Rapid.Space

Key Benefits

- Plug-and-play BBU
- Amarisoft eNodeB/gNodeB
- D-RAN / C-RAN
- CPRI / Ethernet
- OpenRack v2/ESA
- Intel / AMD / Hygon / NXP
- Open-source hardware
- Open-source OSS/BSS
- End-to-end testing
- Edge computing
- 3GPP KPIs
- Full automation
- Carrier grade
- Worldwide shipping

Building block for cost-efficient SimpleRAN infrastructure.

Rapid.Space BBU Series

Rapid.Space BBU - building block for 4G/5G vRAN

Rapid.Space BBUs are the "all-in-one" (DU/CU) building blocks to deploy SimpleRAN 4G/5G public or private radio access networks. Available models rely on Intel Xeon, AMD Epyc, NXP and Hygon C86 CPUs. They support 19 inch telecom rack (ESA) and cloud native OpenRack v2 (ORv2) form factors.

Model	Format	CPU	RAM	CPRI	Ethernet
BBU-TCE	ORv2	2 x Xeon 6138	256 GB	8 x 10 Gbps	2 x 25 Gbps
BBU-CCE	ORv2	1 x Epyc 7C13	512 GB	12 x 10 Gbps	2 x 100 Gbps
BBU-HC	ESA	1 x Hygon C86 3185	16 GB	4 x 10 Gbps	
BBU-HE	ESA	1 x Hygon C86 3185	16 GB		2 x 25 Gbps
BBU-RC	ESA	1 x Ryzen 5950X	256 GB	4 x 10 Gbps	
BBU-RE	ESA	1 x Ryzen 5950X	256 GB		2 x 25 Gbps
BBU-NC	ESA	1 x LX2160A	32 GB	4 x 10 Gbps	
BBU-WS	ESA	1 x Xeon 6338N	128 GB	8 x 10 Gbps	

Globally available

Rapid.Space BBUs can be shipped worldwide. They are certified for EU (CE), USA (FCC), China and Japan. BBU-WS model is certified for carrier-grade outdoor deployment.
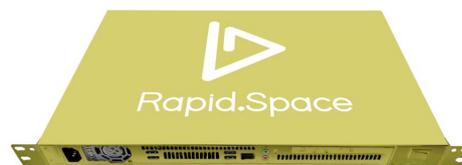
BBU-WS   BBU-HC

Available now

Model	Availability	Performance (estimate)
BBU-TCE	now	3 x NR (4T4R 100 MHz) + 6 x LTE (2T2R 20 MHz)
BBU-CCE	now	6 x NR (4T4R 100 MHz) + 12 x LTE (4T4R 20 MHz)
BBU-HC/HE	now	1 x NR (4T4R 50 MHz) + 1 x LTE (2T2R 20 MHz)
BBU-RC/RE	now	3 x NR (4T4R 100 MHz) + 3 x LTE (2T2R 20 MHz)
BBU-NC	Q1 2024	1 x NR (4T4R 50 MHz) + 1 x LTE (2T2R 20 MHz)
BBU-WS	now	4 x NR (4T4R 100MHz) + 8 x LTE (4T4R 20 MHz)

Rapid.Space BBUs' performance has been optimised with radio units (RU) from Lopcomm, AW2S or Viettel High Tech (VHT). Plug-and-play operation is available for radio units compatible with O-RAN management plane (Lopcomm). Support for other radio unit vendors or other management planes can be added on demand.

Rapid.Space

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Warranty

Rapid.Space BBU server can be easily and remotely maintained with a smartphone and an OLinuXino or Raspberry Pi nano-PC. 3 year warranty covers return to shipper for repair/replacement.

OSS/BSS

Rapid.Space BBUs are tested and certified for Debian GNU/Linux operating system. They support automated configuration and operation of Amarisoft eNodeB/gNodeB through Rapid.Space operation/business support system (OSS/BSS) deployed on premise or in the cloud.

A single Rapid.Space OSS/BSS can control thousands of Rapid.Space BBUs and automate complex configuration of Amarisoft eNodeB/gNodeB, such as carrier aggregation, macrocell clustering over multiple BBUs, multi-cell deployment with a single BBU, health monitoring, performance monitoring (3GPP KPIs), self-healing, self-reconfiguration, SIM provisioning, etc.

Edge native

Rapid.Space BBUs are cloud native nodes that can run edge computing workloads for value added services: IoT buffering, HTTP acceleration, watermarking, local authentication, local core network, MCPTT, PaaS, PLC, etc.

Fully Open

Rapid.Space BBUs are built from hardware components designed by the Open Compute Project (OCP) or by Rapid.Space. All software, except Amarisoft, is open-source: operating system (Linux), operation/business support (SlapOS), networking (re6st) and backhaul routing (babel). The eNodeB/gNodeB source code can be licensed from Amarisoft. For full transparency, Rapid.Space has documented the configuration and customization of each individual BBU model through open source management procedures.

Security

Rapid.Space zero-knowledge technology means that no passwords or credentials need to be shared between nodes or with Rapid.Space OSS/BSS. All passwords or credentials remain on-premise. Rapid.Space provides optional security services to detect logistic attacks and software threats.

Rapid.Space is suitable for sensitive applications (defense, government, research) which require full reversibility and operation without Internet access.