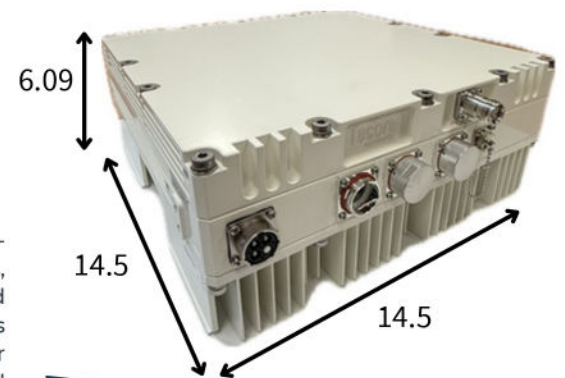


# Multi-RAT Radio Unit (mRU)

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 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 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 Specifications



Software	
<b>3GPP Rel. Support</b>	LTE Rel. 15 UMTS Rel. 7 GSM Rel. 98
<b>Simultaneous Active Users</b>	1024
<b>Connected Users</b>	6000
<b>DL Peak Throughput</b>	401.4Mbps (5CC LTE-A 1x1 Mid-Band) 378Mbps (5CC LTE-A 1x1 Low-Band)
<b>UL Peak Throughput</b>	282.9Mbps (5CC LTE-A 1x1 Mid-Band) 283.3Mbps (4CC LTE-A 1x1 Low-Band)
<b>QOS Control</b>	3GPP standard QCI
<b>Modulation</b>	DL: QPSK, 16QAM, 64QAM, 256QAM UL: QPSK, 16QAM, 64QAM, 256QAM
<b>Voice</b>	VoLTE, Circuit Switched Fallback (CSFB) to UMTS/GSM
<b>RAN Sharing</b>	S1 / MOCN Support for up to 6 PLMN per cell S1AP load sharing via MME weighting
<b>Networking Management</b>	SNMP
<b>Maintenance</b>	<ul style="list-style-type: none"> <li>• Remote/local maintenance</li> <li>• Online status management</li> <li>• Performance statistics</li> <li>• Fault management</li> <li>• Local or remote software upgrade</li> <li>• Logging</li> <li>• Connectivity diagnosis</li> <li>• Automatic start and configuration</li> <li>• Alarm reporting</li> <li>• KPI reporting</li> <li>• User information tracing</li> <li>• Signaling trace</li> </ul>

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

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

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

Ordering Options	
<b>mRU - Low Band</b>	900-10402-41
<b>mRU - Mid Band</b>	900-10402-40
<b>mDU</b>	900-12316-002
<b>mDU BBU License</b>	900-12316-500

\* 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](http://www.Tecore.com) © Tecore Inc.