

FutureAccess™ Type-C

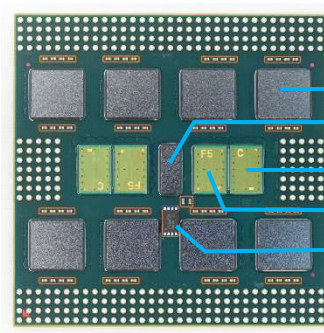
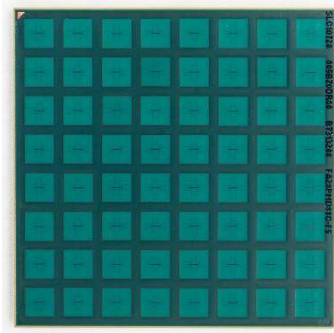
28GHz Phased Array Antenna Module (PAAM)

Overview

Fujikura PAAM operates at 24.25–27.50 GHz or 26.50–29.50 GHz and can transmit and receive dual polarizations.

It integrates Beamformer ICs, Frequency conversion IC, Band pass filters and Array antenna into one module that benefits customers with optimal TCO and reduced development time.

Top side



Beamformer IC
Frequency conversion IC
Combiner / Splitter
Band pass filter
EEPROM

Bottom side

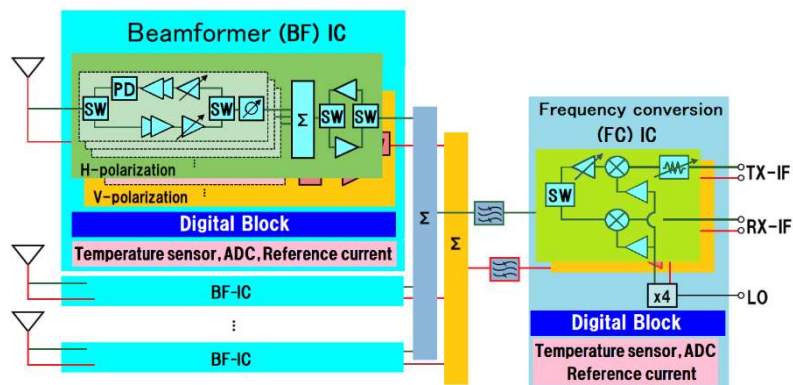
Size: 42.5x42.5 mm

Features

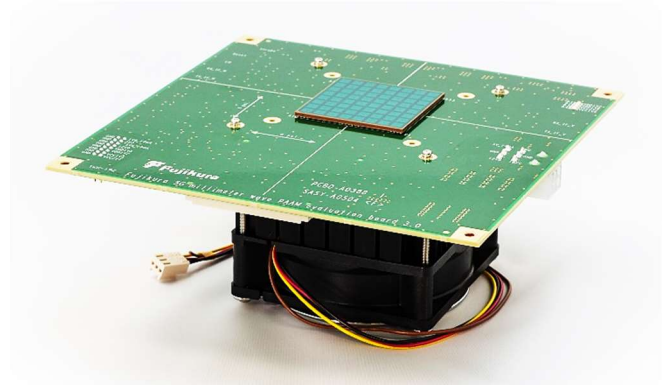
- Calibration-free; precise beam control without gain/phase calibration
- Fast beam-switching of $< 220 \text{ ns}^*$, supports $> 20,000$ beams
- High EIRP 56 dBm (oP_{1dB}) with high power-efficiency $> 20\%$ peak PAE
- Scalable configuration with 8x8-element PAAM as a unit
- Fast parallel interface for digital control

*1 including command transaction time

Block diagram



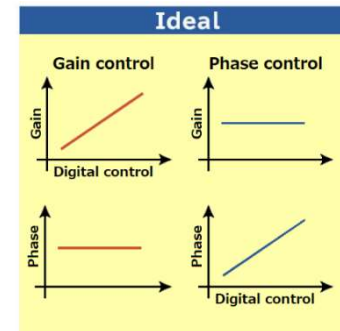
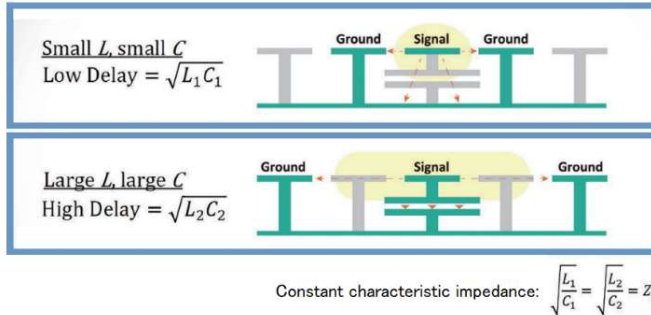
Evaluation board



Tunable true-time delay phase shifter

–Enabling precise and calibration-free gain/phase control–

Phase control using tunable transmission line phase shifter



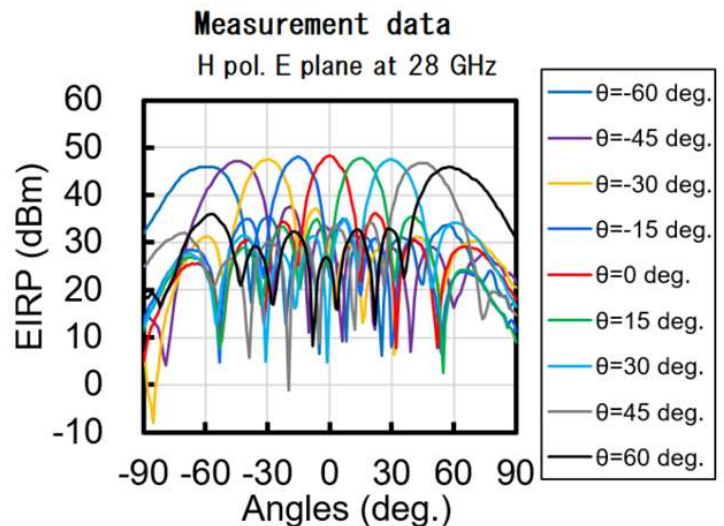
Tunable transmission line

Independent gain/phase control

Typical performance

Frequency range	24.25 to 29.50 GHz
Band	n257/n258/n261
Polarization	Horizontal, Vertical
Number of beam	2T2R / unit
Beam steering range	Elevation: $\pm 60^\circ$ Azimuth: $\pm 60^\circ$
EIRP at EVM 3%	48 dBm
Beam states	>20,000
Beam switching periodicity	<220 ns
Power consumption	Tx: 36 W, Rx: 15W Dual polarization enabled
Noise Figure	5 dB
Supply voltage	1.2V/1.5V/1.8V/2.7V

Beamforming performance



Applications



- 5GNR Mobile Base Station
- Local 5G / Private 5G
- Fixed Wireless Access / Wireless Backhaul
- Repeater

Part number

Part number	Description
FA28PMD88C-F5	Fujikura PAAM - 26.50 - 29.50 GHz
FA28PMD88C-F6	Fujikura PAAM - 24.25 - 27.50 GHz

Contact Information

E-mail: mmwavetech@jp.fujikura.com

Note:

- The values on the table shown above are preliminary, not guaranteed.
- Please refer to the PRODUCT WARRANTY (MW96-11-22-0044) for more detail.
- All contents in this brief are subject to change without any notice.

