

Miracle[®] 5G Outdoor Small Cell Radio Unit

The Most Significant Innovation in Radio... Since the Radio

World's First All Digital, Polar Modulation Based Radio

With a fundamental breakthrough in RF technology, Eridan's ORAN Outdoor Radio Unit dramatically improves both network efficiency and user experience.

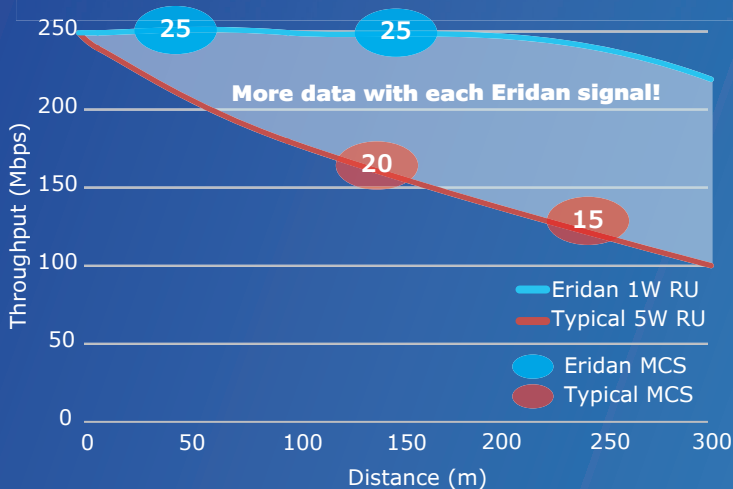
Eridan's radio prioritizes power efficiency and ultra low EVM. This results in unparalleled propagation and throughput per watt consumed.



Key Features

- Ultra light weight ~2kg
- n48 Band / CBRS
- ORAN Split7.2a Radio Unit
- MIMO 2Tx 2Rx
- 256 QAM DL, 256 QAM UL
- IP65 rated Outdoor Unit, pole / wall mount
- Interoperability with multiple industry standard DUs and end-to-end 5G RAN
- GNSS and PTP timing synchronization
- 3 LEDs reporting Power, Status, Network
- Passive convection cooling
- Compatible with 2x2 external antenna

The Eridan Miracle[®] RU has a **propagation advantage** and a **throughput advantage**:



Our proprietary architecture generates clean signals with ultra low EVM

Eridan covers more area using the same output power as clean signals can be received at farther distances

Our technology needs less bandwidth to provide the same throughput, as clean signals achieve higher order modulation rates

Performance charged with low EVM

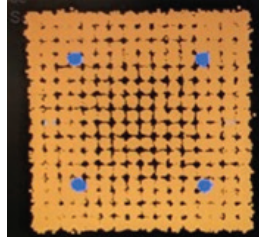
By prioritizing ultra low EVM, Eridan signals are **clean**. With low EVM, Eridan takes advantage of increased range, higher order modulations, reduced re-transmissions, and ultimately better network performance.

Legacy Radio Performance

Industry standard for 256QAM:
3.5% EVM

Results in:

- 64QAM, lower throughput for remainder of cell coverage
- Standard propagation

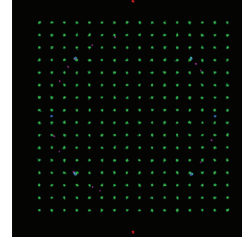


Eridan Performance

Eridan clean signals for 256QAM:
0.4% EVM

Results in:

- 256QAM, high throughput to the standard cell edge
- 64QAM beyond expected cell edge with extended coverage



Specifications

Electrical / Mechanical / Environmental

Parameter	Min	Typ	Max	Units
Band	3550*		3700*	MHz
Instantaneous Bandwidth (IBW) per TX		40**		MHz
Transmit Power (per TX)		0.5 27		W dBm
Power Efficiency		50		%
Error Vector Magnitude (EVM)	0.4***	1***		%
Adjacent Channel Leakage (ACLR)	45			dBc
Power Consumption		40		W
Dimensions (H)		82 3.2		mm in
Dimensions (L)		276 10.8		mm in
Dimensions (W)		183 7.2		mm in
Weight		2 5.5		kg lbs
Operating Temperature (ambient)	-20		55	C

* SKUs for other bands under development; **5G-NR; *** 5G-NR at TX output

Interfaces	Description	Input/Output	Connector
ANT1	TX / RX Port 0 to Antenna	I/O	N-Type
ANT2	TX / RX Port 1 to Antenna	I/O	N-Type
Fronthaul	eCPRI 10Gbps fiber port to DU	I/O	SFP+ 10G
ETH0	100M/1G Ethernet for Config and Management	I/O	RJ-45
Power	-48VDC Power	PWR	Standard

Description	MIMO	Band
Miracle® 5G RU	2TX 2RX	n48 (3.55 - 3.7GHz)

For more information, contact our team at eridan.io/waitlist

ERIDAN

Miracle® Radio Unit Brief v2.0
Eridan Communications Proprietary