



## Megasphere™

- Cylindrical form factor
- High gain omnidirectional antenna
- Mounts to suspended ceiling grid or clamps to I-beam, etc.
- Excellent choice for open-air installation - (parking lot, storage yard, shipping/receiving, warehouse, etc.)



## Multiversity™

- Utilizes Dipole version of the Phantom element to provide effective and clear communications and eliminate fading
- Ceiling and wall mount versions available

## Microsphere™

- Omnidirectional pattern provides optimal in-building coverage
- 450, 850, 900, 1800, 1900, 2100 MHz, 2.4 GHz, Dual and Multi-band versions available
- Toroidal field pattern provides omnidirectional coverage in any plane around the long axis, and two lobes in any plane parallel to the long axis



| Model                             | Description                              | Frequency                    | Gain      | Cable | Connector  | Max Input Power |
|-----------------------------------|--|------------------------------|-----------|-------|------------|-----------------|
| <b>Megasphere™/Indoor</b>         |  |                              |           |       |            |                 |
| IG2450-NF12                       | MegaSphere                               | 2.4-2.5 GHz                  | 6 dBi     | 12"   | N-Female   | 50W             |
| IG2450-NF36                       | MegaSphere                               | 2.4-2.5 GHz                  | 6 dBi     | 36"   | N-Female   | 50W             |
| IG2450-NM36                       | MegaSphere                               | 2.4-2.5 GHz                  | 6 dBi     | 36"   | N-Male     | 50W             |
| IG2450-RB12                       | MegaSphere                               | 2.4-2.5 GHz                  | 6 dBi     | 12"   | RP-BNC     | 50W             |
| IG2450-RB36                       | MegaSphere                               | 2.4-2.5 GHz                  | 6 dBi     | 36"   | RP-BNC     | 50W             |
| IG2450-RS36                       | MegaSphere                               | 2.4-2.5 GHz                  | 6 dBi     | 36"   | RP-SMA     | 50W             |
| IG2450-RT36                       | MegaSphere                               | 2.4-2.5 GHz                  | 6 dBi     | 36"   | RP-TNC     | 50W             |
| IG2450-SM36                       | MegaSphere                               | 2.4-2.5 GHz                  | 6 dBi     | 36"   | SMA Male   | 50W             |
| <b>Outdoor/Indoor Megasphere™</b> |  |                              |           |       |            |                 |
| IGO2450-NF12                      | Outdoor/Indoor MegaSphere                | 2.4-2.5 GHz                  | 5 dBi     | 12"   | N-Female   | 50W             |
| IGO2450-RT12                      | Outdoor/Indoor MegaSphere                | 2.4-2.5 GHz                  | 5 dBi     | 12"   | RP-TNC     | 50W             |
| IGO2450-SM12                      | Outdoor/Indoor MegaSphere                | 2.4-2.5 GHz                  | 5 dBi     | 12"   | SMA Male   | 50W             |
| <b>Multiversity™ Indoor</b>       |  |                              |           |       |            |                 |
| MIA8063                           | Wall Mount Multiversity™                 | 806-869 MHz                  | 3 dB-MEG* |       | N-Female   | 100W            |
| MIA8063ST                         | Ceiling Mount Multiversity™              | 806-869 MHz                  | 3 dB-MEG* |       | N-Female   | 100W            |
| MIA24003                          | Wall Mount Multiversity™                 | 2.4-2.5 GHz                  | 3 dB-MEG* |       | N-Female   | 100W            |
| MIA24003ST                        | Ceiling Mount Multiversity™              | 2.4-2.5 GHz                  | 3 dB-MEG* |       | N-Female   | 100W            |
| <b>Microsphere™</b>               |  |                              |           |       |            |                 |
| IF450-SM00                        | 450 MHz Microsphere™                     |                              | 3 dBi     | none  | SMA Male   | 50W             |
| IF850-SF00                        | 850 MHz MicroSphere™                     | 806-960 MHz                  | 3 dBi     | none  | SMA Female | 50W             |
| IF900-SF00                        | 900 MHz MicroSphere™                     | 880-960 MHz                  | 3 dBi     | none  | SMA Female | 50W             |
| IF1800-SF00                       | 1800 MHz MicroSphere™                    | 1710-1880 MHz                | 3 dBi     | none  | SMA Female | 50W             |
| IF1900-SF00                       | 1900 MHz MicroSphere™                    | 1850-1990 MHz                | 3 dBi     | none  | SMA Female | 50W             |
| IF2100-SF00                       | 2100 MHz UMTS MicroSphere™               | 1920-2170 MHz                | 3 dBi     | none  | SMA Female | 50W             |
| IF2450-SF00                       | 2.4 GHz MicroSphere™                     | 2.4-2.5 GHz                  | 3 dBi     | none  | SMA Female | 50W             |
| <b>Dual-Band Microsphere™</b>     |  |                              |           |       |            |                 |
| IF8519-SF00                       | 850 & 1900 MHz<br>Dual-band MicroSphere™ | 806-896 MHz<br>1850-1990 MHz | 3 dBi     | none  | SMA Female | 50W             |
| IF9018-SF00                       | 900 & 1800 MHz<br>Dual-band MicroSphere™ | 880-960 MHz                  | 3 dBi     | none  | SMA Female | 50W             |

| Model                                       | Description             | Frequency   | Gain  | Cable | Connector  | Max Input Power |
|---|-------------------------|---|-------|-------|------------|-----------------|
| <b>Multi-Band MicroSphere™/Ultrasphere™</b> |                         |   |       |       |            |                 |
| IFMULT-NF00                                 | Multi-Band MicroSphere™ | AMPS 806-896 MHz<br>GSM 880-960 MHz<br>DCS 1710-1880 MHz<br>PCS 1850-1990 MHz<br>UMTS 1920-2170 MHz                           | 3 dBi | none  | N-Female   | 50W             |
| IFMULT-SF00                                 | Multi-Band MicroSphere™ | AMPS 806-896 MHz<br>GSM 880-960 MHz<br>DCS 1710-1880 MHz<br>PCS 1850-1990 MHz<br>UMTS 1920-2170 MHz                           | 3 dBi | none  | SMA-Female | 50W             |
| IFMULT-SFRA00                               | Multi-Band MicroSphere™ | AMPS 806-896 MHz<br>GSM 880-960 MHz<br>DCS 1710-1880 MHz<br>PCS 1850-1990 MHz<br>UMTS 1920-2170 MHz                           | 3 dBi | none  | SMA-Female | 50W             |
| IFULTRA-SF00                                | Multi-Band Ultrasphere™ | AMPS 806-896 MHz<br>GSM 880-960 MHz<br>DCS 1710-1880 MHz<br>PCS 1850-1990 MHz<br>UMTS 1920-2170 MHz<br>ISM (BT) 2400-2500 MHz | 3 dBi | none  | SMA-Female | 50W             |

| <b>2.4 GHz MicroSphere™ Diversity</b> |                                |             |       |     |            |     |
|---------------------------------------|--------------------------------|-------------|-------|-----|------------|-----|
| IFD2450-RB36                          | 2.4 GHz MicroSphere™ Diversity | 2.4-2.5 GHz | 3 dBi | 36" | RP-BNC x 2 | 50W |
| IFD2450-RS36                          | 2.4 GHz MicroSphere™ Diversity | 2.4-2.5 GHz | 3 dBi | 60" | RP-SMA x 2 | 50W |
| IFD2450-RT36                          | 2.4 GHz MicroSphere™ Diversity | 2.4-2.5 GHz | 3 dBi | 36" | RP-BNC x 2 | 50W |
| IFD2450-RT60                          | 2.4 GHz MicroSphere™ Diversity | 2.4-2.5 GHz | 3 dBi | 60" | RP-BNC x 2 | 50W |

| <b>Sphere™</b> |                  |               |       |            |             |     |
|----------------|------------------|---------------|-------|------------|-------------|-----|
| IO850-NF36     | 850 MHz Sphere™  | 824-896 MHz   | 3 dBi | 36" RG-142 | N-Female    | 50W |
| IO850-SM36     | 850 MHz Sphere™  | 824-896 MHz   | 3 dBi | 36" RG-142 | SMA-Male    | 50W |
| IO1900-NF12    | 1900 MHz Sphere™ | 1850-1990 MHz | 3 dBi | 12" RG-142 | N-Female    | 50W |
| IO1900-NF36    | 1900 MHz Sphere™ | 1850-1990 MHz | 3 dBi | 36" RG-142 | N-Female    | 50W |
| IO1900-SM36    | 1900 MHz Sphere™ | 1850-1990 MHz | 3 dBi | 36" RG-142 | SMA-Male    | 50W |
| IO2450-NF12    | 2.4 GHz Sphere™  | 2.4-2.5 GHz   | 3 dBi | 12" RG-142 | N-Female    | 50W |
| IO2450-RN12    | 2.4 GHz Sphere™  | 2.4-2.5 GHz   | 3 dBi | 12" RG-142 | RP-N-Female | 50W |
| IO2450-RS60    | 2.4 GHz Sphere™  | 2.4-2.5 GHz   | 3 dBi | 60" RG-142 | RP-SM       | 50W |
| IO2450-RT36    | 2.4 GHz Sphere™  | 2.4-2.5 GHz   | 3 dBi | 36" RG-142 | RP-TNC      | 50W |
| IO2450-RT60    | 2.4 GHz Sphere™  | 2.4-2.5 GHz   | 3 dBi | 60" RG-142 | RP-TNC      | 50W |
| IO2450-RT84    | 2.4 GHz Sphere™  | 2.4-2.5 GHz   | 3 dBi | 84" RG-142 | RP-TNC      | 50W |
| IO2450-SM12    | 2.4 GHz Sphere™  | 2.4-2.5 GHz   | 3 dBi | 12" RG-142 | SMA-Male    | 50W |
| IO5250-RT36    | 5 GHz Sphere™    | 5.15-5.35 GHz | 5 dBi | 36" RG-142 | RP-TNC      | 50W |

| <b>2.4 GHz Sphere Diversity™</b> |                           |             |       |            |              |     |
|----------------------------------|---------------------------|-------------|-------|------------|--------------|-----|
| IOD2450-NF12                     | 2.4 GHz Sphere™ Diversity | 2.4-2.5 GHz | 3 dBi | 12" RG-142 | N-Female x 2 | 50W |
| IOD2450-RT36                     | 2.4 GHz Sphere™ Diversity | 2.4-2.5 GHz | 3 dBi | 36" RG-142 | RP-TNC x 2   | 50W |

## MicroSphere™



Dual Band MicroSphere™



## Ultrasphere™

- So small it can be hidden almost anywhere
- Omnidirectional coverage
- 179.2x 80.4 x 1.7 mm



2.4 GHz Sphere™

## Sphere™

- Omnidirectional pattern provides optimal in-building coverage
- 850, 1900, 2100 MHz, 2.4 and 5 GHz versions available
- Quick installation with a standard ceiling tile frame metal clip
- Considerable gain improvement over traditional dipole antennas



## Whisper™

- Directional pattern provides targeted coverage to a specific area
- 850, 1900, 2.4 and 5 GHz versions available
- Self contained in its durable radome, the Whisper blends in anywhere
- Patented technology provides inexpensive reliability

| Model | Description | Frequency | Gain | Cable Length | Connector |
|-------|-------------|-----------|------|--------------|-----------|
|-------|-------------|-----------|------|--------------|-----------|

### Whisper Directional

#### 850 MHz Whisper™

|             |                         |             |         |     |            |
|-------------|-------------------------|-------------|---------|-----|------------|
| ID0850-NF00 | 850 MHz Outdoor Whisper | 806-896 MHz | 7.5 dBi | N/A | N-Female   |
| ID850-SF00  | 850 MHz Indoor Whisper  | 806-896 MHz | 7.5 dBi | N/A | SMA-Female |

#### 1900 MHz Whisper™

|              |                          |               |         |       |          |
|--------------|--------------------------|---------------|---------|-------|----------|
| ID1900-NF12  | 1900 MHz Indoor Whisper  | 1850-1990 MHz | 7.5 dBi | 1 ft. | N-Female |
| ID1900-NF36  | 1900 MHz Indoor Whisper  | 1850-1990 MHz | 7.5 dBi | 3 ft. | N-Female |
| ID1900-SM36  | 1900 MHz Indoor Whisper  | 1850-1990 MHz | 7.5 dBi | 3 ft. | SMA-Male |
| ID01900-SM12 | 1900 MHz Outdoor Whisper | 1850-1990 MHz | 7.5 dBi | 1 ft. | SMA-Male |
| ID01900-SM36 | 1900 MHz Outdoor Whisper | 1850-1990 MHz | 7.5 dBi | 3 ft. | SMA-Male |

#### 2.4 GHz Indoor Whisper™

|              |                        |             |       |        |             |
|--------------|------------------------|-------------|-------|--------|-------------|
| ID2450-NF12  | 2.4 GHz Indoor Whisper | 2.4-2.5 GHz | 9 dBi | 1 ft.  | N-Female    |
| ID2450-NF36  | 2.4 GHz Indoor Whisper | 2.4-2.5 GHz | 9 dBi | 3 ft.  | N-Female    |
| ID2450-NM12  | 2.4 GHz Indoor Whisper | 2.4-2.5 GHz | 9 dBi | 1 ft.  | N-Male      |
| ID2450-NM36  | 2.4 GHz Indoor Whisper | 2.4-2.5 GHz | 9 dBi | 3 ft.  | N-Male      |
| ID2450-NM60  | 2.4 GHz Indoor Whisper | 2.4-2.5 GHz | 9 dBi | 5 ft.  | N-Male      |
| ID2450-RN12  | 2.4 GHz Indoor Whisper | 2.4-2.5 GHz | 9 dBi | 1 ft.  | RP-N-Female |
| ID2450-RS36  | 2.4 GHz Indoor Whisper | 2.4-2.5 GHz | 9 dBi | 3 ft.  | RP-SMA      |
| ID2450-RS60  | 2.4 GHz Indoor Whisper | 2.4-2.5 GHz | 9 dBi | 5 ft.  | RP-SMA      |
| ID2450-RT12  | 2.4 GHz Indoor Whisper | 2.4-2.5 GHz | 9 dBi | 1 ft.  | RP-TNC      |
| ID2450-RT36  | 2.4 GHz Indoor Whisper | 2.4-2.5 GHz | 9 dBi | 3 ft.  | RP-TNC      |
| ID2450-RT60  | 2.4 GHz Indoor Whisper | 2.4-2.5 GHz | 9 dBi | 5 ft.  | RP-TNC      |
| ID2450-RT120 | 2.4 GHz Indoor Whisper | 2.4-2.5 GHz | 8 dBi | 10 ft. | RP-TNC      |

#### 2.4 GHz Outdoor Whisper™

|              |  |             |         |       |          |
|--------------|--|-------------|---------|-------|----------|
| IDO2450-NF12 | 2.4 GHz Outdoor Whisper                | 2.4-2.5 GHz | 7.5 dBi | 1 ft. | N-Female |
| IDO2450-RT12 | 2.4 GHz Outdoor Whisper                | 2.4-2.5 GHz | 7.5 dBi | 1 ft. | RP-TNC   |
| IDO2450-RS36 | 2.4 GHz Outdoor Whisper                | 2.4-2.5 GHz | 7.5 dBi | 3 ft. | RP-SMA   |
| IDO2450-RT36 | 2.4 GHz Outdoor Whisper - Marine Rated | 2.4-2.5 GHz | 7.5 dBi | 3 ft. | RP-TNC   |

#### 5 GHz Indoor Whisper™

|             |                      |               |       |       |          |
|-------------|----------------------|---------------|-------|-------|----------|
| ID5250-NF12 | 5 GHz Indoor Whisper | 5.15-5.35 GHz | 9 dBi | 1 ft. | N-Female |
| ID5250-NF36 | 5 GHz Indoor Whisper | 5.15-5.35 GHz | 9 dBi | 3 ft. | N-Female |
| ID5250-RT12 | 5 GHz Indoor Whisper | 5.15-5.35 GHz | 9 dBi | 1 ft. | RP-TNC   |
| ID5250-RT36 | 5 GHz Indoor Whisper | 5.15-5.35 GHz | 9 dBi | 3 ft. | RP-TNC   |
| ID5250-RS12 | 5 GHz Indoor Whisper | 5.15-5.35 GHz | 9 dBi | 1 ft. | RP-SMA   |
| ID5250-RS36 | 5 GHz Indoor Whisper | 5.15-5.35 GHz | 9 dBi | 3 ft. | RP-SMA   |
| ID5250-SM36 | 5 GHz Indoor Whisper | 5.15-5.35 GHz | 9 dBi | 3 ft. | SMA-Male |

### Terrace™ Bidirectional

#### 2.4 GHz Terrace™

|             |                        |             |       |       |             |
|-------------|------------------------|-------------|-------|-------|-------------|
| IB2450-NF12 | 2.4 GHz Indoor Terrace | 2.4-2.5 GHz | 5 dBi | 1 ft. | N-Female    |
| IB2450-NF36 | 2.4 GHz Indoor Terrace | 2.4-2.5 GHz | 5 dBi | 1 ft. | N-Female    |
| IB2450-RN12 | 2.4 GHz Indoor Terrace | 2.4-2.5 GHz | 5 dBi | 3ft.  | RP-N-Female |
| IB2450-RS36 | 2.4 GHz Indoor Terrace | 2.4-2.5 GHz | 5 dBi | 3ft.  | RP-SMA      |
| IB2450-RT12 | 2.4 GHz Indoor Terrace | 2.4-2.5 GHz | 5 dBi | 3 ft. | N-Female    |
| IB2450-RT36 | 2.4 GHz Indoor Terrace | 2.4-2.5 GHz | 5 dBi | 3ft.  | RP-TNC      |



## Terrace™

- Bi-directional pattern provides optimal corridor & hallway coverage
- 2.4 and 5 GHz versions available
- Supplied with standard wall-mount kit

| Model   | Description                             | Frequency   | Gain  | Cable Length | Connector       |
|---|---|-------------|-------|--------------|-----------------|
| <b>2.4 GHz Terrace™ Diversity (cables exit backplate)</b> |   |             |       |              |                 |
| IDD2450-NF12  | 2.4 GHz Terrace Diversity               | 2.4-2.5 GHz | 5 dBi | 1 ft.        | N-Female x 2    |
| IDD2450-NF36  | 2.4 GHz Terrace Diversity               | 2.4-2.5 GHz | 5 dBi | 3 ft.        | N-Female x 2    |
| IDD2450-RS12  | 2.4 GHz Terrace Diversity               | 2.4-2.5 GHz | 5 dBi | 1 ft.        | RP-SMA x 2      |
| IDO2450-RT07E   | 2.4 GHz Terrace Diversity, Marine-Rated | 2.4-2.5 GHz | 5 dBi | 7 in.        | RP-TNC x 2      |
| IDD2450-RT36  | 2.4 GHz Terrace Diversity               | 2.4-2.5 GHz | 5 dBi | 3 ft.        | RP-TNC x 2      |
| <b>2.4 GHz Terrace™ Diversity (cables exit edge/side)</b> |   |             |       |              |                 |
| IDD2450-RS12E   | 2.4 GHz Terrace Diversity               | 2.4-2.5 GHz | 5 dBi | 1 ft.        | RP-SMA x 2      |
| IDD2450-RS36E   | 2.4 GHz Terrace Diversity               | 2.4-2.5 GHz | 5 dBi | 3 ft.        | RP-SMA x 2      |
| IDD2450-RT36E   | 2.4 GHz Terrace Diversity               | 2.4-2.5 GHz | 5 dBi | 3 ft.        | RP-TNC x 2      |
| <b>5 GHz Terrace™ Diversity</b>                           |   |             |       |              |                 |
| IDD5250-NF12  | 5.25 GHz Terrace Diversity              | 4.9-6.0 GHz | 5 dBi | 1 ft.        | N-Female x 2    |
| IDD5250-NF36  | 5.25 GHz Terrace Diversity              | 4.9-6.0 GHz | 5 dBi | 3 ft.        | N-Female x 2    |
| IDD5250-RS12  | 5.25 GHz Terrace Diversity              | 4.9-6.0 GHz | 5 dBi | 1 ft.        | RP-SMA x 2      |
| IDD5250-RS36  | 5.25 GHz Terrace Diversity              | 4.9-6.0 GHz | 5 dBi | 3 ft.        | RP-SMA x 2      |
| IDD5250-RSRA36  | 5.25 GHz Terrace Diversity              | 4.9-6.0 GHz | 5 dBi | 3 ft.        | RP-SMA R.A. x 2 |
| IDD5250-RT12  | 5.25 GHz Terrace Diversity              | 4.9-6.0 GHz | 5 dBi | 3 ft.        | RP-TNC x 2      |
| IDD5250-RT36  | 5.25 GHz Terrace Diversity              | 4.9-6.0 GHz | 5 dBi | 3 ft.        | RP-TNC x 2      |
| IDD5250-RS36E   | 5.25 GHz Terrace Diversity              | 4.9-6.0 GHz | 5 dBi | 3 ft.        | RP-SMA x 2      |

| <b>I ceilings</b> |                                |   |       |      |            |     |
|-------------------|--------------------------------|---|-------|------|------------|-----|
| IFC8519-SF00**    | I Ceiling Ceiling Tile Antenna | One 850/1900 MHz Dual-band                                | 3 dBi | none | SMA Female | 50W |
| IFCMULT-SF00**    | I Ceiling Ceiling Tile Antenna | One 850-1900 MHz Dual-band<br>One 1900 MHz<br>Two 2.4 GHz | 3 dBi | none | SMA Female | 50W |
| IFC2450-SF00**    | I Ceiling Ceiling Tile Antenna | Two 2.4 GHz   | 3 dBi | none | SMA Female | 50W |
| IFE8519-SF00**    | I Ceiling Ceiling Tile Antenna | One 850-1900 MHz Dual-band<br>One 1900 MHz                | 3 dBi | none | SMA Female | 50W |

| Model                   | Description               | Coax Length | Connector(s)         |
|-------------------------|---------------------------|-------------|----------------------|
| <b>Cable Assemblies</b> |                           |             |                      |
| ICSM-RT36               | 3' SMA-male / RP-TNC      | 3 ft.       | SMA-Male/RP-TNC      |
| ICSM-RT60               | 5' SMA-male / RP-TNC      | 5 ft.       | SMA-Male/RP-TNC      |
| ICSM-RB60               | 5' SMA-male / RP-BNC      | 5 ft.       | SMA-Male/RP-BNC      |
| ICSM-SM60               | 5' SMA-male / SMA-male    | 5 ft.       | SMA-Male/SMA-Male    |
| ICSM-NM60               | 5' SMA-male / N-male      | 5 ft.       | SMA-Male/N-Male      |
| ICSM-NF60               | 5' SMA-male / N-female    | 5 ft.       | SMA-Male/N-Female    |
| ICSM-RN08               | 8" SMA-male / RP-N-female | 8 in.       | SMA-Male/RP-N-Female |

| <b>Mounting Hardware</b> |  |
|--------------------------|--|
| IMI-02A                  | 2" Indoor Pan/Tilt Mount (for ID1900)                              |
| IMI-02B                  | 2" Indoor Pan/Tilt Mount (for ID2450)                              |
| IMI-02C                  | 2" Indoor Pan/Tilt Mount (for ID850)                               |
| IMI-02D                  | 2" Indoor Pan/Tilt Mount (for IDD5250)                             |
| IMI-05A                  | 5" Indoor Pan/Tilt Mount (for ID1900)                              |
| IMI-05B                  | 5" Indoor Pan/Tilt Mount (for ID2450, ID5250)                      |
| IMI-05C                  | 5" Indoor Pan/Tilt Mount (for ID850)                               |
| IMI-05D                  | 5" Indoor Pan/Tilt Mount (for IDD5250)                             |
| IMO-05A                  | 5" Outdoor Metal Pan/Tilt Mount N/A N/A N/A (for ID01900, ID02450) |
| IMO-05B                  | 5" Outdoor Metal Pan/Tilt Mount (for ID0850)                       |
| IMP-08A                  | 8" Outdoor Metal Pan/Tilt, Wall/Pole Mount (for ID0850)            |



## Terrace Diversity™

- Multi-port spatial diversity within a single, compact radome
- Bi-directional pattern provides optimal corridor & hallway coverage
- 2.4 and 5 GHz versions available



## I Ceiling

- Omnidirectional 850, 1900 and/or 2400 MHz
- Patent-pending design embeds the latest antenna technology into standard Armstrong ceiling panels
- Specifically tuned and tested to perform in suspended panel ceilings

## Cable Assemblies

## Mounting Hardware

