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## Mitsubishi Electric Develops Ultra-Wideband Transmission Chip Set for Multi-Purpose Wireless Systems

**TOKYO, September 26, 2019** – [Mitsubishi Electric Corporation](http://www.mitsubishielectric.com) (TOKYO: 6503) announced today it has developed the world's first\* ultra-wideband transmission chip set with S/C/X-band capability, designed for multi-purpose wireless systems. The new chip set is expected to facilitate the downsizing of transmission modules and boost the transmission range of wireless systems. Technical details will be presented during the European Microwave Conference / European Microwave Integrated Circuits Conference (EuMC / EuMIC) 2019 commencing September 29 in Paris, France.

\* According to Mitsubishi Electric research as of September 26, 2019

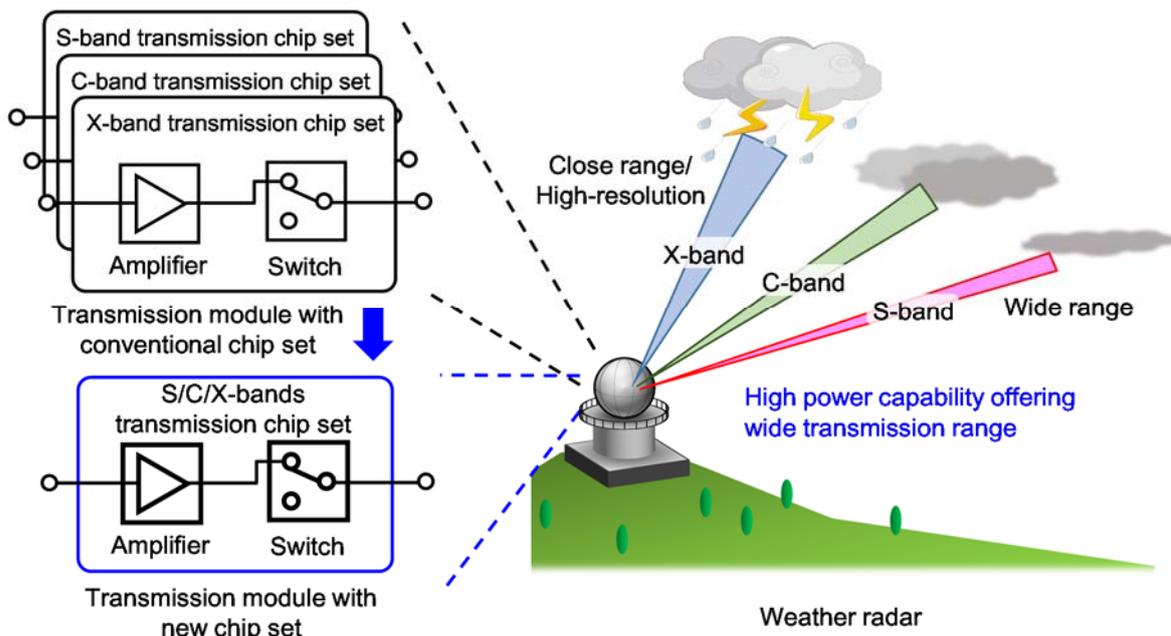


Fig. 1 Multi-purpose wireless system utilizing ultra-wideband chip set

**Key Features**

**1) Novel amplifier configuration offering wideband characteristics**

- The amplifier incorporated in the new chip set is configured in two discrete stages; a distributed first stage amplifier and a reactively-matched second stage amplifier combine to provide ultra-wideband capabilities.
- A single new chip set comprising an amplifier and a switch covering a fractional bandwidth of 125 percent in S/C/X-bands will enable the downsizing of transmission modules.

**2) Co-design of two chips provides high output power**

- Each chip is designed to reduce reflection loss when they are connected to each other; this co-design enables high output power while maintaining broadband characteristics.
- The chip set achieves an output power of over 20 watts as a transmission module, a high output level which will meet the demand for wide transmission range of wireless systems.

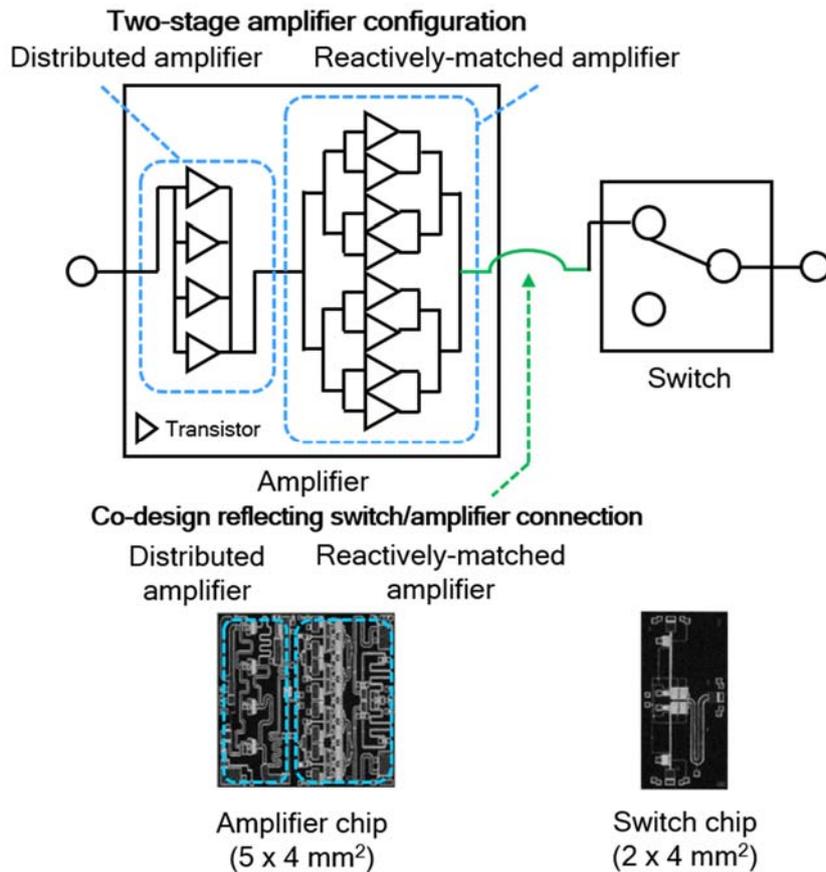


Fig. 2 Ultra-wideband transmission chipset features

**Performance**

	Fractional bandwidth	Output power
New chip set	125 %	20 W
Conventional chip sets	55 %	20 W

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**About Mitsubishi Electric Corporation**

With nearly 100 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognized world leader in the manufacture, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment. Embracing the spirit of its corporate statement, Changes for the Better, and its environmental statement, Eco Changes, Mitsubishi Electric endeavors to be a global, leading green company, enriching society with technology. The company recorded a revenue of 4,519.9 billion yen (US\$ 40.7 billion\*) in the fiscal year ended March 31, 2019. For more information visit:

[www.MitsubishiElectric.com](http://www.MitsubishiElectric.com)

\*At an exchange rate of 111 yen to the US dollar, the rate given by the Tokyo Foreign Exchange Market on March 31, 2019