

Multi-RAT Radio Unit (mRU)

The mRU is at the heart of our sDAS solution, which is a multi-frequency and multi-carrier framework allowing for MNO-specific integration and provisioning, KPI's, alarms, and customization. Each mRU is part of a cost-effective, flexible, and simplified solution providing 2G, 3G, 4G, and 5G wireless network service. The mRU's footprint, power consumption, and support for multi-band, multi-carrier deployments greatly reduce CAPEX & OPEX while also providing the coverage and capacity needs for flexible deployment.

Both the hardware and software architectures have been designed to allow service providers, integrators, and building owners to rapidly deploy networks supporting varied environments including multi-dwelling units, commercial buildings, industrial buildings, and neutral host small cells.



mRU Low Band				
Operating Bands	Band 71	Band 13/14	Band 17/12	Band 5/26
Downlink Frequency (MHz)	617 - 652	746 - 768	729 - 746	859 - 894
Uplink Frequency (MHz)	663 - 698	777 - 798	699 - 716	814 - 849

mRU Mid Band				
Operating Bands	Band 2/25	Band 4/10/66	Band 30	Band 41
Downlink Frequency (MHz)	1930 - 1995	2110 - 2200	2350 - 2360	2496 - 2690
Uplink Frequency (MHz)	1850 - 1915	1710 - 1780	2305 - 2315	2496 - 2690

mRU Capabilities

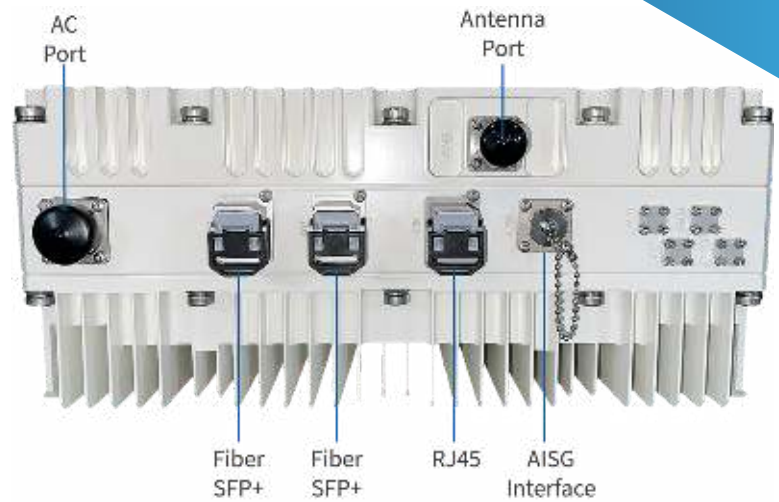
Key Features

- Multi-Band (7 bands per mRU)
- Multi-RAT (2G, 3G, 4G, 5G)
- Multi-Carrier Support (up to 6)

Integrated 5G SA Functional Key Benefits

- TCO reduction over traditional DAS
- Only 14.5"H x 14.5" W x 6.09"D
 - Supports 1000 active users and 6000 connected users
 - Up to 500 Mbps of throughput
- Simplified Installation
 - Reduced infrastructure cost
 - AC 110V/220V standard
 - Compact footprint

mRU Specifications



Software	
3GPP Rel. Support	LTE Rel. 15 UMTS Rel. 7 GSM Rel. 98
Simultaneous Active Users	1000
Connected Users	6000
DL Peak Throughput	401.4Mbps (5CC LTE-A 1x1 Mid-Band) 378Mbps (5CC LTE-A 1x1 Low-Band)
UL Peak Throughput	282.9Mbps (5CC LTE-A 1x1 Mid-Band) 283.3Mbps (4CC LTE-A 1x1 Low-Band)
QOS Control	3GPP standard QCI
Modulation	DL: QPSK, 16QAM, 64QAM, 256QAM UL: QPSK, 16QAM, 64QAM, 256QAM
Voice	VoLTE, Circuit Switched Fallback (CSFB) to UMTS/GSM
RAN Sharing	S1 / MOCN Support for up to 6 PLMN per cell S1AP load sharing via MME weighting
Networking Management	SNMP
Maintenance	<ul style="list-style-type: none"> • Remote/local maintenance • Online status management • Performance statistics • Fault management • Local or remote software upgrade • Logging • Connectivity diagnosis • Automatic start and configuration • Alarm reporting • KPI reporting • User information tracing • Signaling trace

Regulatory	
FCC	Comply (QLJMRU-060785, QLJMRU-19212326)
CE	Comply
Electrical	UL 60950, UL 94, CSA C22.2 No 60950
ROHS	2011/65/EU
WEEE	2012/19/EU
REACH	n°1907/2006/CEC

Regulatory	
LTE Mode	FDD/TDD
mRU - Low Band	B71, B13/B14, B12/B17, B5/B26
mRU - Mid Band	B2/B25, B4/B10/B66, B30, B41*
Channel Bandwidth	1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz**
Max Output Power	43 dBm per frequency band***
Power Consumption	600W max, 400W typical
Power Type	100 - 240V AC (50 - 60Hz)
Interfaces	2x CPRI, 1x Gbe, 1x AISG, 1x Antenna
VSWR	1.222:1
Installation	Wall or Pole Mount (to be mounted vertically)
Dimensions	14.5" H x 14.5" W x 6.09" D 36.83 x 36.83 x 15.47 cm
Weight	44lbs / 19.96kg

Environmental	
Operating Temp	-40 to +45°C (+55°C with sun shield installed)
Storage Temp	-40 to +70°C
Operating Humidity	20% to 90% RH (non-condensing)
Storage Humidity	20% to 90% RH
Cooling	Passive
Ingress Protection Rating	IP67 (with all ports terminated)

Ordering Options	
mRU - Low Band	mRU-20W060785
mRU - Mid Band	mRU-20W19212326
mDU	TC-MDU
mDU BBU License	TC-MDU-BBU

* TDD Band
** Based on 3GPP Band Specifications
*** Measured at antenna port

To learn more about our technology, products, and services, call us at +1.410.872.6500 or visit us at www.Tecore.com © Tecore Inc.