



PATRIOT PMC3551

LTE All-Outdoor Integrated Multibeam Antenna Tri-Micro-Cell eNodeB CBRS Ready

The Patriot™ PMC3551 multi-carrier base station is your most powerful and economical solution to deliver reliable wide area LTE service coverage to mobile and fixed user equipment (UEs) in Private and Public LTE networks.

The PMC3551 integrates three 3GPP compliant eNodeB systems, each with 2x2 MIMO antenna arrays, into a single compact housing that is easily configured and deployed. The six multibeam antennas in each unit provide up to 180 degrees of coverage (up to 23 miles / 37 km) from a single pole, wall, or tower location - enabling a tiny footprint of only two PMC3551 systems to service a full 360 degrees.

The PMC3551 is available for multiple LTE band classes including the Citizens Broadband Radio Service (CBRS) with Spectrum Access System (SAS) including a proxy for Cat B (higher power) CBSD devices. The highest available performance is obtained using up to 3x carrier aggregation (CA) for both contiguous and non-contiguous aggregation across the entire channel range.

Your optimum choice for cyber security, the Patriot PMC3551 is designed and manufactured in North America.

FEATURES AND BENEFITS

- Best-in-class interference resistance –Advanced multibeam antenna to minimize noise exposure and improve RF characteristics
- Massive capacity and hundreds of users per box – 3 eNB per box with up to 3x carrier aggregation (CA) with non-contiguous aggregation across the entire CBRS range, 6x MIMO, up to 1 gigabit Mbps per cell
- Investment protection and long-life span – SDR-based technology enabling new capabilities as LTE standards evolve, LTE RIs 10 with future support of RIs 12
- Tiny footprint lowering CAPEX and site costs – With 3 eNB per box just 2 Patriots can cover 360° using beamforming sectors
- Simple enough any IT professional can deploy it – As little as 20 minutes to set up with integrated EPC and CBRS SaS proxy for Cat B CBSD, default SFP and GigE interfaces, integrated GPS
- No security risks – designed, developed and manufactured in North America by a trusted Canadian-based company

PRODUCT COMPLEMENTS

The Patriot PMC3551 interoperates a wide selection of LTE ecosystem user equipment (UE) devices including Redline's FlexCore EPC (embedded option available) and Redline FlexNet™ NMS, EMS & SON are available for a complete management solution.

Redline provides a full range of advanced services to assist in design, installation, commissioning and maintenance of your wireless network.

UNIFIED GLOBAL SOLUTIONS

Redline's iLTE™ technology provides a truly unified wireless networking solution—across the spectrum, across your company and across the globe—enabling secure, reliable, high-speed connectivity to people and smart devices everywhere.



SYSTEM AT A GLANCE

3GPP Compliant eNodeB
interoperable in LTE ecosystem

Release 10 (future support of
release 12)

Mobility Support

Integrated multibeam antenna

Up to 1 Gbps throughput

288 active users per node

CBRS / SAS support

x3 carrier aggregation including
non contiguous

All-outdoor compact form factor

Quick configure-deploy scenario

360° coverage with only two units

Software Define Radio (SDR) for
remote field upgrades of
features and standards

High-grade cyber security
(NA design-build)

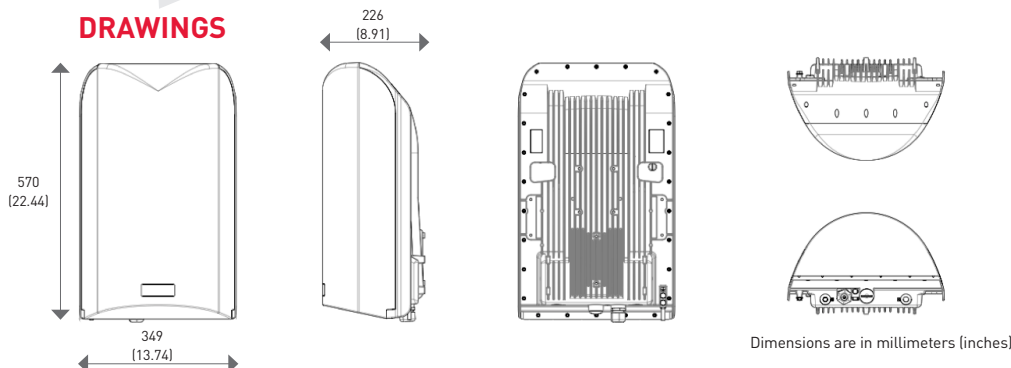
PATRIOT PMC3551 SPECIFICATIONS

Platform Classification	All outdoor eNodeB with integrated multibeam antenna
Transmit Power Class	12 Watts
3GPP Release	LTE-A Rls 10 (software upgrade to Rls 12) ³
Supported 3GPP Band Classes (Contact Redline for additional bands)	3.5 GHz TDD: B42, B43, B48 (CBRS) (Contact Redline for additional bands)
Mobility	Fully Supported hand-over
Cognitive Mode	CBRS CBSD Type B SAS Support, Integrated Proxy SAS
Antenna System	3x 2x2 MIMO (6x Tx + 6x Rx in multiple configurations)
Number of Active UE's	Up to 96/beam, up to 288/eNodeB
Access Scheme	DL: OFDMA UL: SC-FDMA
Modulation	DL: QPSK, 16QAM, 64QAM, 256QAM ³ UL: QPSK, 16QAM, 64QAM ³
Antenna Technology	Integrated Multibeam 3x 60° (60° to 180° view); 17 dBi/beam
Channel Size	10, 20, 15 ³
TDD Config Modes (DL/UL approx. %)	0 (25/75); 1 (50/50); 2 (75/25); 3 (67/33); 4 (78/22); 5 (89/11); 6 (38/62)
Transmit Power (EIRP)	+33 dBm/Beam (+50 dBm EIRP/beam)
Receiver Sensitivity	-98 dBm in 10 MHz (local area BS defined by 3GPP)
Capacity BTS (peak)	150 : 450 Mbps/Sector (60°)
Capacity CPE (peak)	150 : 450 Mbps (1 CC-3 CC)
Data/Control/Management Interfaces	Base: 1x Copper 1000BaseT RJ45, 1x SFP LC Option: 2x Copper 1000BaseT RJ45 or 2x SFP LC
Mobile Environment Supported	Up to 120 km/h (75 mph)
Range Supported	Up to 37 km (23 miles)
Environmental	-40 to +60°C (-40 to 140°F); IP67, powder coat housing, polycarbonate radome
Surge Protection	Built-in
Management	Mgmt: FlexCore EPC, FlexNet NMS / EMS / SON Option: Embedded FlexCore EPC Mgmt I/F: SNMPv2c/v3 OAM: NetConf, HTTP(S), TCP/IP, UDP, (S)FTP, SSH, TR-069/TR-196
Power	48 VDC; 3.5 GHz 150 W; 1x 4-pin DC
Timing	Integrated GPS receiver & 4 dBic antenna Option: IEEE 1588v2
Mount	Pole 50 to 115 mm (2 to 4.5 in) or wall
Survival Wind Speed	200 Km/hr
Wind Loading	Fa (axial) max: 204 N (46 lbs); Fs (side) max: 58 N (13 lbs); Mt (torque) max: 36 N (27 ft-lbs); FPE (side): 0.2 sq. m (2.1 sq. ft.)

All specifications are subject to change without notice.

1. Initial band, others to be determined; 2. Pending, 3. Planned future release

DRAWINGS



Compliance

3GPP: Release 10

Safety²: IEC, EN, and UL/CSA 60950

EMC²: EN 301 489-1. EN 3-1 489-17

FCC²

ISED²

ETSI²



Physical Attributes

Dimensions

350 x 570 x 227 mm (13.78" x 22.4" x 8.9")

Volume

6.5 litres (0.96 cu-ft)

Weight

12.0 Kg (26.5 lb)

List of Terms

Cat B CBSD: Higher power CBSD (96.41 and 96.45)

CBRS: Citizens Broadband Radio Service

CBSD: Citizens Broadband radio Service Device

SAS: Spectrum Access System

3GPP: 3rd Generation Partnership Project (LTE)

Macro Cell: Up to 37 km (23 miles)

302 Town Centre Blvd.
Markham, ON L3R 0E8 Canada

w rdlcom.com t +1.905.479.8344
e info@rdlcom.com tf +1.866.633.6669

20180917 - Patriot C1 PMC3551 © 2018 Redline Communications Inc. All rights reserved.

redline[®]
communications