

No. IV-21011/2/2010-Prov-I
Government of India
Ministry of Home Affairs

26, Man Singh Road, Jaisalmer House,
New Delhi, 9.2.2010

To

The DG:NSG/BPR&D

Subject:- QRs/Specifications of IP Encryptor for NSG Network Security.

The QRs/Specifications of IP Encryptor for NSG Network Security as per Annexure-I has been accepted by the Competent Authority in MHA.

2. Henceforth, the NSG should procure the above items required by them strictly as per the laid down Technical Specifications/QRs.

9/2/10

(R.S.Sharma)
Director (Prov)

जारी किया/ISSUED
दिनांक/Date.....
प्रो. I / Prov. I
गृह विभाग/MHA


9/2

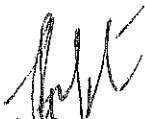
Annex-I


QUALITATIVE REQUIREMENTS: IP ENCRYPTOR FOR NSG NETWORK SECURITY


Sl.No	Specification
1.	Internet Protocol (IP) Encryptor may be used in the following modes :- (a) Transport Mode (b) Tunnel Mode
2.	Network Access : Should be compatible with channels of 8 Mbps using Multi Protocol Level Switching (MPLS), Very Small Aperture Terminal (VSAT), Lease line and Worldwide interoperability for Microwave Access (Wi MAX)
3.	<p>Connectivity :</p> (a) Support Internet Protocol version-4 (IPV4) with migrating capability for Internet Protocol version-6 (IPV6) without any Add on (b) No. of Local Area Network (LAN) ports one or more. (c) No. of Wide Area Network (WAN) ports one or more. (d) Full Duplex. <p>Electrical :</p> i) Min input levels – 10/100 standard Ethernet level. i.e. 10 and 100 Mbps ii) Output levels – 10/100 standard Ethernet level. i.e. 10 and 100 Mbps iii) Pulse shape (input & output) – 10/100 standard Ethernet interface. i.e. 10 and 100 Mbps (International standards to support 10&100Mbps interfaces) iv) Bit Error Rate (BER) rating - 1/10000000 or 10^{-7} (1bit in 10^7 bits) or better.
4.	<p>Encryption: - The Internet Protocol (IP) Encryptor hardware and software will be indigenously developed and the product to meet statutory security requirements. It is required to be approved by the Scientific Analysis Group (SAG), Govt of India. In order to do so the following must be meet:-</p> a) Key length – To meet the G4 grade requirement as specified by SAG. b) Key loading – Through Fill Gun and Key Pad c) Key storing – As per SAG specifications. d) Algorithm – To meet the G4 grade as specified by SAG. e) Algorithm Loading – Field Programmable Gate Arrays (FPGA) based as per SAG requirement. f) Algorithm Storing – Preloaded in system as per SAG specification. g) Encryptor Hardware – Tamper Proof. h) Key Requirement – As per requirement specified by SAG.
5.	<p>Management: Must have following management features.</p> a) LAN interface for Encryptor management b) Visual indications for status. c) Change of key and algorithm from central location after system is deployed i.e. the LAN/WAN. d) Local loading of key using key pad and fill-gun. e) Built in Test Facility (BITE)
	f) Non volatile storage for key and algorithms to ensure that algorithm and key loading is not required even in case of failure of power (primary and secondary).

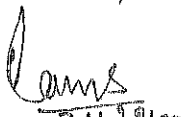
6.	<p>Power :</p> <p>a) Must work on a/c mains with the following :</p> <p>i) Frequency - 50 Hz \pm 5 Hz</p> <p>ii) Voltage - 220VAC \pm 50V, 12-48 Volt DC</p> <p>iii) Current - Max 600mA at 12 V DC</p> <p>b) Must have facility to work on standby batteries with inbuilt changing facility.</p> <p>c) In line batteries arrangement to provide surge protection is desirable.</p>
7.	<p>Physical & Environmental :-</p> <p>a) Mountable in 19" racks.</p> <p>b) Work in non-ac environment at temp from 0 - 50 C</p> <p>c) Environment specs humidity : 90 % at 50° C</p>
8.	<p>Safety and destruction :-</p> <p>a) Unit must be securable to the rack with Key loading arrangements.</p> <p>b) Unit should not be open able unless removed from rack.</p> <p>c) Arrangements for emergency erasure of keys.</p> <p>d) Arrangements for destruction of classified hardware.</p>



 (Pawan Kumar Singhal)
 Director, DCPW


 (Dr. Indul Gupta)
 Scientist 'F' DRDO


 (Venu Kumar K.M.)
 (Dy. Director, DCPW)


 (J.K. Singh)
 G.CT (Comn), NSG


 (Ram Swaroop)
 ADD/Tech, IB Hq


 (Maj. Vijay Pundir)
 SC(Comn), NSG

Approved /-Not Approved


 (A. S. Gill), IPS
 DG, CRPF