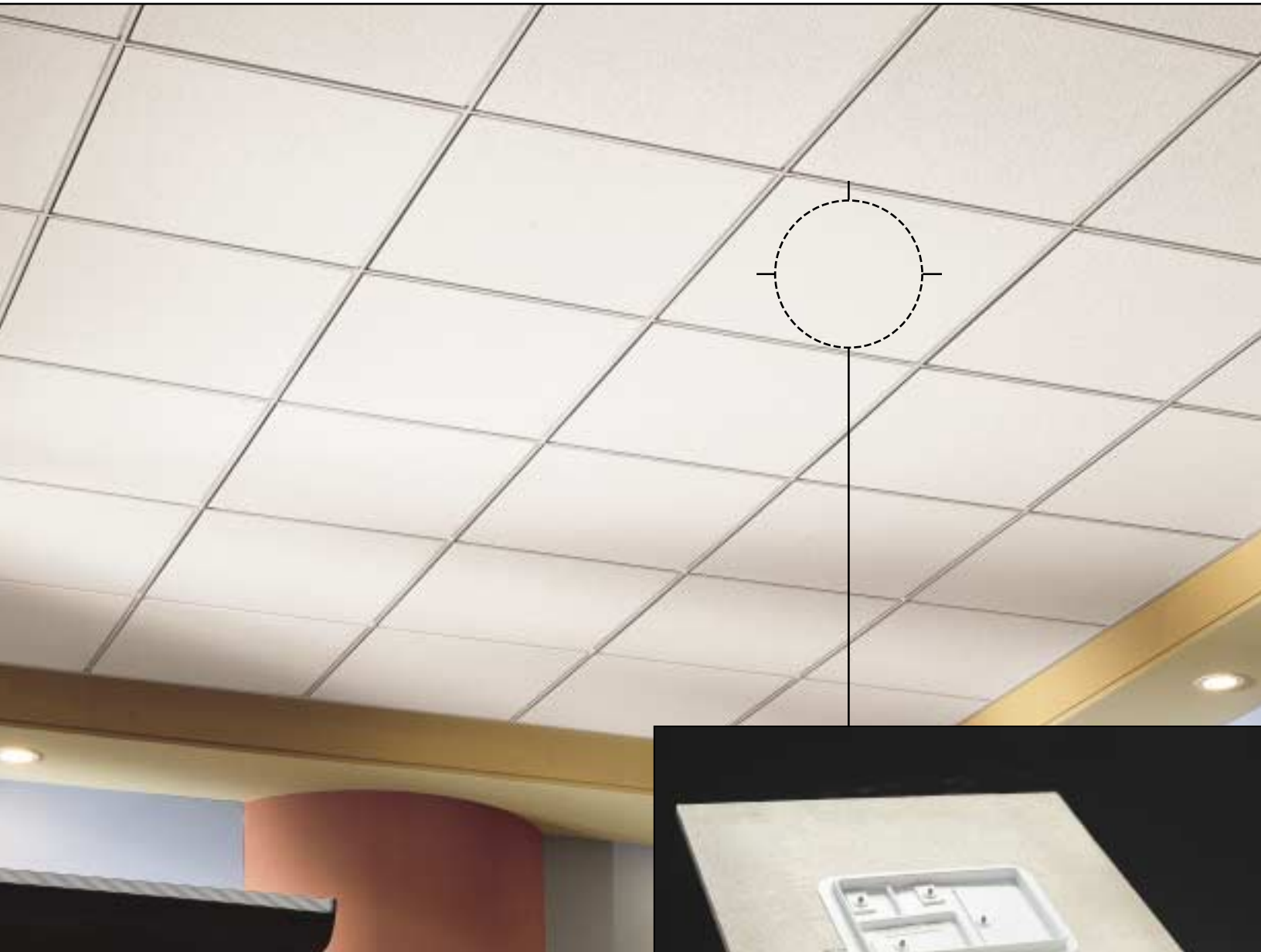


i-ceilings™
Wireless Systems
Antenna Panel



**New Gateway
to Wireless Communications**

Refer to Armstrong Mineral Fiber ceiling product pages to select compatible ceiling panels.

For the most up-to-date information, refer to the commercial ceilings Web site at www.armstrong.com.



Back view of Antenna Panel installed above in an ULTIMA ceiling, the antennas are invisible!

Key Selection Attributes

- Enables in-building wireless communications that enhance employee mobility and workplace effectiveness
- Available in virtually all standard Armstrong ceiling tiles

Typical Applications

- Office
- Education
- Healthcare
- Transportation
- Retail

Product Features

Superior Aesthetics

- Provides superior aesthetics over traditional mounted antennas because i-ceilings antennas are invisible from below
- Matches the rest of the ceiling
- Eliminates sensitivity to health and oversight concerns for occupants and owners

Flexibility and Value

- Fast and easy to install and relocate, just like a standard ceiling panel
- Resistant to damage from the trades or building occupants due to patent-pending embedded antenna design

Wireless Performance Features

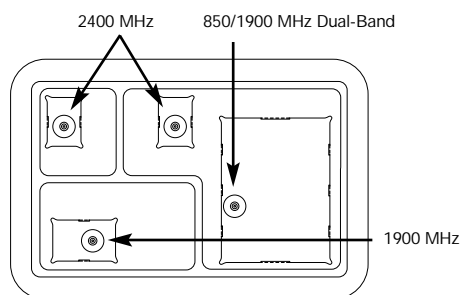
- Panel design embeds the latest antenna technology from Centurion, a global leader in the design and manufacture of antennas for wireless applications
- Delivers equal performance to traditional mounted antennas
- Provides the most efficient and effective in-building coverage because the ceiling plane is the best location for omni-directional antennas
- Antennas are specifically tuned and tested to perform in Armstrong ceilings
- Provides capability for both voice and data communications
- Compatible with all wireless industry standards, including the IEEE 802.11b standard and the Bluetooth standard
- Unique dual-band 850/1900 MHz antenna for voice applications enables operations with either voice band without additional panels

Visual Selection

Antenna Panels are available in nearly all standard 24" x 24", 24" x 48", 24" x 60" and 20" x 60" Armstrong ceiling panels.

Antenna Data/Series

Data	850/1900 MHz Dual-Band	1900 MHz	2400 MHz
Element Type	Microstrip	Microstrip	Microstrip
Frequency Range	806-896 MHz & 1850-1990 MHz	1850-1990 MHz	2400-2500 MHz
Peak Gain	3dBi	3dBi	3dBi
Polarization	Horizontal	Horizontal	Horizontal
Azimuth 3dB Beamwidth	240 degrees	240 degrees	240 degrees
Elevation 3dB Beamwidth	80 degrees	80 degrees	80 degrees
Impedance	50 ohms	50 ohms	50 ohms
Maximum Input Power	50 watts	50 watts	50 watts
Isolation (between pairs)	29 dB (850-1900)	26 dB (850-2400)	24 dB (1900-2400)
VSWR	1.5	1.5	1.5
Connector	SMA Female	SMA Female	SMA Female
Operating Temperature	-40° to 70° C	-40° to 70° C	-40° to 70° C



Identification of the antennas embedded in the WL2 Series Antenna Panel.

*This series is the recommended solution for in-building wireless systems. It provides capability for both voice and data as well as maximum flexibility for use with multiple wireless service providers.

Series	Application	Antennas
WL 1	Voice	1x850/1900 MHz Dual-Band
WL 2	Voice and Data	1x850/1900 MHz Dual-Band, 1x1900 MHz, 2x2400 MHz
WL 3	Data	2x2400 MHz
WL 4	Voice with Diversity	1x850/1900 MHz Dual-Band, 1x1900 MHz

How to Specify and Order

Identify the ceiling tile visual and antenna series you need. Antenna panels are identified by this information as well as the number of pieces per carton (1 or 2).

For example, item number 1912(2)WL2 is an Armstrong ULTIMA ceiling, 2 pieces per carton, with the WL2 series of antenna embedded inside.

Data/Specifications

Antenna Panels are standard ceiling panels with antennas embedded inside. They have the same physical properties as the ceiling panels in which they are embedded, with the following exceptions:

Dimensions

The height of the Antenna Panel is 12.5 mm or 0.49 inches higher than the height of the ceiling tile in which it is embedded.

Fire ratings

Meets UL 2043

Warranties

Five-year limited warranty on antennas for materials and workmanship. Limited warranty on panel equal to that given for the Armstrong ceiling material.

Patents pending.
Features and specifications subject to change without notice.

TechLine™ / 1-877-ARMSTRONG
1-877-276-7876

www.armstrong.com
CS-3281-901E

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Printed in the United States of America