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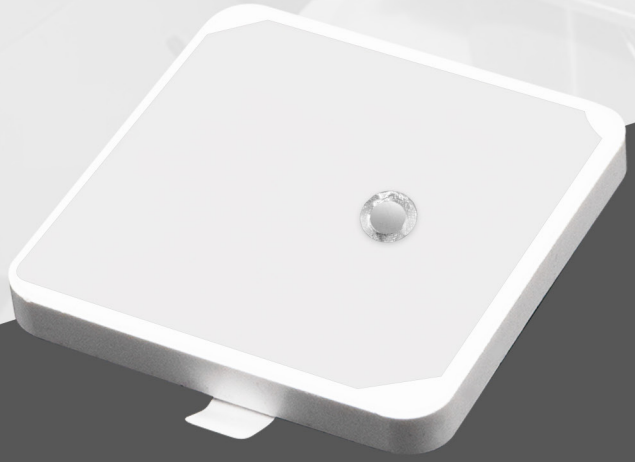

Datasheet

Circularly Polarized Passive GPS Embedded Ceramic Patch Antenna

Model: AIGC002

PN: M04-0103960R0A

Description:

GPS/GALILEO/BeiDou Passive Patch Antenna

Operating Frequency: 1559-1610 MHz

Features:

Ceramic Patch Element

Low Axial Ratio

Dimensions: 35 x 35 x 4 mm

Adhesive Mount

RoHS & Reach Compliant

ABOOSTY

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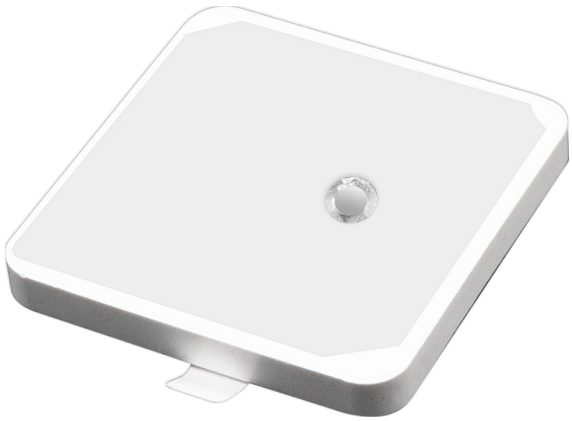
FEATURES & BENEFITS

- 35x35x4 mm Embedded Ceramic Patch Element
- Miniaturized, Multi-system Compatible
- Low Axial Ratio
- Adhesive Mount
- RoHS & Reach Compliant
- Covering Bands: GPS (L1) / Galileo (E1) / BeiDou (B1) /GLONASS G1

APPLICATIONS

- Satellite Navigation Receivers
- Geodetic Surveying and Mapping
- Channel Surveying and Mapping
- Precision Agriculture
- Marine Surveying
- Asset and Fleet Tracking
- Oil, Gas, and Mining Industries
- M2M Applications
- Hand-held/Portable Devices



Antenna Image

ORDER INFORMATION

Product Name	Circularly Polarized Passive GPS Embedded Ceramic Patch Antenna
Model	AIGC002
Part Number	M04-0103960R0A
Dimensions	35 x 35 x 4 mm (PCB Board: 35 x 35 x 0.8 mm)
Weight	16.3 g
Mounting	Internal/Embedded/Adhesive Mount
MOQ	250 pcs
Custom Options	Logo, Packaging, Cable and Connectors

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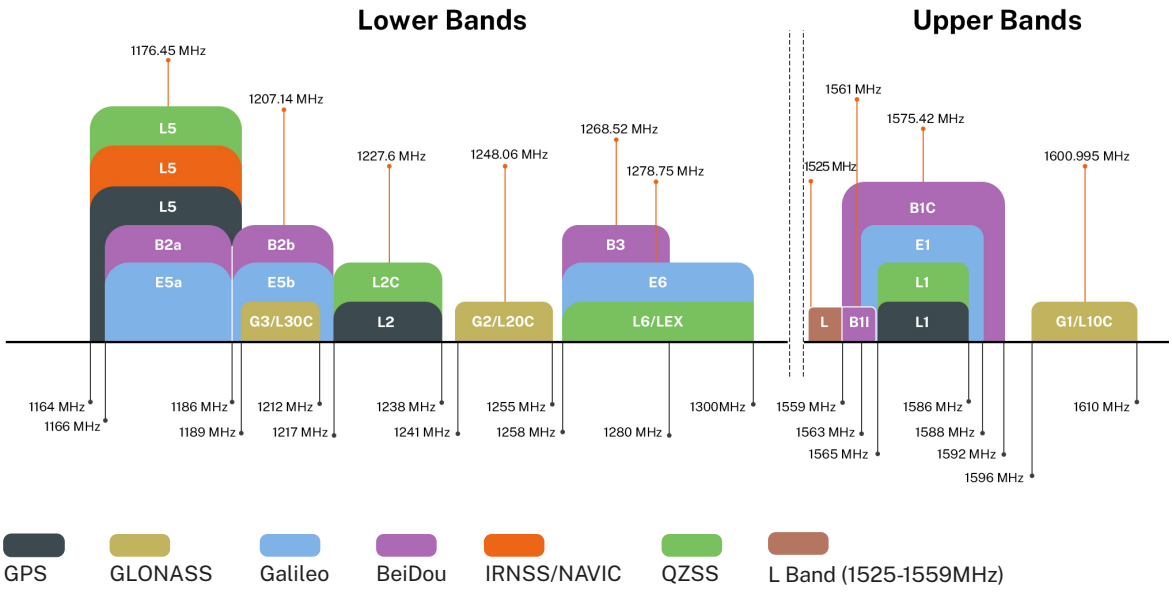
GNSS FREQUENCY BANDS

GNSS Frequency Bands Covered					
GPS	L1	L2	L5		
	●	○	○		
GLONASS	G1	G2	G3		
	●	○	○		
Galileo	E1	E5a	E5b	E6	
	●	○	○	○	
Bei Dou	B1I	B1C	B2a	B2b	B3
	●	●	○	○	○
QZSS (Regional)	L1	L2C	L5	L6	
	●	○	○	○	
IRNSS(Regional)	L5				
	○				
SBAS	L1/E1/B1	L5/B2a/E5a	G1	G2	G3
	●	○	○	○	○

*SBAS systems: WASS(L1/L5), EGNOSS(E1/E5a), SDCM(G1/G2/G3), SNAS(B1,B2a), GAGAN(L1/L5), QZSS(L1/L5), KAZZ(L1/L5).



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REFERENCE GUIDE

Antenna	
Frequency	**1580±20 MHz**
Bandwidth	40 MHz
VSWR	1.5 : 1
Peak Gain (dBi)	1.6
Axial Ratio (dB)	<3
Polarization	RHCP
Radiation Pattern	Directional
Input Impedance	50 Ω

Environmental				
Operating Temperature	-40°C to +75°C			
Storage Temperature	-40°C to +85°C			
Relative Humidity	40% to 95%			
Vibration	Wave Form: Random Vibration			
	Test Time: 30min/Axis			
	Direction: X, Y, Z Axis			
	PSD Break Points for 9.8 RMS (m/s^2)	Frequency (Hz)	50	300
		Acceleration $((m/s^2)^2/Hz)$	0.38416	0.38416
RoHS Compliant	Yes			

All data were measured with an 35x35 mm ground plane. Application data might vary.

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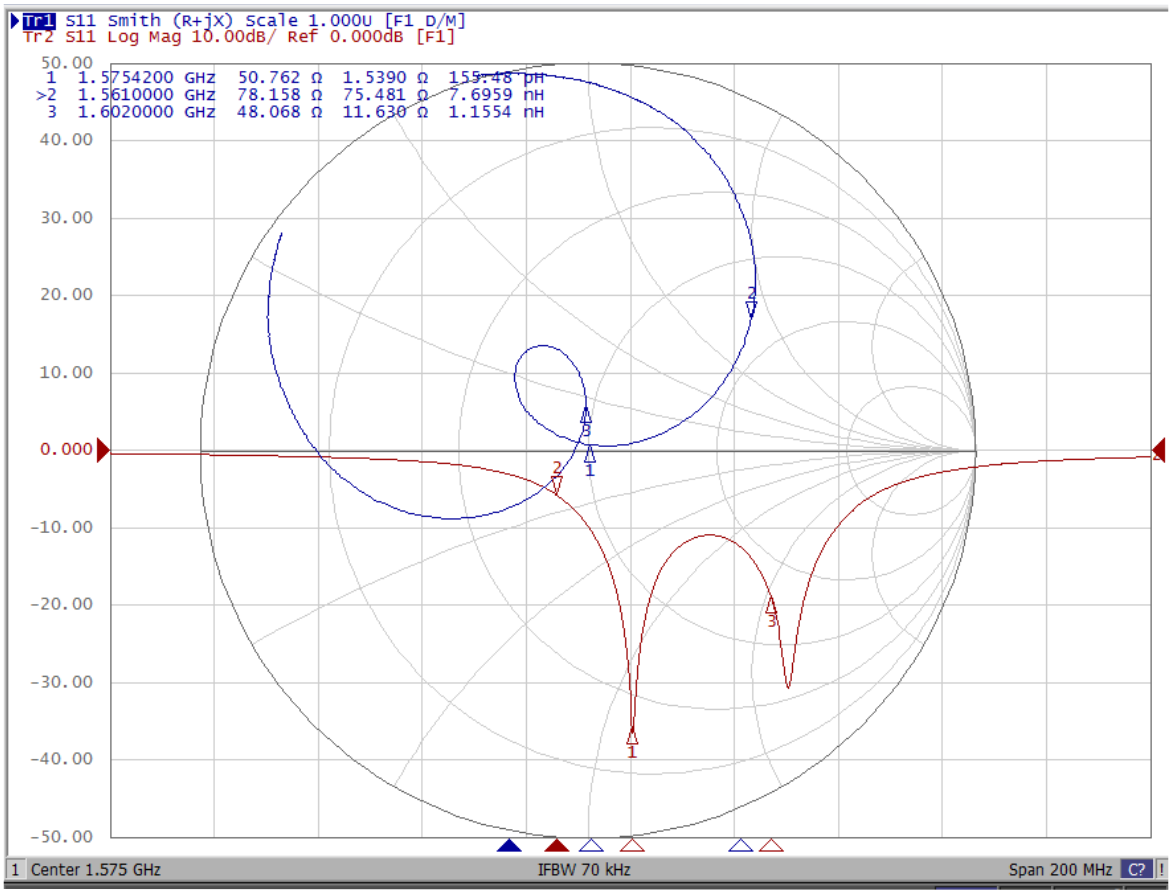
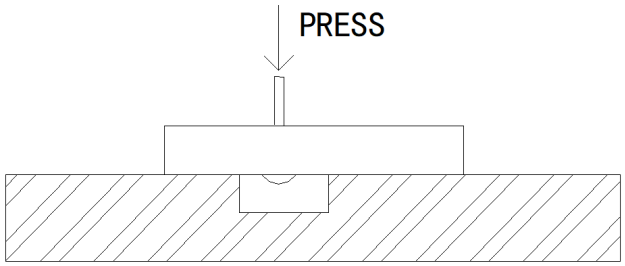
ELECTRICAL PERFORMANCE

◎ **Note**
All data displayed in "ELECTRICAL PERFORMANCE" were measured with a 35 x 35 mm ground plane.

S11





Item	Specification After Test (MHz)
Center Frequency Change	±2.0
-10dB Bandwidth Change	±2.0

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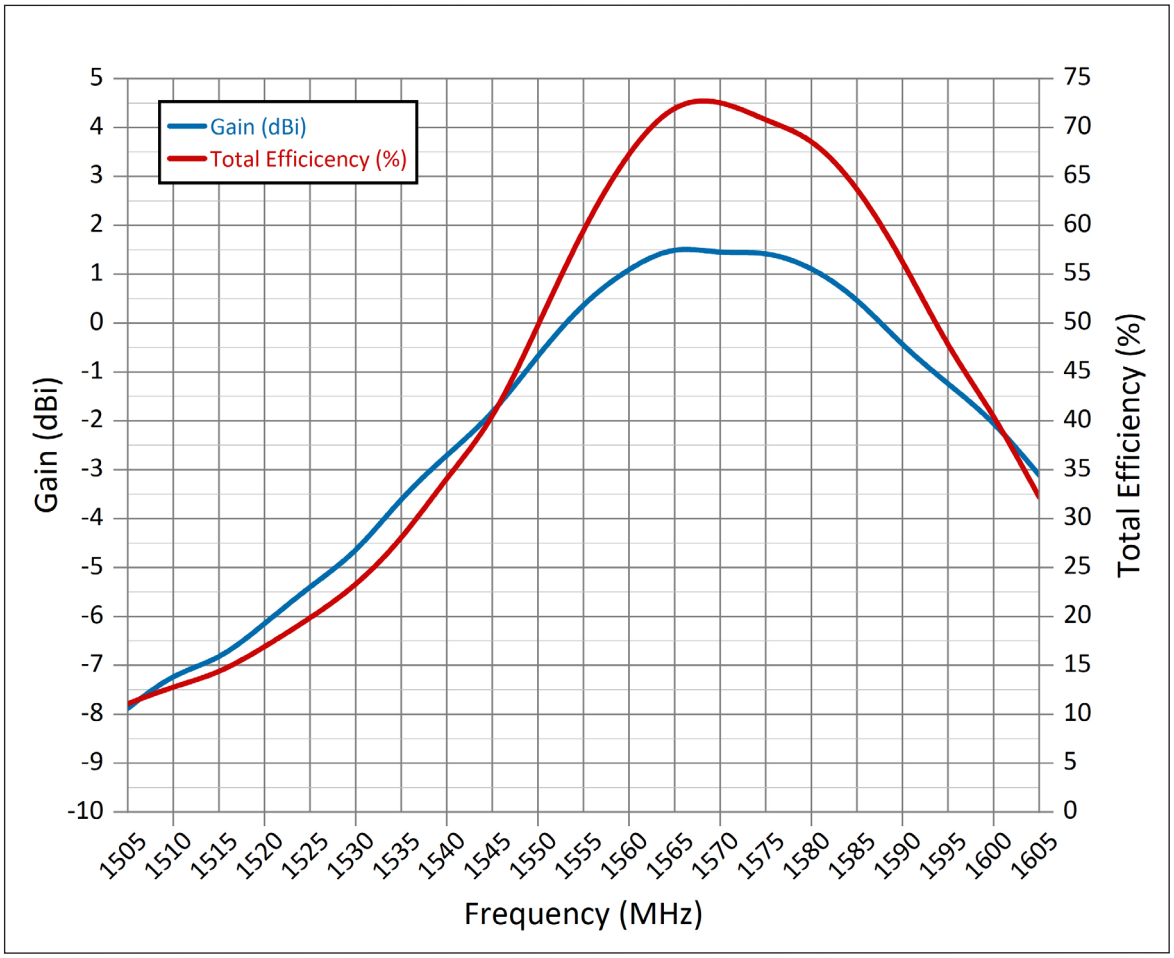
Passive Gain (dBi) and Total Efficiency (%)



Freq (MHz)	Gain (dBi)	Efficiency (%)	Freq (MHz)	Gain (dBi)	Efficiency (%)
1505	-7.88	11.08	1560	1.13	67.74
1510	-7.16	12.85	1565	1.6	72.75
1515	-6.9	14.16	1570	1.41	72.91
1520	-6.15	16.87	1575	1.48	70.69
1525	-5.38	19.79	1580	1.16	69.09
1530	-4.72	23.06	1585	0.52	64.11
1535	-3.56	27.77	1590	-0.47	56.51
1540	-2.7	34.23	1595	-1.24	47.43
1545	-1.89	39.8	1600	-2	40.71
1550	-0.65	49.76	1605	-3.11	32.2
1555	0.43	59.8			

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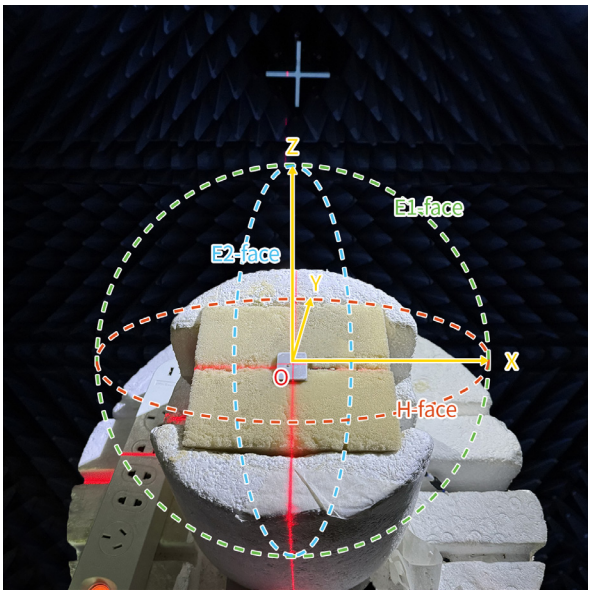
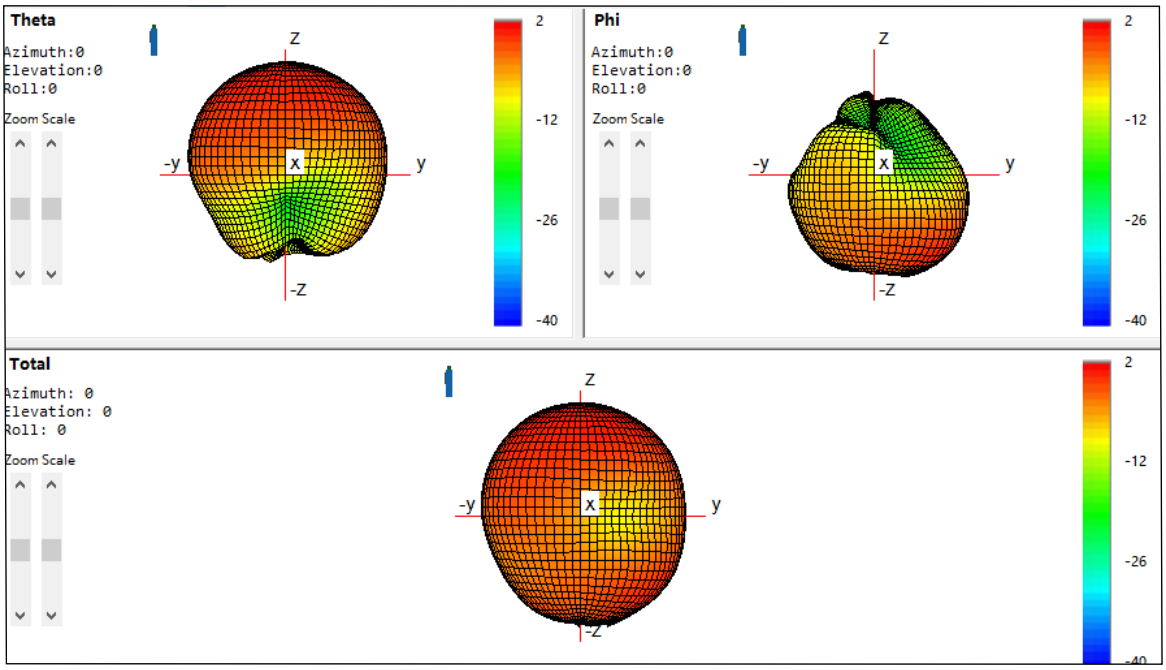
3D Radiation Patterns (1505-1605 MHz)



The Antenna in the Aboosty's Anechoic Chamber



3D at 1575 MHz, Gain=1.48 dBi

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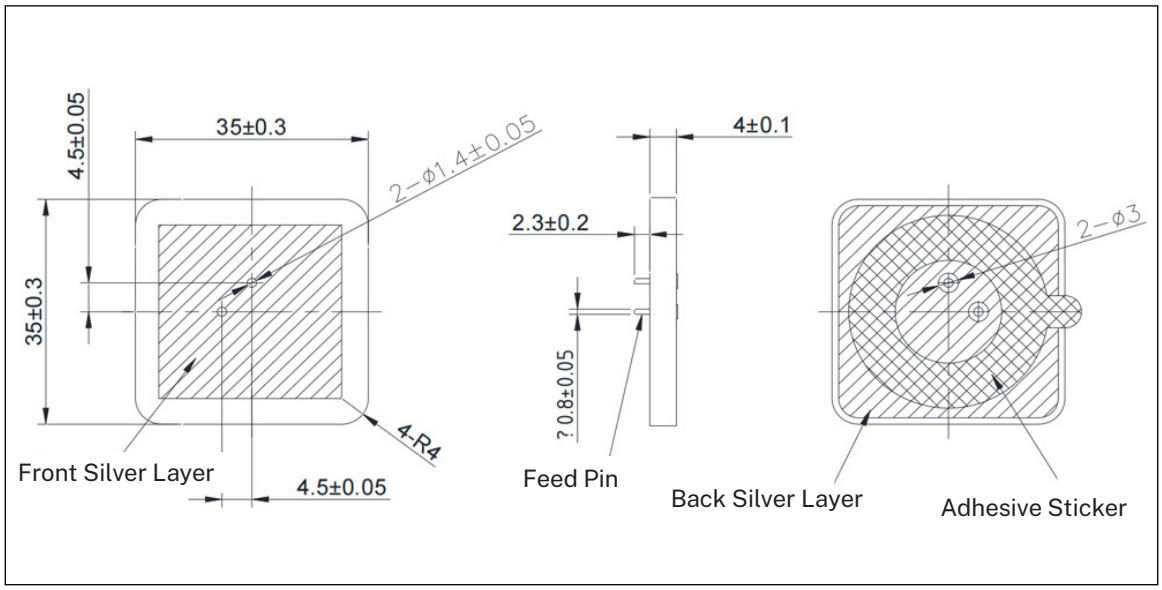
MECHANICAL DIMENSIONS



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Why Choose ABOOSTY

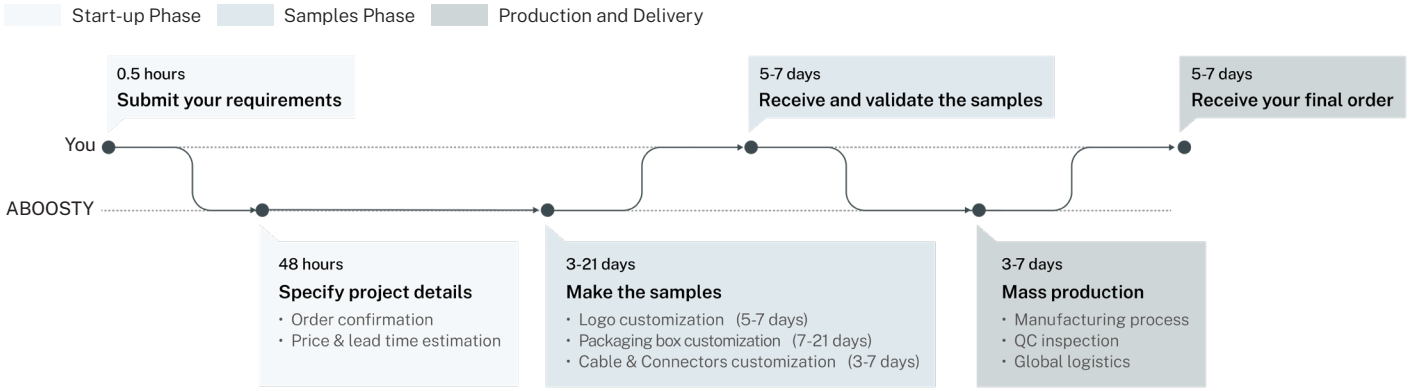
- 10+ years in antenna R&D, production, and OEM/ODM
- MES system supported factory; 50M+ units annual output capacity
- Factory directly competitive price
- Quick price and lead time estimate
- Innovative and patented design solutions
- Professional team support & prompt reply within 24h

What We Provide

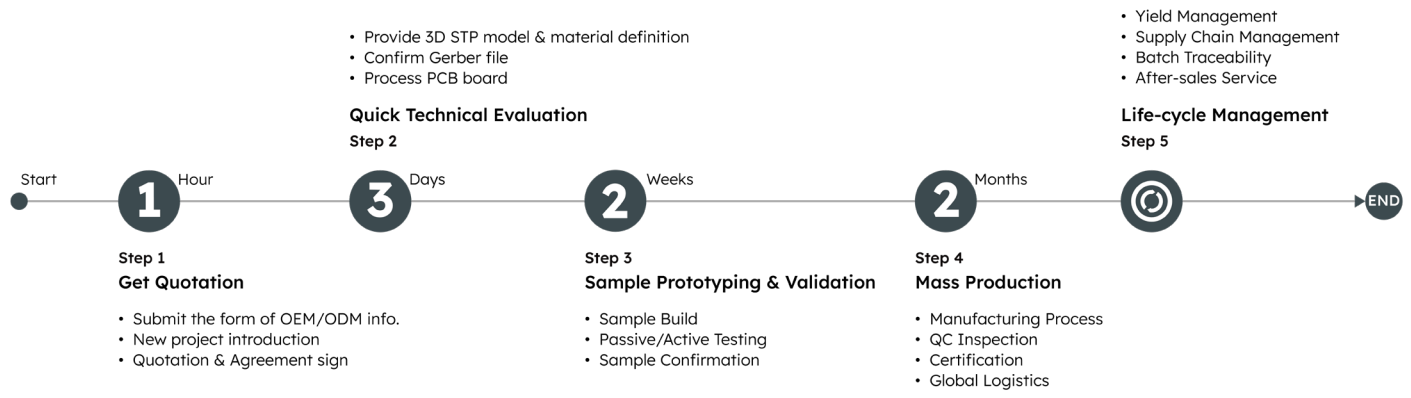
	Light Customization	Deep Customization
OEM/ODM Services	• Logo • Packaging • Cables & Connectors	• In-depth tailoring for specific applications • Functional enhancements • Environmental adaptations • Vertical certifications • ...

Custom Process

Light Customization Process



Deep Customization Process



Note: You can let us handle the PCB prototyping or do it yourself. Choosing self-prototyping may add 2 to 5 weeks to the timeline.

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