Laird™

Smart Technology. Delivered.™

Telecom-Indoor Distributed Antenna Systems (iDAS)

Laird indoor Distributed Antenna Systems (iDAS) are performance engineered to deliver single and multiple carrier signals in buildings where continuous, seamless, and robust wireless coverage is critical for efficient and effective operations.

Smart Technology. Delivered.™

About Laird

Laird is a global technology business focused on enabling wireless communication and smart systems, and providing components and systems that protect electronics. Laird operates through two divisions, Wireless Systems and Performance Materials. Wireless Systems solutions include antenna systems, embedded wireless modules, telematics products and wireless automation and control solutions. Performance Materials solutions include electromagnetic interference shielding, thermal management and signal integrity products. As a leader in the design, supply and support of innovative technology, our products allow people, organizations, machines and applications to connect effectively, helping to build a world where smart technology transforms the way of life. Custom products are supplied to major sectors of the electronics industry including the handset, telecommunications, IT, automotive, public safety, consumer, medical, rail, mining and industrial markets.

Laird provides systems, components and solutions that protect electronics from electromagnetic interference and heat, and that enable connectivity in mission critical systems through wireless applications and antenna systems.

We are a leader in the design, development and delivery of innovative technologies that enable people, organizations and applications to connect efficiently and effectively. With a proud history stretching back to 1824, Laird has been at the forefront of technological innovation for almost two centuries. And we continue to deliver.

Our reputation has been built on three guiding principles:

- Innovation- putting our in-depth knowledge of the latest materials and processes to work in creating outstanding products for our customers.
- Reliable fulfillment – delivering what our customers need to their exact specifications, on time and on budget, and in the quantities required.
- Speed- rationalizing the design and delivery cycle to minimize the time from initial concept to final implementation.

A Brief Introduction to Telecom - Indoor Distributed Antenna Systems (iDAS)

Customers depend on and demand ubiquitous wireless phone service both outside and inside buildings and Wireless Service Providers have a vested interest in meeting those expectations. Indoor Distributed Antenna Systems (iDAS) are designed to deliver near ubiquitous wireless service inside high density private and public locations such as malls, office buildings, stadiums, hospitals, subways, airports and similar facility applications. Wireless service providers are aggressively expanding their in-building coverage to meet customer demand for seamless mobility. Some in-building wireless projects require support for a single Wireless Service Provider and others require multiple air interfaces, known as host-neutral systems. Laird designs and manufactures customized, performance-critical products for both single and multiple Wireless Service Provider air interface applications.

Depend on Laird

Laird's Telecom- iDAS wireless antennas are particularly applicable for environments where aesthetics and wide-angle coverage are necessary for successful wireless deployment. Their surprisingly small size allows the antennas to be hidden almost anywhere, providing flexible installation options for most commercial, government, industrial, and entertainment venue in building applications.

Benefits of Telecom - iDAS Technology

Some benefits of using Laird's Telecom-iDAS antennas include:

- Low profile aesthetically nuetral packaging
- Multiple ceiling mounting options
- Multi-band operation
- Performance optimized using Laird Technologies proprietary RF optimization tools

Telecom-iDAS Antennas

Squint™ Omnidirectional Indoor Panels

Antennas that feature an omnidirectional pattern while focusing energy where it is most desired. Unique pattern characteristics mitigate multipath issues. The products feature:

- Ceiling mount vertically polarized
- Omnidirectional while focusing energy where it is most desired
- Unique pattern characteristics mitigate multi-path issues
- Single and multi-band models
- Integrated coaxial pigtails can be customized in length and connector for app
- 50 watt power rating

• SQ1852PG12NF

PART NUMBER	FREQUENCY (MHz)	BANDWIDTH (DEG)		VSWR	GAIN (dBi)	DIMENSIONS (mm)		
		EL	AZ			LENGTH	WIDTH	HT
SQ8243P12NF	824-896	—	360	1:5:1	3.5	254	127	38
SQ8803P12NF	880-960	—	360	1:5:1	3.5	254	127	38
SQ8962P12NF	896-940	—	360	1:5:1	3.5	254	127	38
SQ9023P12NF	902-928	—	360	1:5:1	3.5	254	127	38
SQ1852PG12NF	1850-1990	—	360	1:5:1	3.5	102	102	22
SQ2403PG12NF	2400-2500	—	360	1:5:1	3.5	102	102	22

1. Part numbers above are completed with the addition of the cable length and connector (e.g. SQ185PG12NF implies 12" of cable terminated in a TypeN female connector
2. Connector/cable configurations can be customized to meet requirements
3. Vehicular application

• SR2405135D

Omnidirectional Indoor Panels

Omnidirectional single and dual port panel antennas that are well suited for indoor applications where a small foot print is required. The products feature:

- Low profile designs
- Single and multi-band models
- Extremely uniform and symmetrical pattern characteristics
- Integrated coaxial pigtails

• SL80173WP

PART NUMBER	FREQUENCY (MHz)	BANDWIDTH (DEG)		VSWR	GAIN (dBi)	DIMENSIONS (mm)		
		EL	AZ			LENGTH	WIDTH	HT
SL82184P[3]	824-896/ 1850-1990	—	360	2.0	4.0	152.4	152.4	31.75
SL88174P	880-960/ 1710-1880	—	360	2.0	4.0	152.4	152.4	31.75
SL80173WP	880-960/ 1710-1880/ 1920-2170	70/60/60	360	2.0	3.0	152.4	152.4	31.75
SL8025WP	806-960/ 1710-2170/ 2400-2500	55/50/60	360	2.0	3.0	152.4	152.4	31.75
SL17182P[2]	1710-1755/ 1850-1990/ 2110-2155	65	360	2.0	2.0	152.4	152.4	31.75

1. Part numbers above are completed with the addition of the cable length and connector (e.g. SQ185PG12NF implies 12" of cable terminated in a TypeN female connector
2. Connector/cable configurations can be customized to meet requirements
3. Vehicular application

• S9027PS

Microsphere™

Antennas that feature an omnidirectional pattern, and suited to a variety of uses including handheld devices, in-building systems, or other applications where mobility is a factor. The products feature:

- Surprisingly small size allows for an invisible solution for most apps
- The field pattern is vertically polarized and toroidal, providing omnidirectional coverage in any plane around the long axis of the antenna
- 50 watt power rating

• if850 microsphere

• i f 8 519 microspheres_LT

• If900 900 MHz microsphere

MODEL	PART NUMBER	FREQUENCY MHz	VSWR	GAIN dBi	DIMENSIONS (mm)		
					LENGTH	WIDTH	HT
IF850-SF00	CAF95952	806-960	2.0	3.0	114	86	2.5
IIF8519-SF00	CAF94135	806-896/1850-1990	1.5	3.0	159	136	2.5
IF9018-SF00	CAF94126	880-960/1710-1880	1.5	3.0	129	156	2.5
IFMULT-SF002	CAF94362	806-960/1710-1990/ 1920-2170	2.0	3.0	112	138	2.5
IFULTRA-SF00	CAF94895	806-960/1710-1990/ 1920-2170/2400-2500	2.5	1.8 3.6 3.0 2.9	179	80	1.7
3G/4G MicroSphere	CFS69271	698-806/ 824-960/ 1710-1880/1850-1990/ 1920-2170/2100-2500/ 2500-2700	2.1	1.5 3.0 3.0 4.5	100	164	1.6
3G/4G MicroSphere	CFS69271-FNF	698-806/ 824-960/ 1710-1880/1850-1990/ 1920-2170/2100-2500/ 2500-2700	2.1	1.5 3.0 3.0 4.5	100	164	1.6
3G/4G MicroSphere	CFS69271-FSMAF	698-806/ 824-960/ 1710-1880/1850-1990/ 1920-2170/2100-2500/ 2500-2700	2.1	1.5 3.0 3.0 4.5	100	164	1.6

1. Part numbers above are completed with the addition of the cable length and connector (e.g. SQ185PG12NF implies 12" of cable terminated in a TypeN female connector
2. Connector/cable configurations can be customized to meet requirements
3. Vehicular application

LTE In-Building Wireless

Antennas applicable for environments where aesthetics and wide angle coverage are necessary for successful wireless deployment. Their surprisingly small size allow the antennas to be hidden almost anywhere, providing an invisible solution for most applications. The products cover:

- Broadband global solutions (698-2700 MHz)
- Localized solutions that operate in the 698-806 band
- Localized solutions that cove the 2500-2695 band

• CMD69273P

• CMS69273

PART NUMBER	FREQUENCY (MHZ)	ANTENNA TYPE	PATTERN TYPE	BANDWIDTH		VSWR	GAIN dBi	POLAR-IZ-ATION	DIMENSIONS (mm)			CONNECTOR TYPES	MOUNT STYLE	POWER RATING	PIM, 3RD ORDER 2X20 W, dBc	
				EL°	AZ°				LENG	WID	HT				TYPICAL (HIGH/LOW BAND)	MAX
IN800/2700-5	806-860 / 1710-2700	Panel	Omnidirectional	90	360	1.5	3.0	Vertical	186	87	—	Type N(f)	Ceiling	50W	—	—
CMD69273	698-960 / 1710-2700	2-port MIMO	Omnidirectional	—	360	2.0	3-4/ 5.0-5.6	Vertical	219	—	44	2-Type N(f)	Ceiling	10W	—	—
CMD69273P-FNF	698-960 / 1710-2700	2-port MIMO	Omnidirectional	—	360	2.0	3-4/ 5.0-6.9	Vertical	219	—	44	2-Type N(f)	Ceiling	50W	—	—
CMD69273P-30F	698-960 / 1710-2700	2-port MIMO	Omnidirectional	—	360	2.0	3-4/ 5.0-6.9	Vertical	219	—	44	2-Type N(f)	Ceiling	50W	—	—
CMD69273P-46NF	698-960 / 1710-2700	2-port MIMO	Omnidirectional	—	360	2.0	3-4/ 5.0-6.9	Vertical	219	—	44	2-Type N(f)	Ceiling	50W	—	—
CMS69273	698-960 / 1575 / 1710-2700	Panel	Omnidirectional	90	360	2.0	1.0 / 3.0	Vertical	199	—	86	Type N(f)	Ceiling	25W	—	—
CMS69273S	698-960 / 1575 / 1710-2700	Panel	Omnidirectional	90	360	2.0	1.0 / 3.0	Vertical	199	—	86	Type N(f)	Ceiling w/ threaded stem	25W	—	—
CMS69273P	700/850/900/1800/1900/ 2300/2400/2500	Low PIM 2-port MIMO	Omnidirectional	—	360	2.0	3.1/3.1/2.8/ 5.9/4.5/4.3/ 5.9/6.9	Linear H/V	219	—	44	2-Type N(f)	Ceiling	50W	—	—
PAS69278P-FNF	698-960 / 1710-2700	Dual Port Panel	Directional	55/70	50/80	2.0	7.5-9.0 5.7-9.5	Slant ± 45°	295	295	82	2-Type N(f)	Wall / Mast	10W	—	—
PAS69278P-46NF	698-960 / 1710-2700	Dual Port Panel	Directional	55/70	50/80	2.0	7.5-9.0 5.7-9.5	Slant ± 45°	295	295	82	2-Type N(f)	Wall / Mast	10W	—	—
PAV69278I	698-960 / 1710-2700	Panel	Directional	64/51	75/63	2.0	8.0	Vertical	249	249	61	Type N(f)	Wall	50W	—	—
PAV69278PI	698-960 / 1710-2700	Low PIM Panel	Directional	64/51	75/63	2.0	8.0	Vertical	249	249	61	Type N(f)	Wall	50W	—	—
SL69273PT	Port1: 698- 806/1710-2170 Port2: 824-894/1850-1990 Port3: 2500-2700	3-port Panel	Omnidirectional	—	360	2.0	3.0 / 2.0/2.0	Vertical	216	—	44	Type N(f)	Ceiling	5W	—	—
CMX69273P	698-960 / 1710-2700	2-Port MIMO	Omnidirectional	—	360	1.7:1	4.5/3.5	Linear	—	250	49	Model Specific	Ceiling	50W	<-154 dBc / <-153 dBc	<-150 dBc
CMQ69273P-30NF	698-960 / 1710-2700	4-Port MIMO	Omnidirectional	—	360		6.0/5.7	Linear	—	330	55.5	Type N(f)	Ceiling	50W	<-154 dBc / <-164dBc	<-153 dBc
CMQ69273P-30D41F	698-960 / 1710-2700	4-Port MIMO	Omnidirectional	—	360		6.0/5.7	Linear	—	330	55.5	Four Type 4.1-9.5 (f)	Ceiling	50W	<-154 dBc / <-164dBc	<-153 dBc
CMQ69273P-30D43F	698-960 / 1710-2700	4-Port MIMO	Omnidirectional	—	360		6.0/5.7	Linear	—	330	55.5	Four Type 4.0-10 (f)	Ceiling	50W	<-154 dBc / <-164dBc	<-153 dBc
CLS69273	698-960 / 1710-2700	Panel	Omnidirectional	—	360		3.1/6.3	Vertical	250	—	475	Type N(f)	Ceiling	50W	<-153 dBc	—
CLS69273P	698-960 / 1710-2700	Panel	Omnidirectional	—	360		3.1/6.3	Vertical	250	—	475	Type N(f)	Ceiling	50W	<-153 dBc	—
PAV69278O	698-960 / 1710-2700	Panel	Directional	64/51	75/63	2.0:1	7.6/8.1	Vertical	249.4	248.6	61.3	Pigatail w/ Type N(f) Fixed Type N(f)	Wall/Mast	50W	—	—

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