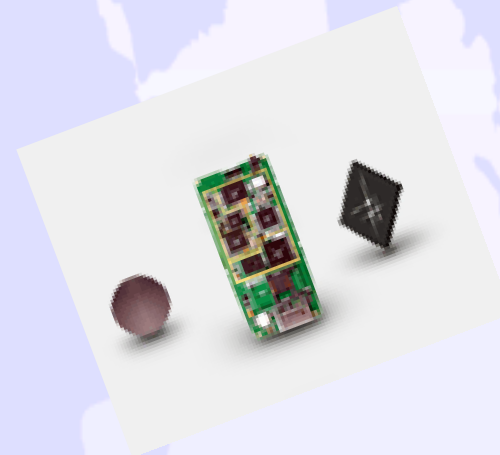


Qwave Product Presentation



Company Profile

- *Capital: US\$1.5 million*
- *Headquarter: SotoKanda Chiyoda-ku Japan.*
- *Taiwan branch: Taoyuan, Taiwan (Marketing)*
- *Manpower: 30 People*
- *Background: Qwave has a rich heritage in GaAs based RF products.*
- *Products:*
 1. *WLAN 802.11a/b/g/n switch ICs*
 2. *WiMAX Switch ICs*
 3. *WLAN 802.11a/b/g/n PA*
 4. *PA+LNA+SW FEM*

Cooperate factory and Product Users

- **Cooperate Partner:**



- **Product Users:**





RF Switch for WLAN Solution

WLAN Switch

Product	Application	Equi.	Package	Schedule
GW1179	11b/g/n, SPDT	uPG2179 ,AS179, HWS314	SOT-363	M/P
GW2164	11b/g, DPDT	uPG2164	DFN 1.5x1.5	M/P
GW2163	11a/b/g/n, SPDT	uPG2163	DFN 1.5x1.5	M/P
GW2158	11b/g/n, SPDT	uPG2158 uPG2159	TDFN 1x1	M/P
GW2185	11a/b/g/n, SPDT	uPG2185	TDFN 1x1	Q1'09
GW2186	11a/b/g/n, SPDT		TDFN 1x1	Q2'09

Wimax Switch

Product	Application	Equi.	Package	Schedule
GW2176	Wimax SPDT 6G	uPG2176 HWS486	DFN 1.5x1.5	Q1'09 MP
GW1466	Wimax SPDT 6G	HWS466	DFN 3x2	Q1'09 MP
GW1499	Wimax DPDT 4G	HWS499	QFN 3x3	Sample Ready

RF PA&FEM for WLAN Solution

RF PA

Product	Application	Equi.	Package	Schedule
GW5514	WLAN b/g/n	LX5514	QFN 2x2	Q1'09 MP
GW5515	WLAN b/g/n		QFN1.5x1.5	Q1'09
GW5530	WLAN a/n		QFN3x3	Sample Ready
GW5600	WLAN a/b/g/n		QFN3x3	Sample Ready
GW5610	WLAN a/b/g/n		QFN3x3	Sample Ready

RF FEM

Product	Application	Equi.	Package	Schedule
GW5540	WLAN b/g/n PA+LNA		QFN2x2	Q1'09 MP

T/R SW Comparison Table

Product	Type	Insertion Loss (dB)	Isolation (dB)	P _{1dB} (dBm)	Package
GW1179	SPDT	0.4	30	31	SOT363
AS179	SPDT	0.4	23	30	SOT363
uPG2179	SPDT	0.35	24	32	SOT363
HWS314	SPDT	0.4	25	30	SOT363
GW2164	DPDT	0.5	26	31	DFN1.5x1.5
uPG2164	DPDT	0.5	25	31	DFN1.5x1.5
GW2158	SPDT	0.4	33	31	TDFN1x1
uPG2158	SPDT	0.47	17	30.5	DFN1x1
uPG2159	SPDT	0.25	27	25.5	DFN1x1

Frequency=2.5GHz

T/R SW Comparison Table

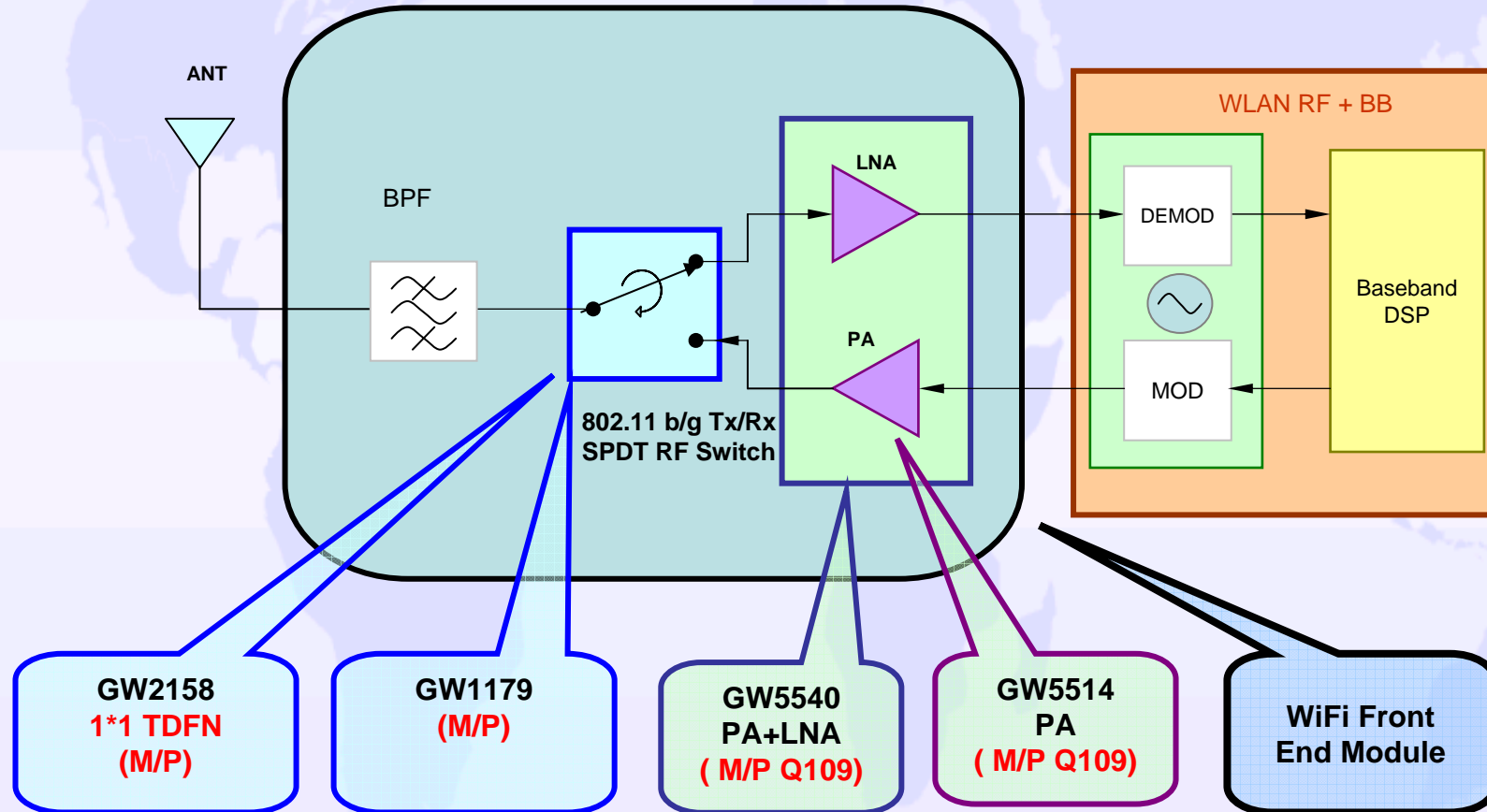
Product	Type	Insertion Loss (dB)	Isolation (dB)	P _{1dB} (dBm)	Package
GW2163	SPDT	0.4 (@2.4~2.5 GHz) 0.5 (@4.9~6.0 GHz)	29 (@2.4~2.5 GHz) 30 (@4.9~6.0 GHz)	31 (@2.4~2.5 GHz) 30 (@4.9~6.0 GHz)	DFN1.5x1.5
uPG2163	SPDT	0.4 (@2.4~2.5 GHz) 0.5 (@4.9~6.0 GHz)	35 (@2.4~2.5 GHz) 30 (@4.9~6.0 GHz)	31 (@2.4~2.5 GHz) 29 (@4.9~6.0 GHz)	DFN1.5x1.5

Frequency=5GHz

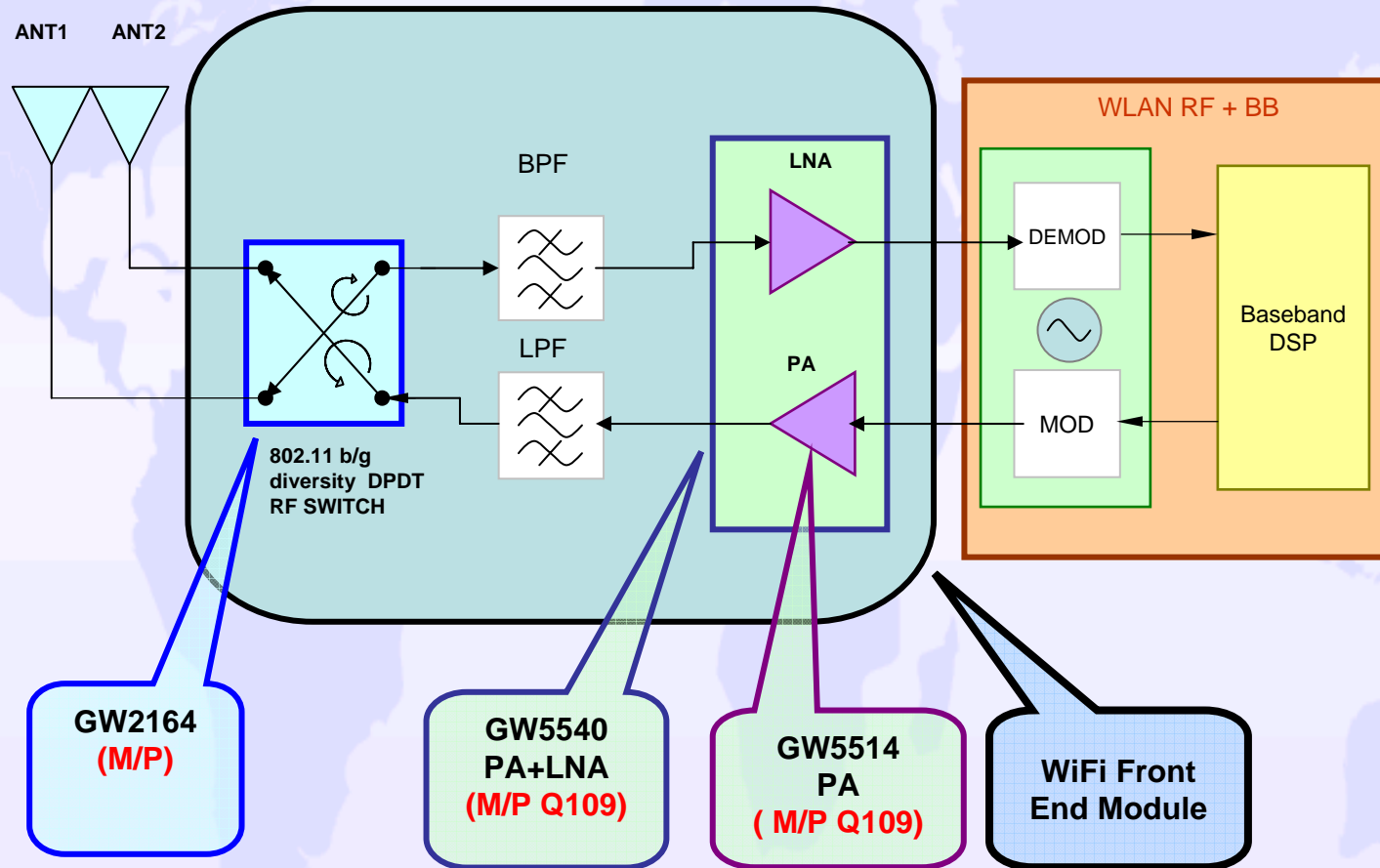
Single band PA Comparison Table

Product	Type	Pout@3% EVM 802.11g (dBm)	P1dB (dBm)	Current@ 3% EVM 20 dB Pout(mA)	Standby Current (mA)	Power Gain (dB)	Package
GW5514	11b/g/n	20	26	140	80	34	QFN2x2-12L
LX5514	11b/g/n	20	26	145	80	28	QFN2x2-12L
SST12LP07A	11b/g/n	21	28	160	70	28	QFN2x2-12L

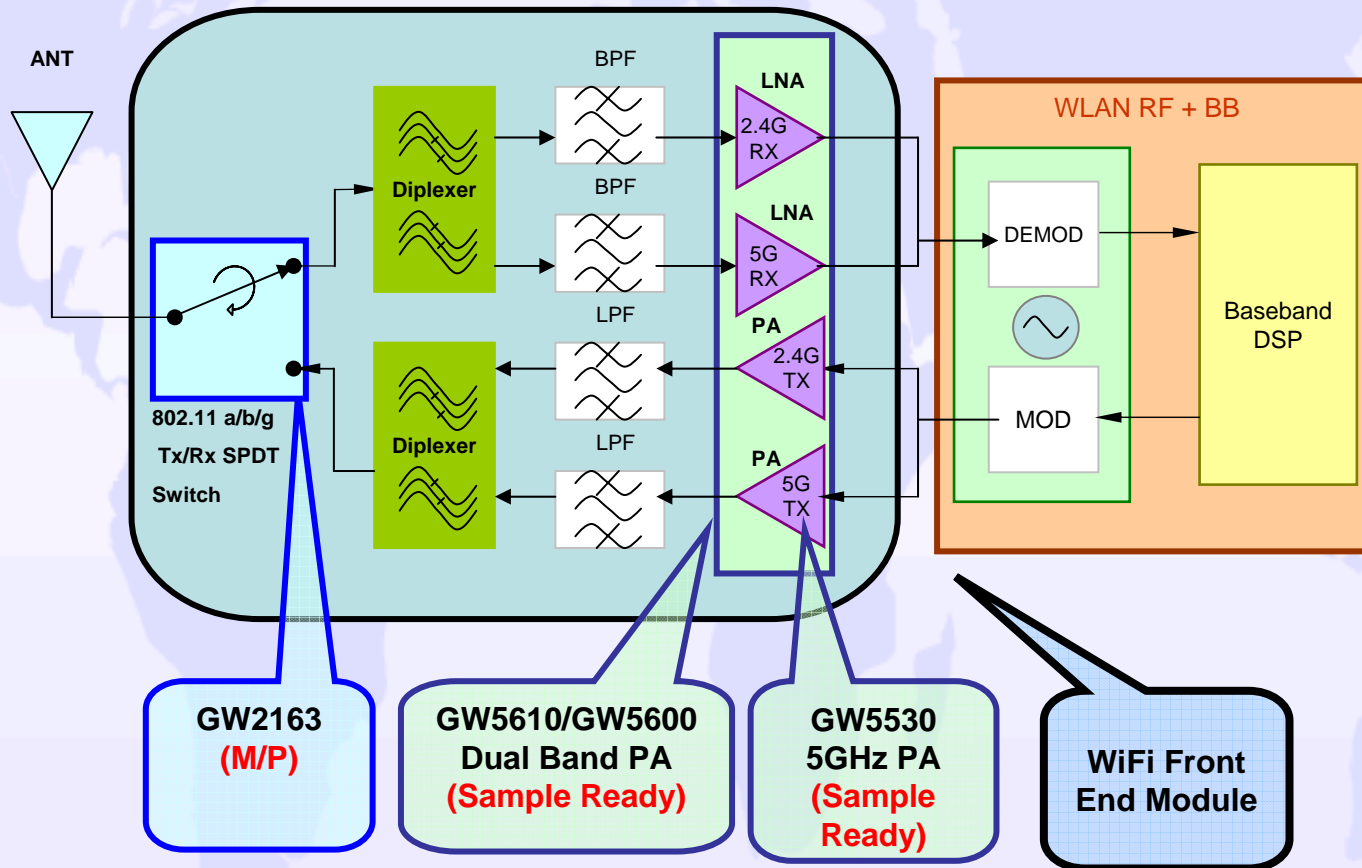
Single Band WLAN 802.11n+b/g RF Switch Application



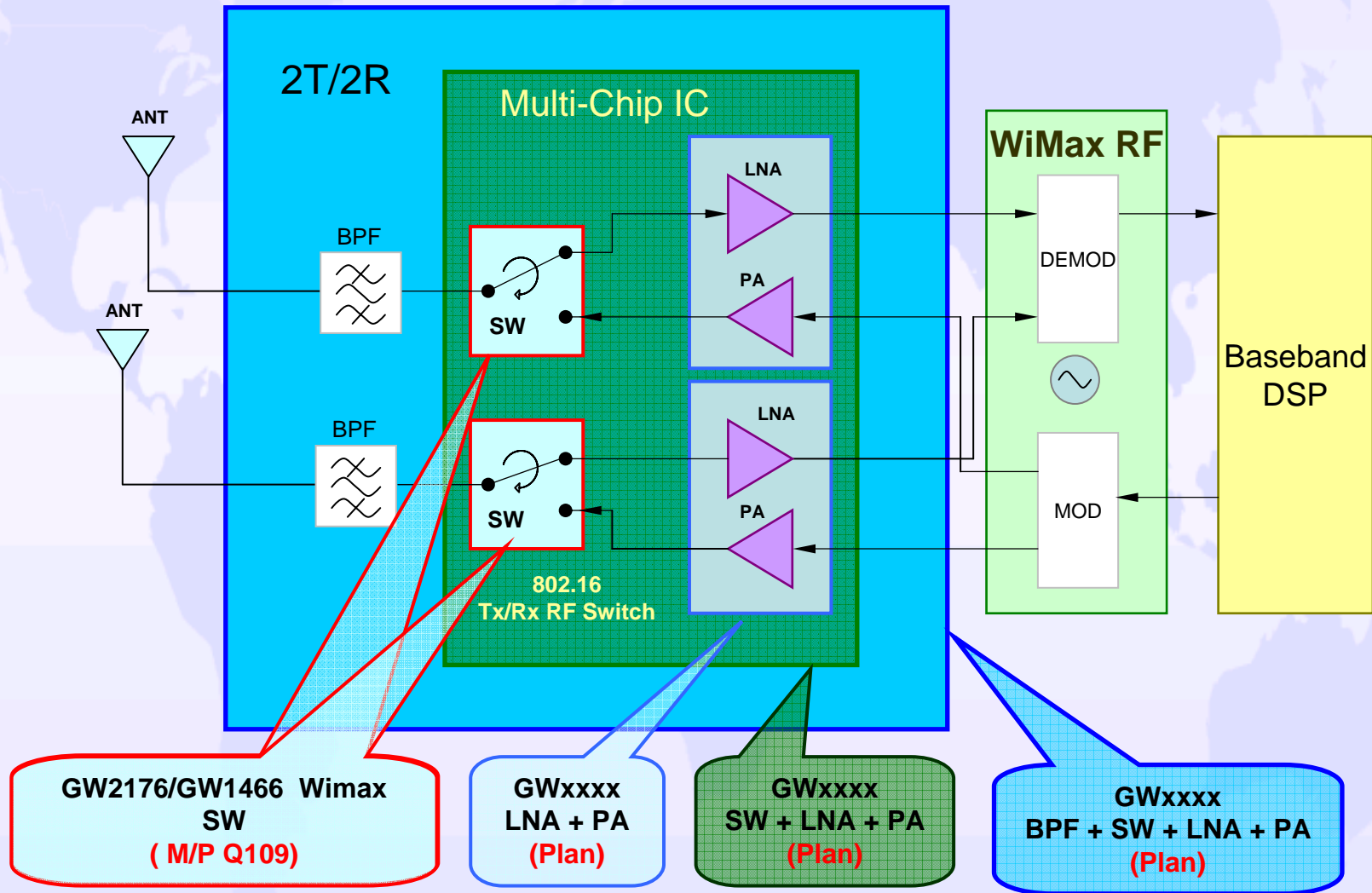
Single Band WLAN 802.11 b/g diversity RF Switch Application



Dual Band WLAN 802.11n+a/b/g RF Switch Application



MIMO 2T/2R Wimax 802.16 RF Switch Application



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