

# Specification

## 4G LTE WiFi Gigabit Router

Plug & Play



**Model: BT44i**

**2X2 MIMO**  
**TORNADO**



Maintenance – Free Connections

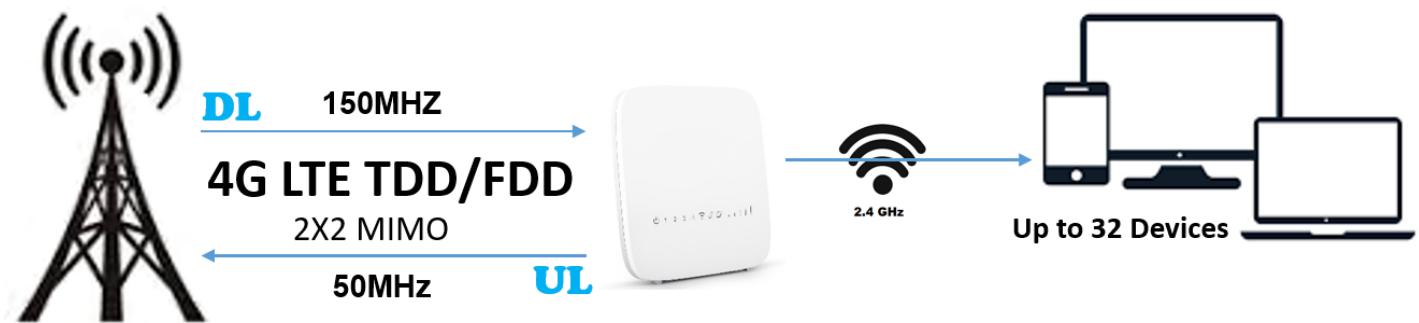


## Introduction

LTE (Long Term Evolution) is already gaining momentum as the world's most rapidly deployed cellular technology, giving mobile wireless broadband services to millions of users worldwide. Consumers are increasingly looking for always on, always connected mobile experience delivering high data rate services on small form factor mobile devices whilst at the same time expecting long battery life to minimize recharge cycles.

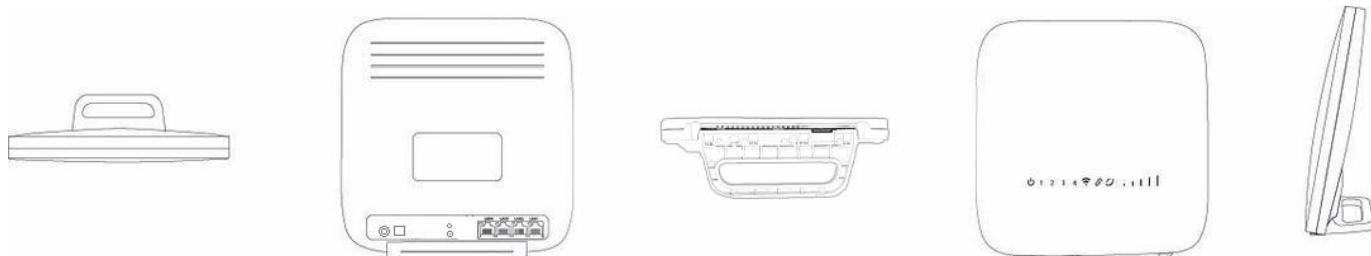
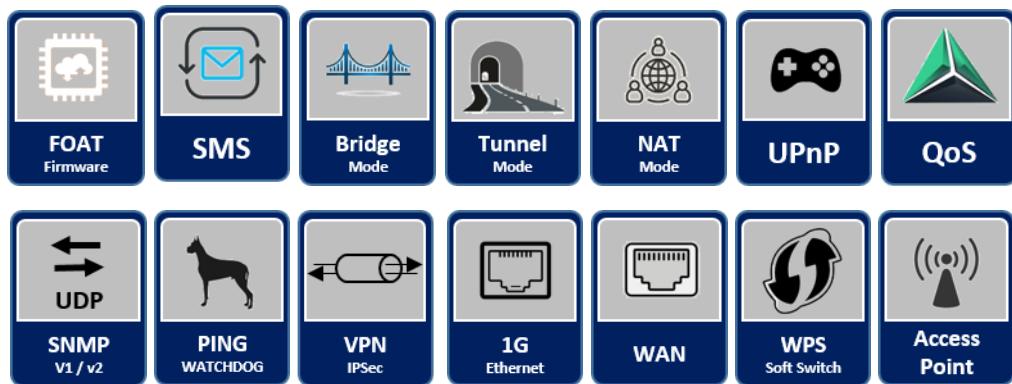
BT44i is highly advanced LTE indoor multi-service product solution for **Enterprise** and **SHSO** application. Specifically designed to meet integrated data, and dual bands Wi-Fi access needs for residential, business and enterprise users.

In this product, we provide Gigabit networking and dual bands Wi-Fi AP functionalities, it enables wide service coverage and provides high data throughput and networking features to customers who needs easy broadband access, hot-spot Wi-Fi connectivity.



## Technical Features

- Support 4 LAN ports, 1GE and Support 1 WAN port
- Support Wi-Fi 2.4GHz Concurrent
- Support Multi SSID
- Support Short Message System
- Support Small Network Management Protocol (SNMP)
- Support CWMP TR069 and Certification
- Support Server Network Time protocol (SNTP).
- Support EARFCN lock, and PCI lock, PLMN lock, ICCID lock/
- Support two login access, root for administrator and admin for clients
- Support DDNS or DNS Agency
- Support WPS Soft Button and Push Button
- Support Routing (NAT, Tunnel, and Bridge Mode)
- Support VPN (L2TP, GRE, PPTP, VXLAN)



## BASIC SPECIFICATIONS

Main Chipset	Quectel EC200AELV1
LTE Standard	3GPP latest Release, 8, 9, 10 & 11
Ethernet LAN/WAN Port	4*RJ-45 port LAN 10/100 auto-sensing,
Smart Wi-Fi Dual Mode	2.4GHz (802.11 b/g/n and MIX)
LED Indicators	8 Blue LED indicators (PWR, Wi-Fi 2.4GHz, LTE, RF and 4 Signal Level)
USIM	1.8v/3.0v Mini-SIM (2FF)
Antenna	PCB Built-in high gain, 2.4GHz
Restore Button	Press for 10 Sec. to factory restore settings
Power Switch	ON/OFF Button
WPS Switch	ON/OFF Push button 10 Sec. hold
Power Supply	Input: Universal range 100V to 240V AC, Output 12VDC / 2A

## LTE SPECIFICATIONS

Duplex Mode	FDD & TDD
Frequencies Bands	4G LTE: B1, B3, B7, B8, B20, B38, B40, B41 3G WCDMA: B1, B5, B8
Bandwidth	5, 10, 15, 20MHz
MIMO	2x2 MIMO
Max Output Power	23 ± 2dBm per Tx antenna
Tx / Rx	1T2R configurations
Uplink channel	PUCCH, PUSCH, PRACH
Downlink channel	PDCCH, PDSCH, PBCH, PCFICH, PHICH

Peak Rate (20 MHz)	FDD: DL 150 Mbps, UL 50 Mbps TDD: DL 130 Mbps, UL 30 Mbps
Number of Resource Blocks	6 ~ 110
Transmission Mode	TM 1.2,3,4,7,8,9
Modulation	DL: QPSK, 16QAM, 64QAM UL: QPSK, 16QAM
Receive Sensitivity	-96±2 dBm @QPSK, 20MHz, 25°C, -96±2 dBm @ 2RX Diversity
Antenna Type	PCB
Antenna Gain	5dBi
Antenna Efficiency	>60% or more
Polarization	Linear, Vertical
VSWR	700~2700<4 and 3300~3800<3
Radiation	Omni-directional
Admitted Power	1w

## LTE RADIO STATUS INFORATION

General Info	USIM	Operator	IMEI
	PLMN	eNodeB ID	IMSI
Signal Details	PCI	EARFCN	Bandwidth
	SINR	Band	Cell ID
	RSSI	RSRQ	RSRP

## SOFTWARE SPECIFICATIONS

LTE Network Mode	<ul style="list-style-type: none"> <li>• NAT Mode</li> <li>• Bridge Mode</li> <li>• Tunnel Mode</li> </ul>
LAN Network	<ul style="list-style-type: none"> <li>• IPv4 address</li> <li>• DHCP Statics Lease</li> </ul>

	<ul style="list-style-type: none"> <li>• DHCP Relay</li> <li>• DHCP Server, Client</li> </ul>
Mobile Network Connection	<ul style="list-style-type: none"> <li>• Auto</li> <li>• Manual</li> </ul>
4G LTE Connection	<ul style="list-style-type: none"> <li>• Roam (Enable / Disable)</li> <li>• Power Scan (First Detected Cell, Strongest Cell)</li> <li>• Dedicated Mode: PCI, EARFCN, Frequency &amp; Cell</li> <li>• APN Management Settings</li> </ul>
Wi-Fi (2.4GHz)	<ul style="list-style-type: none"> <li>• Wi-Fi Enable / Disable</li> <li>• Bandwidth: 20MHz / 40MHz</li> <li>• Access Point Isolate</li> <li>• Channel Selection: Manual, Auto</li> <li>• Channel Range 1 ~ 13</li> <li>• SSID: Hidden / Disable / Edit, Support four SSID</li> <li>• Security type: No Authentication, WPA-PSK, WPA2-PSK, WPA/WPA2-PSK, WPA/WPA3-PSK</li> <li>• WPA Algorithm: (TKIP/AES)</li> <li>• WPS Enable / Disable</li> <li>• Country Code: IRAN</li> </ul>
WAN Network	<ul style="list-style-type: none"> <li>• WAN (LTE)</li> <li>• WAN (Input Access)</li> </ul>
VPN Server	<ul style="list-style-type: none"> <li>• L2TPv2</li> <li>• GRE L2/L3</li> <li>• PPTP</li> <li>• VxLAN</li> </ul>
Data Services	<ul style="list-style-type: none"> <li>• Port Range Forwarding</li> <li>• Port Range Triggering</li> <li>• DMZ Setting</li> <li>• UPnP Setting</li> <li>• ALG Rule Setting</li> </ul>
Remote Access	<ul style="list-style-type: none"> <li>• DDNS or DNS Agent</li> <li>• SNMP</li> </ul>
Firewall	<ul style="list-style-type: none"> <li>• Terminal Firewall</li> <li>• IPv4 Filter (Black List / white List)</li> <li>• MAC Filter (Black List / white List)</li> <li>• URL Filter (Black List / white List)</li> </ul>
System Security	<ul style="list-style-type: none"> <li>• Remote Web Login</li> <li>• Access Control</li> <li>• Block Port scanner</li> <li>• Block SYN Flood</li> <li>• SPI Firewall</li> </ul>

Terminal Security	<ul style="list-style-type: none"> <li>• SSH</li> <li>• Telnet</li> </ul>
Device Management	<ul style="list-style-type: none"> <li>• SNMP v3</li> </ul>
CWMP	<ul style="list-style-type: none"> <li>• Primary TR069</li> <li>• Certificated Primary</li> </ul>
Network Diagnostics	<ul style="list-style-type: none"> <li>• TCP Dump</li> <li>• Ping</li> <li>• Traceroute</li> <li>• iPerf</li> </ul>
Administration	<ul style="list-style-type: none"> <li>• Web Protocols (https 443 and http 80)</li> <li>• NTP Setting</li> <li>• MTU Setting</li> <li>• PIN Management</li> <li>• USIM Setting</li> <li>• ICCID Setting</li> </ul>
Statistics	<ul style="list-style-type: none"> <li>• LTE Status</li> <li>• System up time</li> <li>• Device Status</li> <li>• Firewall Status</li> <li>• Roaming Status</li> <li>• Carrier Aggregation Status</li> </ul>
Network Users	<ul style="list-style-type: none"> <li>• DHCP Client List</li> <li>• Wi-Fi 2.4GHz Client List</li> </ul>
Maintenance	<ul style="list-style-type: none"> <li>• Date and time setting</li> <li>• Restore Factory Settings</li> <li>• Backup Configuration file</li> <li>• Firmware Upgrade locally Web UI</li> </ul>
Routing	<ul style="list-style-type: none"> <li>• Current Route Status</li> <li>• Routing Map (ARP / Active Route)</li> <li>• Static Routes (LAN / WAN / L3 VPN)</li> <li>• Ping Watchdog</li> </ul>
System Tools	<ul style="list-style-type: none"> <li>• Operating Log (Info, Warnings, Errors, Critical)</li> <li>• Run-time Log (Info, Warnings, Errors, Critical)</li> <li>• Filter, Select, Display, export Logs</li> </ul>
Other Applications	<ul style="list-style-type: none"> <li>• SMS Sent / Receive</li> <li>• WPS Soft Button</li> </ul>

## Wi-Fi SPECIFICATIONS

Standards Supported	<ul style="list-style-type: none"><li>• 802.11b/g/n compatible Wi-Fi</li><li>• 802.11e QoS Enhancement (WMM)</li><li>• 802.11i (WPA, WPA2) No Authentication, shared key, and pairwise key authentication services</li></ul>
Channel Bandwidth	20MHz, 40MHz, 80MHz
Frequency 2.4GHz	2.412 (Channel 1) ~ 2.472 (Channel 13)
TXRX	1T2R
MIMO	2x2 MIMO
Maximum Data Rate	<ul style="list-style-type: none"><li>• 802.11b: 11Mbps</li><li>• 802.11g: 54Mbps</li><li>• 802.11n: 300Mbps</li></ul>
Modulation	<ul style="list-style-type: none"><li>• DSSS with DBPSK and DQPSK, CCK</li><li>• OFDM with BPSK, QPSK, 16QAM, and 64QAM</li></ul>
Convolutional Coding Rate:	1/2, 2/3, 3/4, and 5/6
Receive Sensitivity	<ul style="list-style-type: none"><li>• -64dBm @ 65Mbps, typical for 802.11n</li><li>• -65dBm @ 54Mbps, typical for 802.11g</li><li>• -76dBm @ 11Mbps, typical for 802.11b</li></ul>
Maximum Output Power	<ul style="list-style-type: none"><li>• 2.4GHz / 20dBm for ODFM &amp; 18dBm for CCK modulation</li></ul>
Fast Receiver	Automatic Gain Control (AGC)
Antenna Type	Build-in separate antenna, 2.4GHz
Antenna Gain	2.4GHz / 3dBi

## ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-40°C to 55°C
Storage Temperature	-40°C to 70°C
Operating Humidity	5% to 95%
Ingress Protection Rating	IP65

## PACKAGE DELIVER

	Assembled Product
	Ethernet Cable, Cat5
	12V/2A AC / DC Adaptor
	Quick Installer Guide

## CONTACT INFORMATION

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