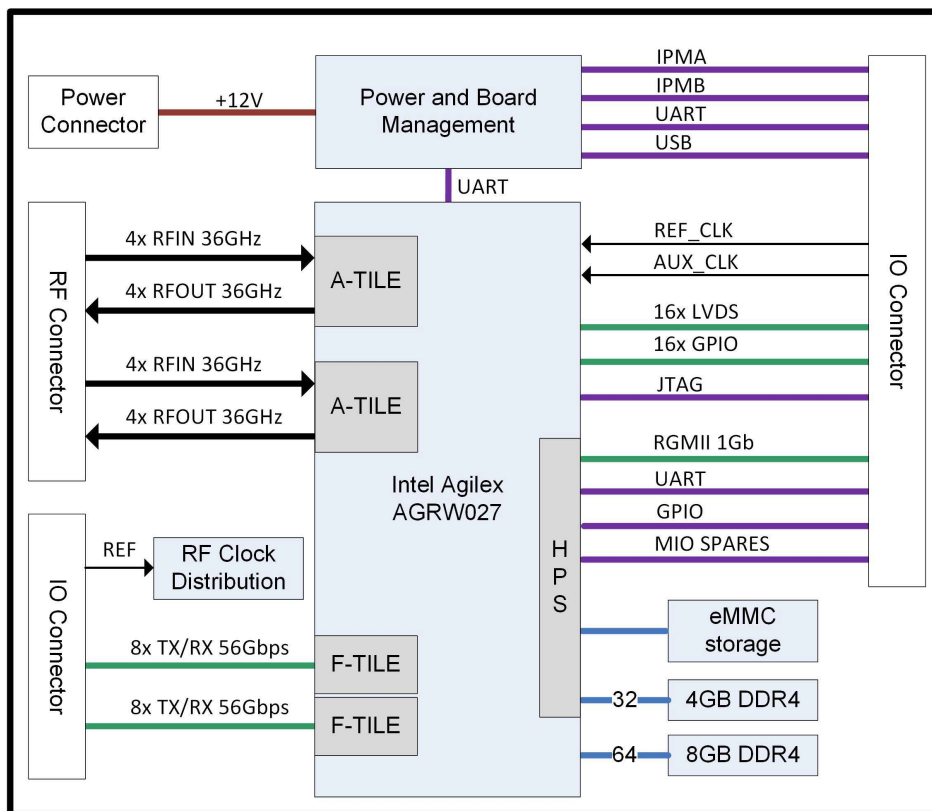




Athena Agilex™ 9 Direct RF FPGA SFF module

PRELIMINARY



▪ Direct-RF SOC altera® Agilex™ 9 AGRW027

- 8 channels 64 Gbps 10-bit ADC
- 8 channels 64 Gbps 10-bit DAC
- Analog bandwidth up to 36 GHz

- 1x 64-bit 8GBytes DDR4 2666 SDRAM (Fabric)
- 1x 32-bit 4GBytes DDR4 2666 SDRAM (HPS)
 - 16x Transceivers 56Gbps PAM4

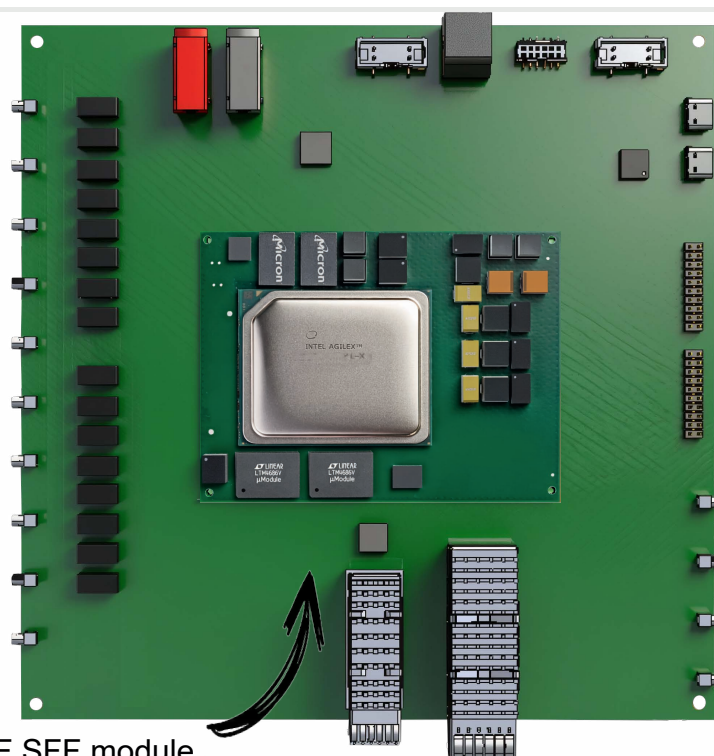
- Phased-Array Radar Transmitter /Receiver systems
- Electronic Warfare (ESM/ECM)
 - Broadband Communication
- Target Radar Simulator/ Generator
 - Airbone embedded systems

Features	Athena Agilex™ 9 Direct RF FPGA SFF SoM
Ordering Information	sample end 2026
Analog-Digital Conversion	Differential input Eight channels, up to 64Gsps Analog bandwidth up to 36GHz Resolution: 10 bit Sampling Performances at 64Gsps NSD: -150 dBFS/Hz at -3dBFS at 6GHz SDFR: -55 dBc at -3dBFS at 6GHz
Digital-Analog Conversion	Differential output Eight channels, up to 64Gsps Analog bandwidth up to 36GHz Resolution: 10 bits Sampling Performances at 64Gsps NSD: -156 dBFS/Hz at 0dBFS at 6GHz SDFR: -50 dBc at 0dBFS at 6GHz
Clock	Embedded Ultra-low jitter clock synthesizer External sampling clock reference
Memory	One banks 64-bit 8GBytes DDR4 2666 SDRAM (fabric) One bank 32-bit 4GBytes DDR4 2666 SDRAM (HPS) One 2 Gbit QSPI FLASH memory eMMC storage (HPS)
Communication	16x Transceivers 56Gbps PAM4 32x LVDS and GPIO UART, USB, RGMII 1Gb
Power & dissipation	+12V: 14 A max (170W)
Module dimensions	100mm x 75mm (4 x 3 inches)
Deliverables	Board Support Package : - FPGA + HPS exemple design - SW API and examples, Windows 10 64-bits / Linux 64-bits - User manuals - Quick start guide

Related products: Carrier board

The Carrier board is sold separately

- Fully compatible with the Athena module
- Embedded Clock Reference Oscillator
- 2x QSFD-DD, up to 16 transceivers 56G PAM4
- 8x Input RF Channels up to 32GHz, single-ended
- 8x Output RF Channels up to 32GHz, single-ended



with Athena Agilex™ 9 Direct RF SFF module