

Navian Marketing Report

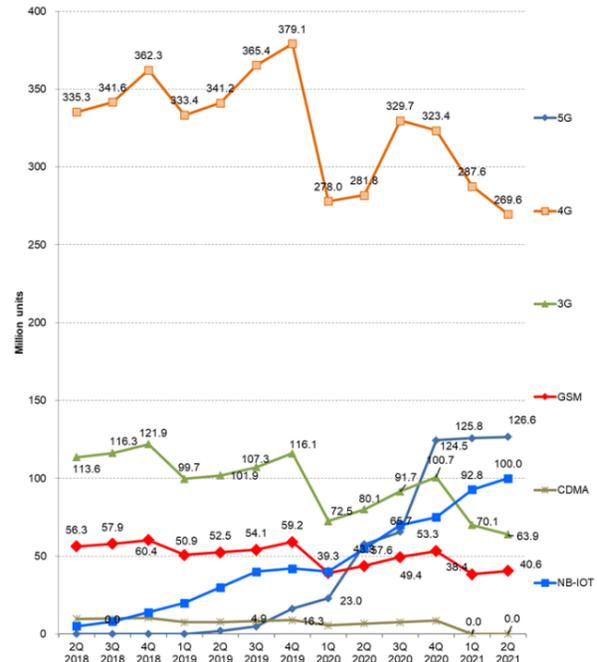
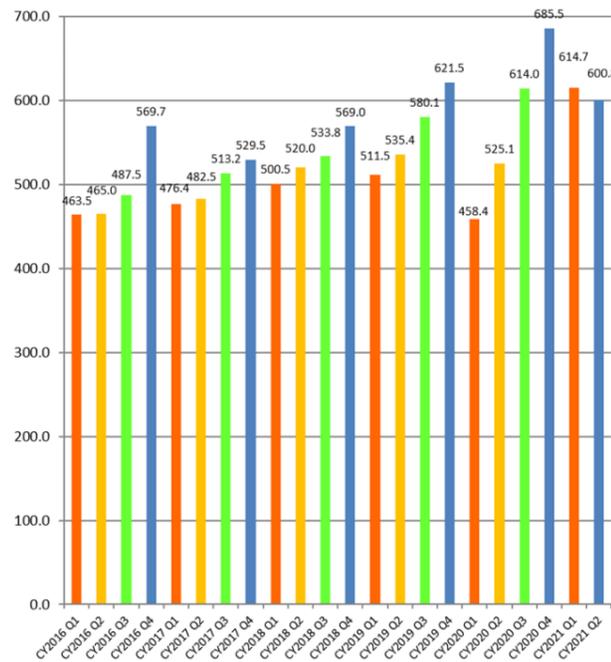
RF Devices/Modules For Cellular Terminal Quarterly Market Report Q2 2021

Released on November 30th ,2021

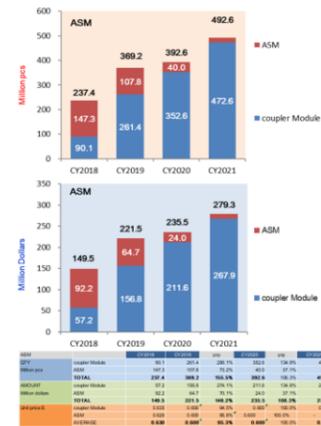
RF Components & Modules in this report

- ① Front end Module (ASM • TX Module • PAiD • FEMiD • All-in-One FEM • PAMiD • 5G TX Module/PAMiF-NEW • Multiplexer • A-Multiplexer • 5G RX Module-NEW)
- ② Antenna Switch (Main RF/Diversity) Power Amplifier Module
- ④ Duplexer
- ⑤ Band Pass Filter
- ⑥ TCXO

RF Components & Modules in this report

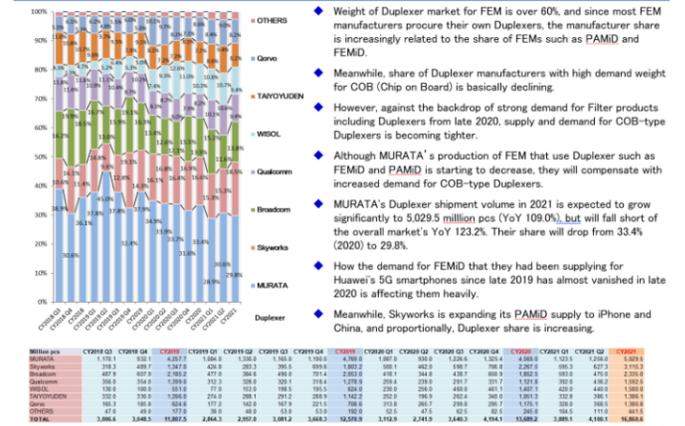


Market Forecast of Antenna Switch Module in CY2021

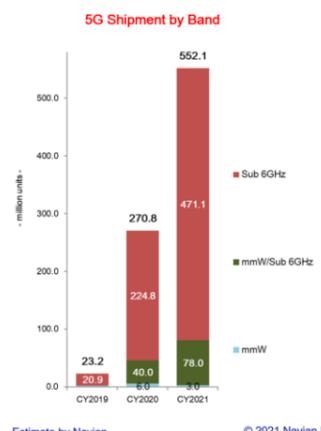


- This report covers the "Coupler Module" used in iPhones in addition to the conventional ASM (Antenna Switch Module).
- The number of Coupler Modules used in 2019 model iPhone11 increased from 1 in 2018 model to 2, and the ASM market in 2019 resulted in significant increase.
- Since 2020 model iPhone12 also uses 2 Coupler Modules, the majority of iPhones produced and shipped in 2020 mounts 2 Coupler Modules, resulting in high growth rate for ASM market.
- 2021 model iPhones also continue to adopt Coupler Module.
- Market size of ASM in 2021 is expected to be 492.6 million pcs (YoY 125.5%, quantity) and 279.3 million dollars (YoY 118.6%, amount).

Duplexer Market Share for Q2CY2021 & CY2021 Forecast 1/2

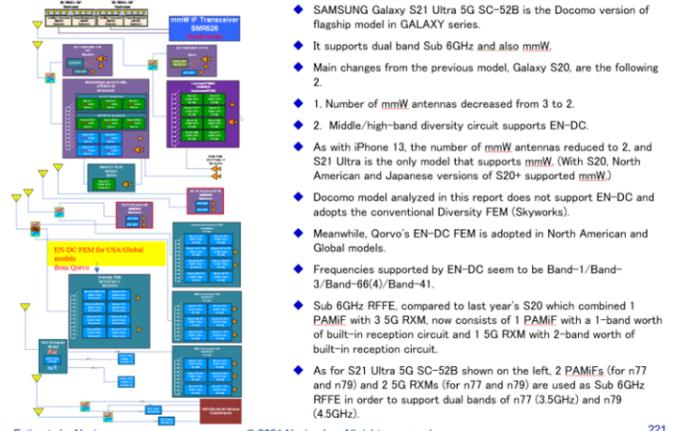


5G Smartphone Shipment CY2019-CY2021 ~Mainly supports Sub 6GHz, iPhone mainly supports mmW~



- Shipment size of 5G-supporting devices in 2021, mainly smartphones, is expected to reach 552.1 million pcs.
- By frequency type they support, products that only support Sub6GHz account for majority, with 471.1 million pcs.
- Most demands are for Chinese market where 5G is actively being popularized.
- Runner up is products which support both Sub 6GHz and mmW, and they are expected to be 78.0 million pcs.
- Of these, 573.5 million pcs are USA models of iPhone12 and iPhone13, making iPhone account for 73.5%.
- Other smartphone manufacturers are passive about supporting mmW.
- Apple was also expected to expand the number of mmW-compatible models for iPhone 13, including those for Japan, but it remains limited to the USA version.

SAMSUNG Galaxy S21 Ultra 5G SC-52B RF Circuit Diagram



e-Book Reader
Tablet PC

WWAN Terminal
Adapter

Embedded Module

Smart Phone

Traditional Handset
Mobile Phone

Fixed Wireless Terminal

Outline of the report
RF Devices/Modules For Cellular Terminal Quarterly Market Report Q2 2021
-CD-ROM (PDF file)-

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**PHASE 1. CELLULAR TERMINAL SHIPMENT
AND UPDATE**

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 - ① RF Circuit Block Diagram
 - ② Teardown pictures & RF Modules/Components
 - (3) SAMSUNG Galaxy A52 5G SM-A5260
 - Latest Middle/Low-end Smartphone compatible with EN-DC-
 - ① RF Circuit Block Diagram
 - ② Teardown pictures & RF Modules/Components

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