

Technical Specification

JRC Tactical LTE Box



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Technical specifications are subject to change without notice.

Highlights

Item	Description
Complete LTE Network in-a-Box	EPC, eNB, application servers are in a box
End users devices	Supports standard commercial mobile devices
Advanced LTE	Advanced LTE-MIMO Radio Technology
Simple Operation	Fully standalone operation and simplified operation
Fast bring up	Two to three minutes from power up to full operation (no further actions)
Backup	Battery backup Hot swappable battery replacement to allow continues system operation
Multi-Bubble Communication	Supports multiple box connection w/o backhaul
Communication tools	Optional integrated PTT App server, Video server and Location based service
Interoperability with legacy voice system	Optional interoperability with legacy system e.g. P25, Tetra
Backhaul	Optional backhaul 3G/4G Cellular modem, WiFi backhaul, VSAT link
Remote access	Allow an operating center to connect remotely to the box and manage it
Maintenance	Simple maintenance with snapshot support



Specification (Preliminary)

Item	Description
Model	JRL-151B
Form factor	Rugged hand-held suitcase
Dimensions	560mm (L) x 455mm (W) x 229mm (D)
Weight	20 Kg (without battery)
Input power	AC 110/220V(AC adapter)
Battery Operation	3 hours *4 exchangeable batteries(option) Batteries are hot swappable
LTE Frequency	FDD : Band1,3,4,7,10,12,13,14,17,20,28 TDD : Band38,41,42
Bandwidth	5/10/20MHz
Transmit Power	2 x 5W
Number of Antenna	2 antennas (2 x 2 MIMO)
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Range	14km *COST-HATA Rural, 750MHz
Max Connected Users	FDD : 255, TDD : 128
Max Active Users	FDD : 90, TDD : 32
Max Throughput	150Mbps Downlink, 50MbpsUplink (FDD 20MHz BW)
Interfaces	1 x 10/100/1000BASE-Tx for backhauling 1 x 10/100/1000BASE-Tx for connecting to external server and maintenance 1x USB 2x audio(RoIP) 2x antenna RF connector 1x GPS antenna connector
Synchronization	External GPS antenna for TDD



Item	Description
Network Functions	<ul style="list-style-type: none"> - Internal routing capabilities - NAT for connected UEs - Service <ul style="list-style-type: none"> o Multi APN support, per UE or per UE groups o Advanced TFT support o Advanced QoS Control (Bandwidth, application, destination etc.) o Admission Control - IP Allocation - Dynamic , Static, Internal, External , from dedicated pools - Multi users - Support network behind UE
Management Functions	<ul style="list-style-type: none"> - Remote connection and control (using backhaul interface) - Full backup and restore procedures - SNMP support - System status indications
Security Functions	<ul style="list-style-type: none"> - White list of roaming partners (PLMN-ID) - AKA based authentication (key generation and distribution) - Standard LTE AES-128 encryption - SIM info encryption - UE to device bundling Un-authorized users report <p>Cell overload protection</p>
Advanced Applications	<ul style="list-style-type: none"> - Dual authentication operation mode to allow simultaneously local and centralized authentication - Multi users - Support network behind UE -
Operating temperature	-20°C to 50°C
Applications	<p>VIDEO-PTT Location based service Mission Critical PTT LMR (legacy voice) GW</p>



Accessories

Item	Description
Antenna	TBD
GPS antenna	<p>Frequency Rang 1575.42MHz \pm 1.023MHz</p> <p>Polarization Right-hand circular</p> <p>Total Gain 38dBi typical</p> <p>Attenuation 60dB typical</p> <p>Noise Figure 1.8dB typical</p> <p>VSWR 1.5 typical</p> <p>Operating Viltage DC5V e0.5V</p>
Battery	<p>Lithium Ion V-Mount battery</p> <p>136Wh capacity (14.8V 9.2Ah)</p> <p>Up to 9.2A/110W loads</p> <p>Include removable two power cartridges</p> <p>(For bypasses Li-ion IATA carry-on restrictions)</p>
Battery charger	<p>4 channel V-Mount Battery charger</p> <p>Universal AC input voltage for worldwide operation</p>

