

Standards, Regulations, Testing & Certifications

UNLICENSED 6GHz BAND

A Global Perspective

INDIA

EUROPE

USA

AUSTRALIA

PRAVEEN RAO

CEO & Technical Director of
C-PRAV Labs & Certifications

Compliance & Product Regulatory Approvals



BIF – WORLD WIFI Day, 18th June 2026

An event banner for BIF – World Wi-Fi Day. At the top, it says 'SUPPORTED BY' and lists the Ministry of Communications and JOT. Below that are logos for BIF (Broadband India Forum) and the Wireless Broadband Alliance. The central text reads 'Celebrates WORLD™ Wi-Fi Day'. At the bottom, it says 'Unlocking 6 GHz: Powering India's Next Wireless Leap' and provides the date '18 June 2026', time '0930 - 1700 Hrs', and location 'Shangri-La Eros, New Delhi'.



Praveen Rao

CEO & Technical Director
C-PRAV Group

C-PRAV Group: Australia, New Zealand,
India, Canada, Singapore, France

With over 33 years of engineering experience in the TIC Industry, Praveen is a seasoned professional specializing in electrical/electronic product **Standards, Regulations, Testing & Certifications for Global markets.**



Connect
with me!



Started his career in ISRO Satellite Control Earth Stations in 1988 – ISRO.	Lab Manager of an Australian EMC Test Lab from 1992 – 2000.	Global Product Compliance Manager at Fujitsu for 21 years.
Member of International Standards committees IEC and CISPR.	Chair of Australian National EMC Committee.	Technical Assessor for Lab's ISO 17025 for NATA and IANZ. NATA Accreditation Advisory Council member.
Member of USA-FCC TCB Council and European REDCA.	Board Member of IEEE EMC Society of Australia	An associate of Cherry Clough Consultants, UK.

+61 412258952

Praveen@C-PRAV.com

6GHz WIFI

AGENDA



- 01 6GHz Global Overview & Usage
- 02 Band Usage by Region
- 03 USA, EU, India & Australia Regulations, Standards
- 04 Indian WPC vs EU and FCC
- 05 Testing for TEC-MTCTE
- 06 **Indigenous** Design of Products – What's the Roadmap?

6GHz GLOBAL USAGE - Bands, Regulations, Standards, Approvals

Unlicensed band deployment across key regions



USA

5.925–7.125 GHz

1200 MHz — Full band

FCC Regulations – Radio, EMC, RF Exp

FCC Part 15, UNII-5 to UNII-8

Indoor + Outdoor (SP/AP)

FCC Type-Approval Certification

EUROPE

5.945–6.425 GHz

500 MHz — Lower sub-band

EU-CE Regulations – Radio, EMC, Safety, RF Exp, Cybersecurity, RoHS

ETSI EN 303 687

Indoor only (LPI) only and VLP

EU – RED CE Presumption of Conformity including Cyber Security

INDIA

5.925–6.425 GHz

500 MHz — Lower sub-band

WPC / DoT Regulations – Radio only
TEC-MTCTE – PENDING

WPC Gazette 47E

Indoor LPI and Outdoor VLP

WPC SD-ETA required

AUSTRALIA

**5.925–6.585 MHz
Planning up to 7.125 GHz**

500 MHz lower sub-band + 160MHz, 1200 MHz — Full band in planning

ACMA Radiocomms Act – Radio, EMC, Safety, RF exp, Cybersecurity

AS/NZS 4268 and LIPD Class Licenses

ETSI EN 303 687 / FCC also OK

Indoor + Outdoor

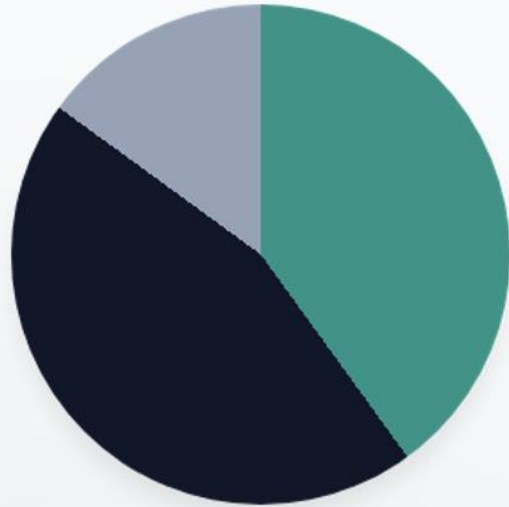
RCM Approval

Global Unlicensed Spectrum Share of WIFI bands



India is in the League now

The Upper 6GHz band should also be in the agenda



- 6 GHz Band (High Capacity)— 40% (New lower 500 MHz allocation)
- 5 GHz Band (Mainstream)— 45% (DFS & non-DFS channels)
- 2.4 GHz Band (Legacy/IoT)— 15% (Heavily congested range)

The newly de-licensed 6GHz band effectively doubles the available clean spectrum for high-throughput client devices, resolving long-standing congestion issues in the 2.4GHz and 5GHz ranges.

6GHz INDIA WPC vs USA and EU – Requirements

Device Type : Low Power Indoor Use			
Test Parameters	Limits as per WPC Gazette G.S.R. 47(E)	FCC part 15 (Subpart E) 15.407: Technical Requirements	ETSI EN 303 687 V1.1.1 (2023-06) Technical requirements
Max. PSD e.i.r.p for in-band emissions	11 dBm/MHz	5 dBm/MHz	10 dBm/MHz
Max. e.i.r.p for in-band emissions	30 dBm	30 dBm	23 dBm
Max. Emission Bandwidth	320 MHz	320 MHz**	Not defined
Out of band emissions (Max e.i.r.p density)	-27dBm/MHz WPC requirement is more stringent for this parameter	-27dBm/MHz	-22 dBm/MHz
** FCC has relaxed this requirements stating that a 99% BW result can be used. WPC needs to also consider due to technology constraints			

FCC or EU Test reports are accepted by WPC with few conditions

--17025 Accredited reports

--Compliance with WPC limits

Device Type: Very Low Power Outdoor Use			
Test Parameters	Limits as per WPC Gazette G.S.R. 47€	FCC part 15 (Subpart E) 15.407: Technical Requirements	ETSI EN 303 687 V1.1.1 (2023-06) Technical requirements
Max. PSD e.i.r.p for in-band emissions	1 dBm/MHz	- 5 dBm/MHz	1 dBm/MHz
Max. e.i.r.p for in-band emissions	14 dBm	14 dBm	14 dBm
Max. Emission Bandwidth	320 MHz	320 MHz**	Not Defined
Out of band emissions (Max e.i.r.p density)	- 27 dBm/MHz WPC requirement is more stringent for this parameter	-27dBm/MHz	-45 dBm/MHz
** FCC has relaxed this requirements stating that a 99% BW result can be used. WPC needs to also consider due to technology constraints			



C-PRAV
LABS & CERTIFICATIONS

Upcoming: For TEC-MTCTE in-country testing required for all products incorporating 6GHz WiFi

WPC Just Published – 77–81GHz delicensed for Radar systems

The publication of **WPC GSR 468(E) dated 11th June 2026** enabling the use of Short-Range Automotive Radar systems in the 77–81 GHz band, marks a significant step towards advancing intelligent transportation and vehicle safety technologies in India. By aligning the regulatory framework with established European and global standards, the Department of Telecommunications (DoT) has enabled wider adoption of advanced driver assistance systems (ADAS)

De-licensing the 77–81 GHz will help the Indian automotive industry to become more competitive in the export market/ leading to the economic growth.

WPC notification GSR 466E dated 10th June 2026

Use of On-Board Units for Cellular Vehicle-to-Everything (C-V2X) Communication in the 5.9 GHz Band.

Device must comply with the technical standards as specified in WPC Gazette.

For more details/access to the WPC notification GSR 466E dated 10th June 2026, please refer the link below

<https://www.dot.gov.in/static/uploads/2026/06/e57098ec9d7015e859c1b98d6e3fadad.pdf>



INDIAN 6GHz Incorporated Host Products

Design for Exports



Challenges & Requirements for 6GHz Compliance in Export Markets

Multi-Regulatory Compliance

Products must satisfy multiple REGULATIONS: FCC (USA), ETSI (EU), ACMA (AU) and WPC (India) requirements – **different bands, power levels, and AFC rules(USA/AU)**.
– Lab capabilities in India

TRAINING is Key!

India is a BIG market. The world is BIGGER! Exporting QUALITY products need TRAINING in DESIGN, RELIABILITY, STANDARDS, TESTING, etc. Gov't Initiative and support for TRAINING is very VITAL.
www.c-prav.com/events

Lab & Certification Costs

Labs in India are NOT accepted for USA's FCC Certification – Recent development – ANY PRODUCTS DESTINED FOR USA MUST BE TESTED in USA, TAIWAN, VIETNAM, AUSTRALIA, etc. BUT NOT in INDIA...

Using Pre-Certified Modules in Host Products

Great cost saving and ease of approvals when using pre-certified modules in your products.



C-PRAV

LADS & CERTIFICATIONS

C-PRAV PRESENTS

<https://c-prav.com/events-2026/>

PRODUCT DESIGN & EMC COMPLIANCE WORKSHOP

The Journey of a Product through Design & Compliance



Mr. Keith Armstrong
United Kingdom



Dr. Min Zhang
United Kingdom



Mr. Istwaan Knijff
Netherlands



Mr. Claus Romer A
Denmark



Mr. Praveen Rao
Australia



THANK YOU

Our Resources



Stay ahead of the game with all the latest standards & regulatory updates.



Global Newsletter

Stay ahead of the game with all the latest standards & regulatory updates.

[Subscribe](#)



Standards

Download information on EMC & Radio Standards from our website.

The best and only resource you will ever need - our experienced and knowledgeable team have all the answers you need. Please call in or email to enquire a personalized presentation for your engineers.

C-PRAV Australia

Phone

+61 390 879 383

Email

australia@c-prav.com

Our Address

HALLMARC BUSINESS PARK, A9/2A Westall Rd,
Springvale VIC 3171 Australia

C-PRAV India

Phone

+91 99023 85494

Email

india@c-prav.com

Our Address

No. 2, 32nd E Cross, B C C Layout,
No.1374, 1st Floor, Jayanagar
4th T Block, Bangalore 560041 INDIA

C-PRAV New Zealand

Phone

+61 390 879 383

Email

NZ@c-prav.com

Our Address

NZBN 9429050399253 Auckland, NZ

C-PRAV Canada

Phone

+1 289 632 9334

Email

Canada@c-prav.com

Our Address

160-2 County Court Blvd, Brampton, Ontario
Canada L6W 4V1

C-PRAV Singapore

Email

Singapore@c-prav.com

C-PRAV France

Email

France@c-prav.com

Watch our events page for our future global resourceful events!