

Antenna Datasheet

Product OC:

Version: 0.9

Date: 2025-08-08

Product Name: P C B Antenna

Key Features:

Frequency Band: 2400–2500 MHz, 5150–5850 MHz

Dimensions: 22.42 mm

Efficiency: Up to 44 %

ROHS and REACH Compliant

Manufacturer: Shenzhen Aikerui Technology Co., Ltd.

Address: Room 302, 3rd Floor, Factory Building No. 31, Yangmei Road,
Yangmei Community, Bantian Street, Longgang District, Shenzhen

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1 Specification

Test Condition: Assembled in test device

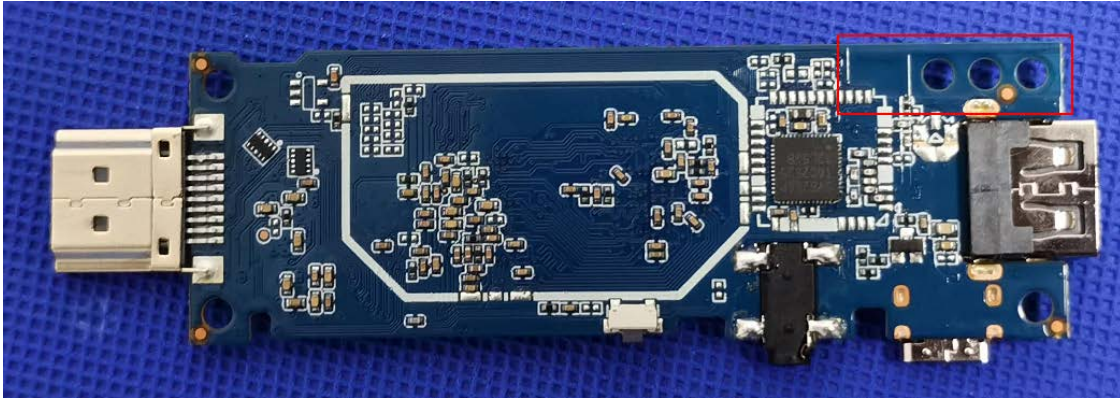
1.1. Electrical

Electrical	
Frequency Range	2400–2500 MHz, 5150–5850 MHz
Impedance	50 Ω
Polarization	Linear
Radiation Pattern	Omni-directional
VSWR	≤ 2.2
Peak Gain	0.91dBi for 2.4G, 2.01dBi for 5.15G, 2.03dBi for 5.85G

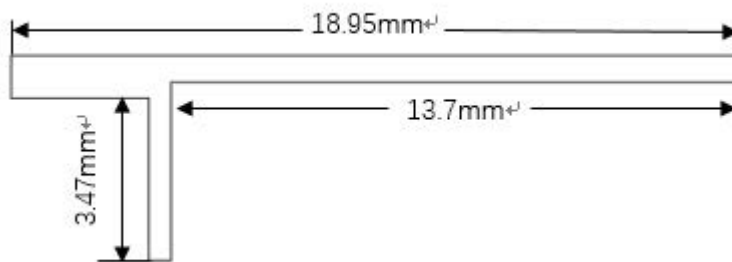
1.2. Mechanical & Environmental

Mechanical	
Antenna Dimensions	22.42 mm
Material & Color	PCB & Green
Weight	
Mounting Type	
Environmental	
Operation Temperature	-40 °C to +85 °C
Storage Temperature	-40 °C to +85 °C
RoHS & REACH Compliant	Yes

1.3. Antenna Assembly



2 Drawing

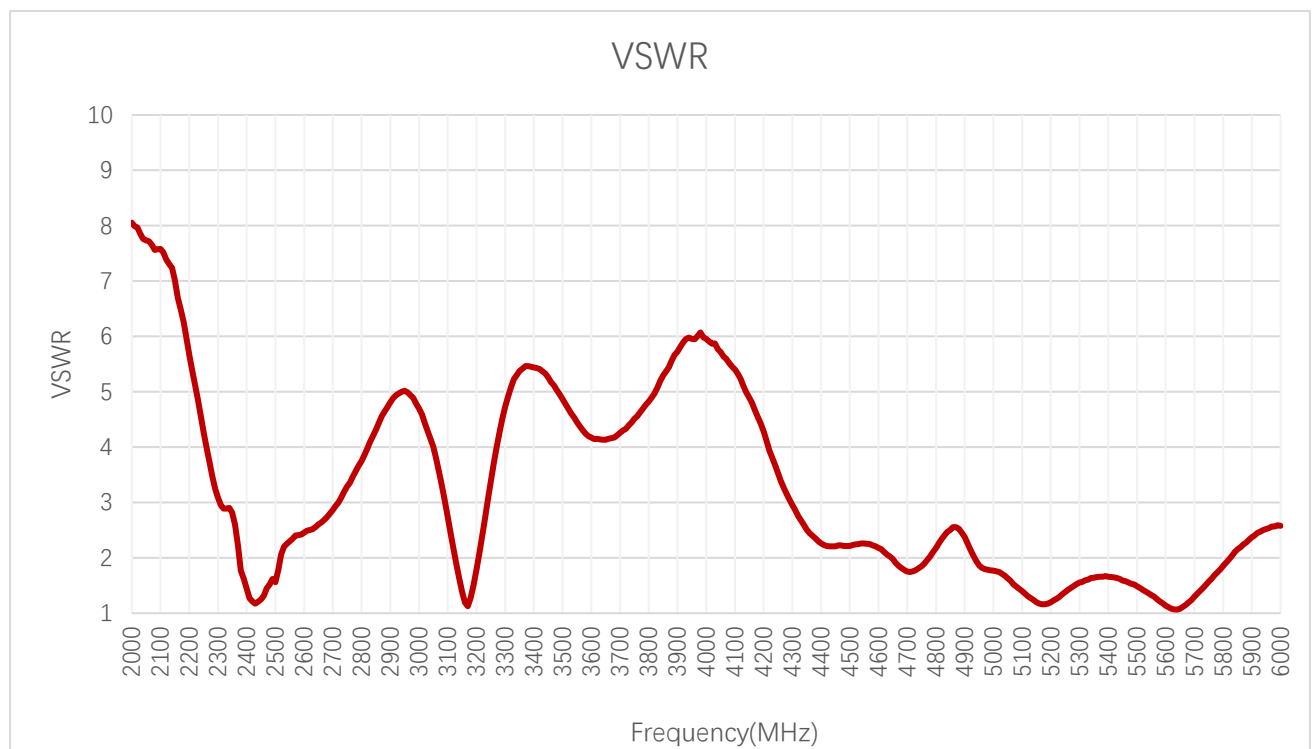


3 Detailed Performance

- Manufacturer: Quectel Wireless Solutions (Changzhou) Co., Ltd.
Address: No.8 Nanhu West Road, Wujin District, Changzhou City, Jiangsu Province, China

3.1. S-Parameter Test

3.1.1. VSWR

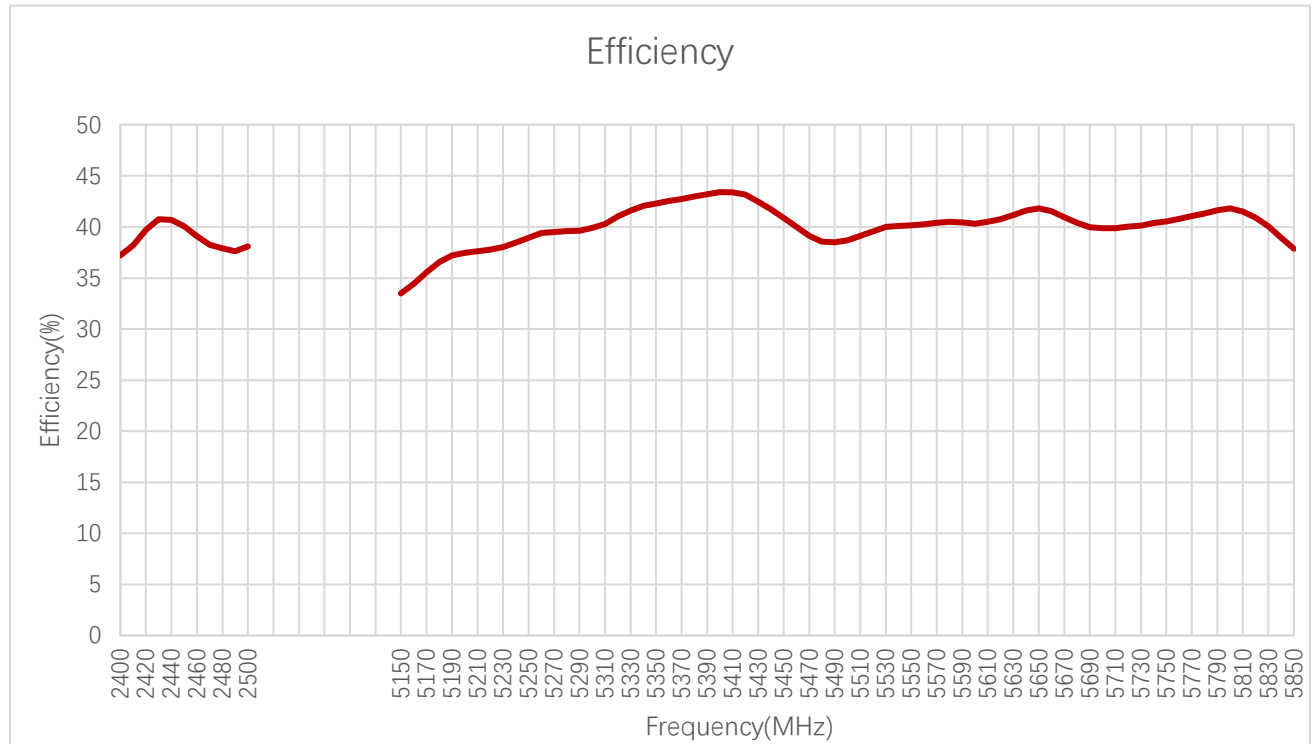


VSWR

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
VSWR	1.5	1.2	1.6	1.2	1.5	2.2	-	-	-	-

3.2. Radiation Performance Test

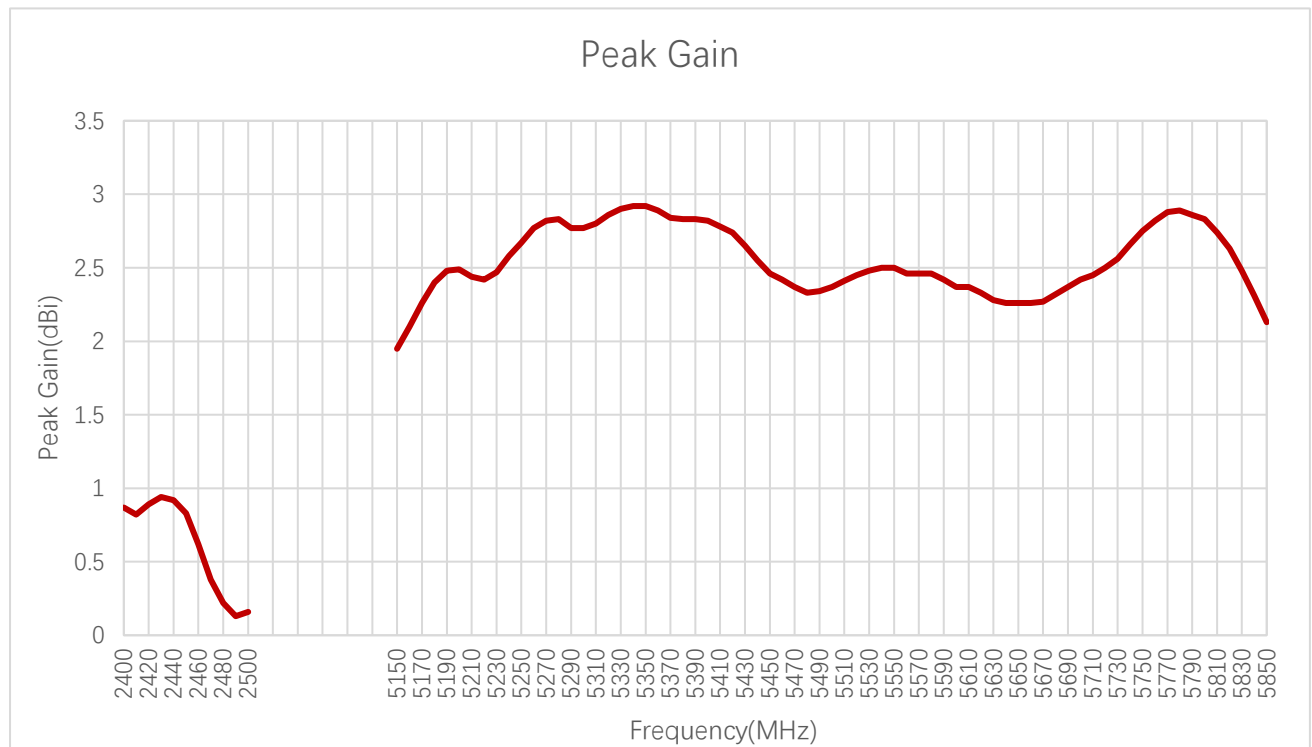
3.2.1. Efficiency



Efficiency (%)

Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
Efficiency (%)	37.2	40.1	38.1	33.5	38.7	37.9	-	-	-	-

3.2.2. Peak Gain

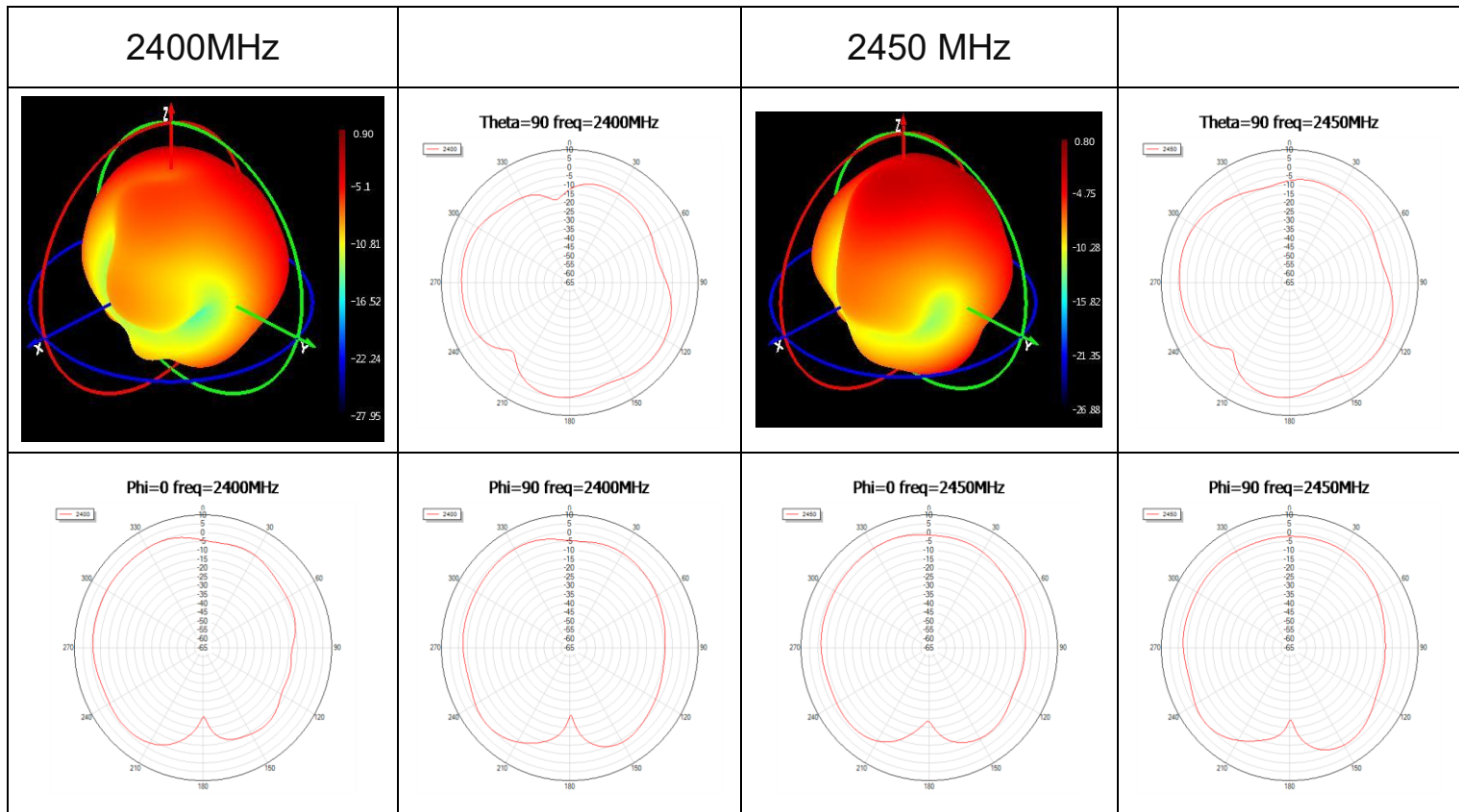


Peak Gain (dBi)

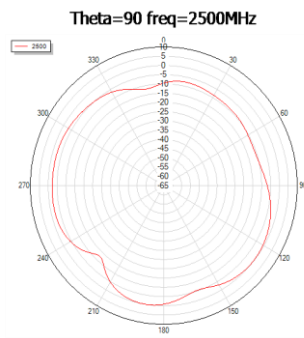
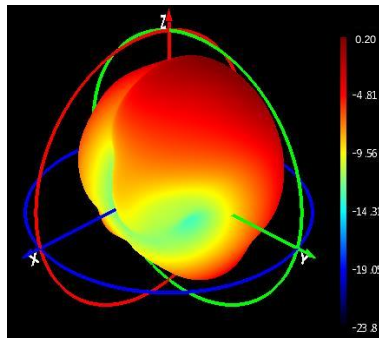
Frequency (MHz)	2400	2450	2500	5150	5500	5850	5925	6325	6725	7125
Peak Gain (dBi)	0.91	0.82	0.21	2.01	2.40	2.03	-	-	-	-

3.2.3. 2D Radiation Pattern

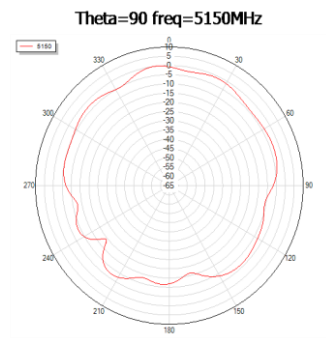
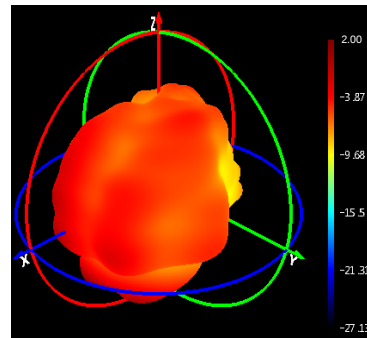
- Test Condition: Assembled in test device
- Test Chamber: HF-S-1



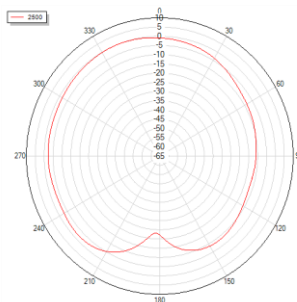
2500 MHz



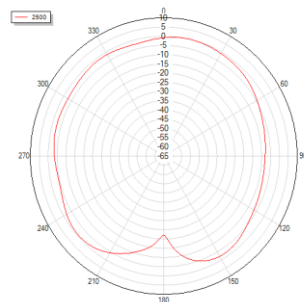
5150 MHz



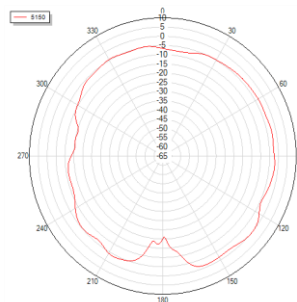
Phi=0 freq=2500MHz



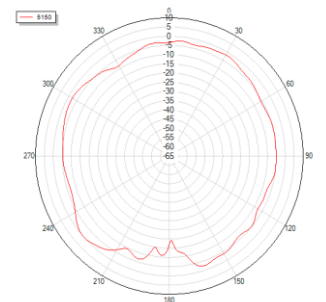
Phi=90 freq=2500MHz



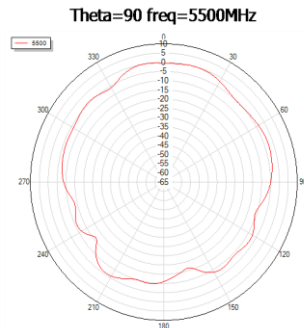
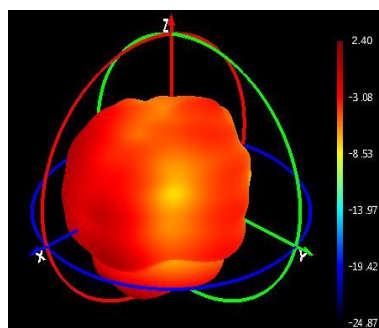
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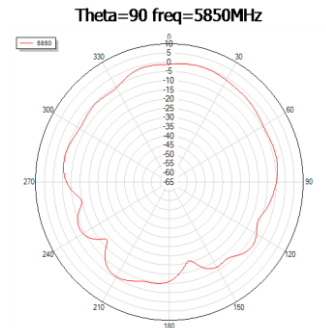
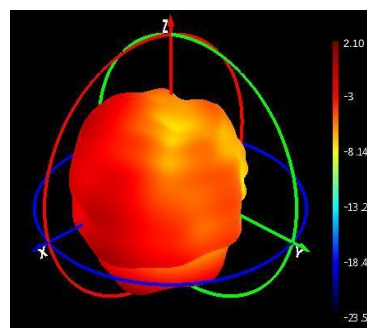
Phi=90 freq=5150MHz



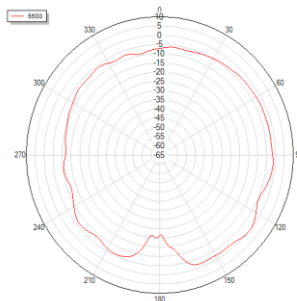
5500 MHz



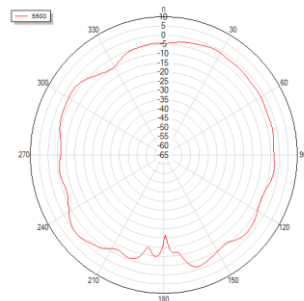
5850 MHz



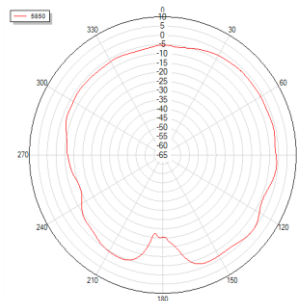
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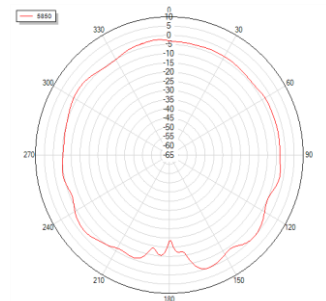
Phi=90 freq=5500MHz



Phi=0 freq=5850MHz



Phi=90 freq=5850MHz



Contact Us

At Quectel, our aim is to provide timely and comprehensive services to our customers. If you require any assistance, please contact our headquarters:

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Or our local offices. For more information, please visit:

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Revision History

Version	Date	Author	Note
-	2024-07-01	Edison Liu/ Blake Xiang/ David Liu/ Aria Chu	Creation of the document
1.0	2024-07-01	Edison Liu/ Blake Xiang/ David Liu/ Aria Chu	First official release
1.1	2025-09-02	Blake Xiang/ Edison Liu/ Aria Chu	Numerous changes were made to this document. It should be read in its entirety.



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