

base7 RNC HXTC-15 v2.4.1

OPERATING SYSTEMS

Linux CentOS 7.6+

PROCESSORS

All x86

SUPPORTED IUB

Up to 750

SUPPORTED IUCS/IUPS

Up to 127 links
IuCS/IuPS

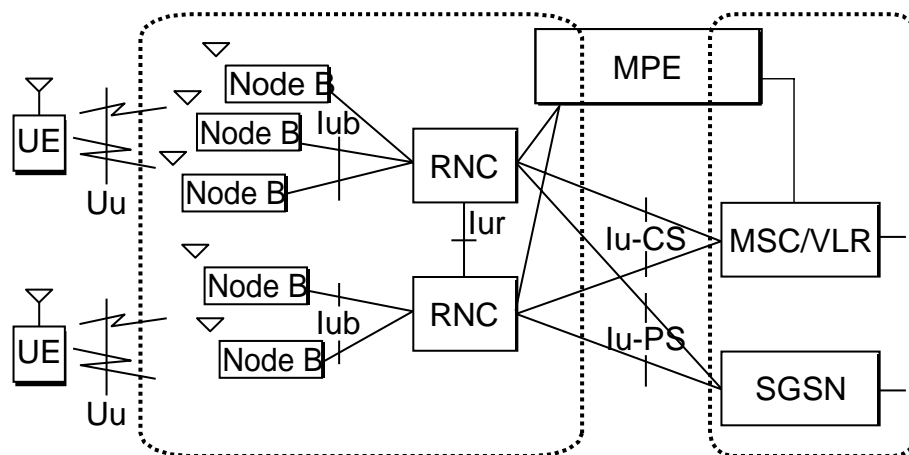
IP EXTERNAL MGMT CLIENTS

250 per server

The base7 HXTC-15 is a full-featured software IP Radio Network Controller supporting voice and data control as well as supporting the IuB, IuCS and IuPS interfaces in the standard and all-IP configurations. It can be deployed on physical servers or as a VNF within a VM.

The 2.4 release also adds support for Release 5 HSPA at the physical layer covering HS-DSCH, HS-DPCCH and HS-SCCH channels. In this physical configuration the stack supports AMC, 16QAM, HARQ and fast packet scheduling for data speeds of 1.2-1.44 Mbps on single antenna systems.

The RNC runs on standard x86 server hardware using the Linux operating systems and it offers integration options at all stack layers as well as an external IP interface that is accessible via TCP, SCTP or UDP with a defined application layer for external service control. There is also an external SIP interface that can be used for IMS or LTE call control integration. The system architecture is as shown below



Interface Support

Category	Function	Organization	Specification
Application layer	RRC	3GPP	TS25.331
	RANAP	3GPP	TS25.413
	RNSAP	3GPP	TS25.423
	NBAP	3GPP	TS25.433
	ISUP/BICC	ITU-T	Q.765
	ALCAP	ITU-T	Q.2150.3, Q.2630.1
Transport layer	GTP-U	3GPP	TS29.060
	RLC	3GPP	TS25.322
	MAC	3GPP	TS25.321
	lu FP	3GPP	TS25.415
	Iub/Iur FP	3GPP	TS25.425, TS25.427, TS25.435
	AAL Type1/2/5	ITU-T	I.363.1, I.363.2, I.363.5
	ATM	ITU-T	I.361
Voice	PCM	ITU-T	ITU-T G.711
	GSM-AMR	3GPP	TS26.071
Encryption	Cipher/Authentication	3GPP	TS33.102

Codec support

The RNC has a transcoder unit as an integral module. In addition to standard GSM-FR/HR, EFR, G711 and G729, the stack supports ANR-NB and WB and transcoding between any available codec.

Performance

The platform has capacity to support up to 750 nodeB connections on a single server pair. It can also support split networks at the RANAP layer. It can support up to 127 simultaneous IuB and IuCS links.

