# Japan Private & Local Mobile Technologies

A short description of Private vs Local for 4G/5G

## Japan & private/local mobile networks

The Japanese government has created several options for enterprise/industry etc to meet the increasing challenges of managing and scaling their own data networks by enabling spectrum in the 4G & 5G spaces for private and local government use. New use cases, connectivity requirements, focus on security, performance, resilience, employee mobility and control are driving to review their strategy and seek new solutions.

| Name | Private 4G | Local 4G | Private 5G | Local 5G |
|---|---|---|---|---|
| Other Aliases | sXGP, uLTE, Multefire | Chiki BWA, Regional BWA | N/A | |
| Technology | 4G/LTE | 4G/LTE | N/A | 5G NSA/SA |
| Spectrum | 1.9 GHz | 2.5 GHz | N/A | 28 GHz / 4.5 GHz |
| Band | 39 | 38/41 | N/A | |
| Licensed by | Unlicensed for private use | Local/Regional Government | N/A | Local/Regional Government |
| Availability | 2018 | 2017 | N/A | 2020 |
| Comments | For private use. Not to offer commercial services to subscribers | Local Community<br>Local institutions<br>CATV operators | N/A | Local Community<br>Local institutions<br>CATV operators |

## Private LTE

- 4G/LTE Spectrum – Band 39 @ 1.9GHz
  - also called unlicensed LTE or sXGP
- Spectrum available for private use since October 2017.
  - The spectrum was previously allocated for the private PHS networks in Japan. See the JIT flier for this @ http://www.jitechnology.com/sxgp/
  - Standard off the shelf UE, eNB, EPC core require enhancements to use for this private area. General availability from April 2020.
- Theoretically any private/public institution can use it in areas that are considered private spaces such as offices, hospital, industrial sites, education, health, local government etc
  - It is not for commercial services
  - eNB broadcast an MCCMNC of 44190.

## Private 5G

- Not Available

## Local 4G

- 4G/LTE spectrum Bands 38 / 41 @ 2.5GHz
- Also called Chiki BWA, Regional BWA
- Spectrum is available from local governments all over Japan.
- The spectrum was previously allocated to the Wimax space
- MNO's / MVNO's are not allowed to operate this space.
- Spectrum is allocated based on use cases proposed, the use case should in theory benefit the local community in some way. Examples are smart Cities, emergency services and other
- Local government allocates MCCMNC to be used
- Standard off the shelf UE, eNB, EPC core require enhancements to use for this private area.

## Local 5G

- 5G spectrum at 28Ghz initially, supplemented by 4.5GHz later
- Spectrum availability for Mid 2020
- Similar in context to local LTE described above
- Multiple large SI, OEM, other are applying for test local 5G licenses in various areas of Japan.

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Hotel Communications Cloud PBX / uLTE


Enterprises / on Premise | Cloud


Offshore / Edge EPC


Outlet Mall shopping / mPOS


Universities / Free LTE / MEC


Hospitals / private LTE

Smart City / IOT / M2M


IOT / EDGE


Stadiums / Events / mPOS / uLTE


Rural/Remote Network Extensions


MVNO


Military / Public Safety / Tactical

Private 4G, Local 4G & local 5G don't have to operate independently of each other, Radio technologies can be combined with common core and networks for many reasons.

| Private 4G | Local 4G | Local 5G | Example Use Case |
|---|---|---|---|
| ☑ | | | Office (PHS/ WiFi/ Macro replacement) |
| | ☑ | | Smart City (Monitoring, Digital Signage, emergency services) |
| | | ☑ | Smart City (Monitoring, Digital Signage, emergency services) Network extension, Networking new buildings |
| ☑ | ☑ | | Smart City + Internal comms in Government / Hospitals |
| | ☑ | ☑ | Local 4G smart City + NSA 5G |
| ☑ | | ☑ | Government buildings + smart City |
| ☑ | ☑ | ☑ | All of the above |

## Talk to us today

To find out more about sXGP/uLTE/local 4G/local 5G market opportunities in Japan, please contact us at info@jitechnology.com or call +81-80-6786-4469 to speak to us today.

Ref: http//www.jitechnology.com