



## Ming-Chi Tech Research

### MTI's 2022 growth momentum to benefit from two critical trends of the network industry, O-RAN, and LEO; revenue to boost starting September

From a hardware investment perspective, we believe it is worthwhile for investors to look at suppliers that meet the following three criteria: 1) have orders for both O-RAN and low earth orbit (LEO) satellite, 2) have at least one O-RAN and LEO order that will contribute significantly to revenue and profit in 2022, and 3) benefit from O-RAN or LEO orders that can grow 100% YoY or more in terms of profit in 2022 vs. 2021. Our latest survey indicates that MTI is one of the few suppliers that meet all three criteria. As a result, we forecast that MTI's revenue will grow significantly YoY starting in September. In addition, if shipments go smoothly and there are no serious component shortages, we expect EPS (NTD) to reach \$1.2–1.7 and \$5.5–6.5 in 2021 and 2022, respectively.

**O-RAN and LEO are the two major trends in the network industry in 2022, both of which are critical infrastructures for the future of the electronics industry.**

1. The key to 5G infrastructure in 2022 will be cost reduction and increased mmWave coverage.
  - (1) O-RAN is one of the best solutions for operators to further reduce the cost of 5G infrastructure deployment.
  - (2) The large bandwidth and low latency of mmWave will integrate with future hardware products and provide an innovative user experience. However, the infrastructure cost of mmWave is significantly higher than sub-6 GHz, so we predict that the low-cost advantage of O-RAN will help operators deploy mmWave infrastructure starting in 2022.
2. We expect LEO services and related component shipments to grow rapidly in 2022, driven by companies such as SpaceX and Apple. We believe that the always-on connectivity of LEO services will enhance the user experience of hardware products (e.g., cell phones, IoT, and EVs).

**MTI is now overcoming the challenges of developing and shipping O-RANs and expects to start mass shipments of Dish RUs in September–October with a significant contribution to revenue. Our latest survey indicates that MTI has secured Kyocera's mmWave O-RAN phased array antenna orders and expects to pass technology qualification in 4Q21–1Q22 and start mass shipments in 2022.**

1. MTI's O-RAN development and shipment challenges include: 1) DU software, 2) intermodulation interference of the diplexer, and 3) Infineon controller supply shortage.
2. MTI has overcome the above challenges and expects to start mass shipments of Dish RU from September to October. We estimate that MTI's monthly revenue will grow significantly by 50–100% YoY from 4Q21 to 1Q22, thanks to the shipment of Dish RU. We estimate MTI's EPS will reach \$1.2–1.7 in 2021.
3. MTI will start mass shipments of Rakuten/NEC and JMA O-RAN RU in 2022. Thanks to O-RAN orders, we predict that MTI's 2022 EPS will reach \$5.5–6.5.
4. MTI will start shipping the mmWave O-RAN phased array antenna in 2022. We expect MTI's mmWave O-RAN orders to begin growing from 2022–2023.

**We expect that LEO satellite communication service providers will have significant growth in the coming years. Regarding hardware supply chain investment**

Updated forecast:

MTI's O-RAN and LEO orders

Major companies in this report:

MTI (2314.TW)

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opportunities, as there is no significant upgrade in the specifications of current smartphones supporting LEO satellite communications, the investment focus is on the satellite and the receiver sides. However, we believe that the smartphone support for LEO services will accelerate overall industry growth.

1. MTI's other new business focus is LEO, mainly targeting internet service providers rather than voice service providers.
2. Among the current LEO internet service providers, SpaceX is the leading company, with an estimated launch number of 12,000 satellites. Other main players include Amazon (Kuiper) (expected to launch around 3,200 satellites), OneWeb (expected to launch around 7,000 satellites), and Kymeta. MTI's current orders are mainly from OneWeb and Kymeta.
3. We forecast that MTI's LEO business will contribute significantly to the overall revenue and profit from 2023 onwards.

**Stock for actions:**

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**Risk:**

New product shipment delays; lower-than-expected demand due to US-China trade war and COVID-19.

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Ratings Definitions			
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		Neutral	Expected relative return over stock price between -10% and 10%
		Sell	Expected relative return over stock price below -10%
Industry investment ratings	within 6 months from the report issuance date, increase or decrease relative to the Index of the jurisdiction of the Industry in the same period	Outperform	Expected increase of industry index over 5%
		Neutral	Expected increase of industry index between -5% and 5%
		Underperform	Expected increase of industry index below -5%
Jurisdictions	Index Used for Ratings Definitions		
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China-Hong Kong	Hang Seng Index		
China-Marco	Hang Seng Index		
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