HARDWARE INFRASTRUCTURE REQUIRED FOR IMPLEMETATION OF EXCISE E-GOVERNANCE APPLICATION (ASSAM)

C-TEL INFOSYSTEMS PVT LTD

: - __Usage of Hardware for functioning of Excise e-governance application at Company Wholesaler__

S. No	Item Description	Specifications	Purpose	Units
1	IP68 Grade Server (Primary & Secondary)	• Intel i7 Octa Core • 16 GB RAM, 1 TB HDD, Fanless • Operates in -20 to +90 degree Celsius. • Dual LAN port, Inbuilt 4G / 5G SIM and Wi-fi Module • OS: Ubuntu 20:04	Installation of Excise e-governance application - Modules and Features to achieve Control and Regulation at Wholesales __Features List:__ • Add Approved Route • Route Approval • Indent for Supply / Purchase Order to Bottling Plants or Breweries / Import Stock • List of waiting Trucks • Indent & Approval of Transport Permit • Advance Shipment Notice Verification • Gate Inward Register • Transport Pass Revalidation • Gate Pass Generation • Receiving process of different consignments • Record Transit Breakages • Record Transit Shortages • Repack process for Part bottles • Verification of Stock Receipt acknowledgement • Generation of Product wise Stock • Beer Consignment Receiving Process • Retailer Indents (IFS) • Issue Order for Supply for Retailers • Scanning the cases/Bottles/for Shipment • Bottle Replace incase of storage breakage • Storage / Breakages & Shortages • Breakage Verification by Excise Officers • Day end Process tool • Gate Pass generation and Outward register • Alerts and Notifications • Hologram Procurement • Hologram Packing Process • Import Stock Receiving	2

			• Lab Sample reports • Destruction of Sedimented Stock etc.	
2	IP 68 Industrial Grade PC (Client PC) with monitor Keyboard Mouse	• 8 GB RAM, 500 GB HDD • Operates in -20 to +90 degree Celsius. • LAN port, 4 USB Hub, Inbuilt 4G/5G SIM and Wi-fi Module • OS: Ubuntu 18:04	Computer (Industrial Grade Computer) required to Access and Operate the e-governance Application by the Warehouse Management and Excise Officer of the Company Wholesaler for the modules and features mentioned in the above feature list.	4

3	Handheld Scanners Wi-Fi (For Dispatch section) WLAN/ Bluetooth with 2D, 1D with linear imager	**Basic Features:**
		
		• **CPU:** Octa-Core 1.4 Ghz
		• **RAM:** 2GB(Standard)/4GB (Optional)
		• **ROM:** 16GB(Standard)/64GB(Optional)
		• **O.S:** Android 8.1
		• **Display:** 5.0-inch TFT-LCD HD (720 x 1280) color screen
		• **Dimensions:** 158mm x 76.2 mm x 13.3mm
		• **Weight:** 210g (Battery included
		• **Buttons:** Volume up/down, Power button, Custom buttons, Scan button, Home, Menu, Back
		• **Input:** Chinese/English, and supports handwriting and soft keyboard
		• **Barcode Scanner:** 2D imager
		• **Main Battery:** Rechargeable 3.8V 3800mAh lithium, Polymer battery pack (Typical Operation time >8 hours)
		• **RTC Battery:** Real time clock battery
		• **Radio Communication:**
		  - **Wi-Fi**: 802.11 a/b/g/n/ac
		  - **Bluetooth:** 4G FDD-LTE (B1/B2/B3/B4/B5/B7/B8/B20
		  - **Radio Bands:**
		  - 3G: WCDMA(B1/B2/B5/B8)
		  - 2G: GSM/EDGE/GPRS (850/900/1800/1900MZ)
		• **Expansion and peripherals:**
		  - **Camera:** 13MP auto-focus color rear camera with flash, 2MP front-facing camera
		  - **RFID GPS:** Supports 13.56Mhz, ISO14443A&B and ISO15693 standard, Supports NFC
		  - **GPS:** GPS, A-GPS, Bei-Dou satellite navigation system, GLONASS
		• **Slot Interfaces:**
		  - Micro SD/TF * 1, Micro SIM 2
		  - Type-C USB, 3.5mm Audio port, POGO PIN
			Mobile Based application on Handheld devices is provided to operate the transaction where a computer cannot be used to facilitate such transaction (Mainly at warehouse, Security Gate etc.)
			• Scanning of Permit Barcodes to auto generate the Gate Inward and Outward Registers
			• Mobile based application is developed for scanning the Barcodes printed on each Carton box before loading into the truck or vehicle against each Transit Pass.
			Breakages or Shortages identified in the bottling plant warehouse shall be scanned through the device for capturing & recording the Breakages or Shortages to automatically update / generate the respective inventory registers.
				6

		- **Sensor:** Light sensor, Range sensor, Acceleration sensor, Compass, Gyroscope, Barometer - **Audio:** Loudspeaker, Microphone, Earpiece - **Fingerprint Module:** Optional - **Standard Accessories:** Power adaptor, Data cable, One battery • **User Environment:** - **Operating Temperature:** -10 50 C (14=122"F) - **Storage Temperature:** -40 70 C (-40=158'F) - **Humidity:** s% - 95% - **Drop Durability:** 1.5m - **IP rating:** 65		
4	2 D wired scanner	• **Scan Pattern:** Area Image (838 x 640-pixel array) **Motion Tolerance:** Up to 610 cm/s (240 in/s) for 13 mil UPC at optimal focus • **Scan Angle:** - HD Focus: Horizontal 41.4°; Vertical: 32.2° - SR Focus: Horizontal: 42.4°; Vertical: 33° - ER Focus: Horizontal: 31.6°; Vertical: 24.4° • **Symbol Contrast:** 20% minimum reflectance difference • **Pitch, Skew:** 45°, 65° • **Decode Capability**: Reads standard 1D, PDF, 2D, Postal and OCR symbologies • **Environmental Sealing:** IP41 • **Drop:** Designed to withstand at least 1.8 m (6′) drops to concrete. • **Ratchet stand:** Designed to • (4′) drops to concrete on each of the faces. • **Input Voltage:** 4 VDC to 5.5 VDC • **Operating Power:** 2.3 W (450mA @ 5 VDC) • **Standby Power:** 0.45 W (90mA @ 5 VDC) • **Host System Interfaces:** USB, Keyboard Wedge, RS232, IBM 46xx (RS485)	2D-wired scanners are integrated with the Excise e- governance application for certain process where scanning of Barcodes is required by Management and Excise officer connected with the Integrated Computers. • Scanning of Barcode Printed on Delivery challan for receiving the Hologram consignment to generate / Update the Inventory. • Scanning the 1D / 2D Barcodes printed on the Hologram Carton or Spool for issuing it to the bottling Plant management from Excise Custody / Inventory for Daily utilization • Scanning of Spool Barcodes for allocation of Holograms to the production lines • Scanning of Hologram for reprinting of Damaged or Smudged Case Barcode	2
5	LED Display 40''	• **Ethernet Specification**: Integrated Ethernet LAN Enabled • Inbuilt Browser	Displaying Realtime Dashboard for Line wise Production, Active Shipments, Revenue Generated, Sales, Inventory, etc.	1
	Network Equipment*			
6	Wireless Access Points	• **Power:** External power adapter Input: 110-240V AC | Output: 12V DC, 1.0A | Power over Ethernet Class 0 • **Ethernet ports:**1 auto MDX, auto-sensing 10/100/1000 Mbps, RJ-45, POE port | 2	Wireless Access Points will be installed in the Wholesale Warehouse, dispatch point and any other location within the Wholesale Premises for establishing the connectivity between mobile based	2

		auto MDX, auto-sensing 10/100 Mbps, RJ-45 ports • **Lock option:** Padlock & Kensington lock supported with optional mounting bracket (902-0166-0000). Kensington Lock supported with low profile mounting bracket (902-0181-0000) • **Power draw:** ZF7363: 12.95W (PoE), 12W (12V DC) • **WIFI:** **Standards:** IEEE 802.11a/b/g/n*, 2.4GHz and 5GHz* • **Supported data rates:** 802.11n: 6.5Mbps – 130Mbps (20MHz) 6.5Mbps – 300Mbps (40MHz) | 802.11a: 54, 48, 36, 24, 18, 12, 9 and 6Mbps*| 802.11b: 11, 5.5, 2 and 1 Mbps | 802.11g: 54, 48, 36, 24, 18, 12, 9 and 6 Mbps. • **Radio chains:** 2 x 2 • **Spatial streams:** 2 • **RF power output:** 26 dBm for 2.4GHz†, 24 dBm for 5GHz*† • **Channelization:** 20MHz and/or 40MHz • **Frequency band:** IEEE802.11n: 2.4 – 2.484GHzand 5.15 - 5.85GHz* | IEEE 802.11a: 5.15 – 5.85 GHz* | IEEE 802.11b: 2.4 – 2.484 GHz • **Performance & capacity:** - **Concurrent stations:** 256 - **Simultaneous VoIP clients:** Up to 20	handheld device, Integrated computers etc. and the servers installed within the Company Wholesaler Location to operate / access the Excise e-governance application.	
7	6 PIN industrial power spike	• **Maximum Spike Current**: 13,000 Amps • Long chord around 1.5 Mtr. *Preferably with Universal Sockets	Required for providing Power supply to the Equipment installed within the Server Rack	4
8	Network Switch 24 Port	• **1000Base-T Interface:** 12 • **1000Base-T PoE Interface:** 12 • **Auto MDI/MDIX:** Yes • **10/100/1000BASE-T PoE ports:** 12 • **10/100/1000BASE-T ports:** 12 • **Switch Capacity:** 48 Gbps • **Max. Packet Forwarding Rate:** 35.71 Mpps • **Power Input:** AC: 100-240V • **Comply with RoHS 6:** Yes • **MAC Address Table Size:** 8K • **802.3x Flow Control:** Yes • **802.1D Spanning Tree (STP):** Yes • **802.1w Rapid Spanning Tree (RSTP):** Yes • **802.1AX Link Aggregation:** Yes • **802.3ad Link Aggregation:** Yes • **Link Aggregation Group Per Device:** 12 • **Max Port Per Link Aggregation Group:** 8 • **Port Mirroring:** Yes • **Jumbo Frame:** 9216 bytes	Required to provide the network connectivity (LAN) between the equipment installed within the Wholesale Premises	4

		• **IGMP Snooping:** Yes • **Max IGMP Snooping Groups:** 64 • **802.1Q VLAN:** Yes • **VLAN Groups:** 128 • **Port-based VLAN:** Yes • **Voice VLAN:** Yes • **Auto Surveillance VLAN:** Yes • **Asymmetric VLAN:** Yes • **Number of Queue:** 4 • **DHCP/BootP Client:** Yes • **Ping:** Yes • **Surge/Lightning Protection (AC Power Inet):** 2kV • **Surge/Lightning Protection (All Ethernet Ports):** 1Kv • **Operation Temperature:** -5-50°C • **Operation Humidity:** 0%-95% RH • **Maximum Power Consumption:** 131.5 W (PoE on) 19.5 W (PoE off) • **Standby Power Consumption:** 8.8 Watts • **Maximum PoE Budget:** 100W • **PoE Budget:** 100 W (30 W max. per PoE port)		
9	Laser printer	• **Printing Method:** Monochrome Laser Beam Printing • **Print Speed (Simplex):** A4: Up to 25ppm **Print Speed (Duplex):** A4: Up to 7.7spm (sheets/minute) • **Print Resolution:** 600 x 600dpi. • **Print Language:** UFR II LT • **Paper Sizes:** A4, B5, A5, Legal, Letter, Executive, 16K, Envelope COM10, Envelope Monarch, Envelope C5, Envelope DL/ Index card Custom (Width: 76.2 - 216mm x Length 127 - 356mm) • **USB Interface** - USB 2.0 High Speed • **Network Protocol:** - Print: LPD, RAW, WSD-Print - Management: SNMPv1, SNMPv3, SLP - TCP/IP Application Services: WINS (IPv4), DHCP, BOOTP, RARP, DHCPv6 (IPv6), Auto IP, mDNS, DNS, DDNS • **Compatible Operating Systems-** Windows 7(32/64bit) or later, Windows Server 2012 R2 or later, Linux, Citrix (FR2 and later)	Required to Print the Permits, Pass, Chemical Reports, different types of Registers etc.	1
10	Server Rack (12U)	• **Dimensions**: 12U 19", 590x600x440 mm, (H x W x D), 370mm working depth, (distance from bars to rear panel) • **Type:** wall-mounted, welded body, removable sides • **Door:** 4mm toughened glass • **Cable entry:** top + bottom • **Mounting profiles:** 1 pair – 19"	Required to Mount the Primary & Secondary Servers, Switch, Router etc..	1

		• **Fan openings:** yes • **Colour:** RAL 7035 (grey) • **Protection degree:** IP 20 • **Additional equipment:** 3 sets of fixing screws in the holes of the supporting rails and a set of four screws for wall mounting		
11	Server Rack Partition Plates	• 1 pair – 19"	Partition plates are required to place Primary and Secondary servers separately inside the Server Rack	1 pair – 19"
12	Network cable (Cat6 - 305) mtrs	• **Category:** 6 UTP Solid cable • **Conductor Meta:** Bare Copper • **OD:** 6.1mm ±0.2 • **Capacitance Unbalance:** 330pF/100m • **Conductor:** 23 AWG (Solid) • **Insulation Material:** HD-PE • **Resistance Unbalance:** 5% Max • **Delay Skew:** <45nS	Cable required for providing network connectivity between each equipment to be installed within primary distillery premises.	As per usage
13	RJ 45 Jack	• **Performance category:** CAT6 • **Housing material:** Polycarbonate • **Contact material:** Copper Housing • **Colour:** Clear • **Operating temperature:** -10° to 60°C • **Voltage/Current rating [UL applications]:** 125Volts AC/1.5Amps	Rj-45 Jacks are used to connect computers, Network Switches, Router and other equipment's onto Ethernet-based local area networks (LAN) though Network Cable. (Point No 11)	As per usage
14	1KVA UPS Connectivity	• **Input Voltage Range:** 140 V ~ 300 V AC • **Frequency:** 50 Hz ± 10% • **Output Voltage:** 230 V ± 10% • **Charging Time:** 4-8 Hours recover to 90% capacity • **Operating Temperature:** 0°C-40°C	Required for Connecting Servers and Other computer equipment to avoid forceful shutdown and to achieve seamless / uninterrupted operations.	1

15	Firewall +5yr License	• **Interface:**
		  - **Hardware Accelerated 10 GE SFP+ Slots:** 2
		  - **Hardware Accelerated GE SFP Slots:** 8
		  - **Hardware Accelerated GE RJ45 Ports:** 20
		  - **GE RJ45 Management / HA Ports:** 2
		  - **USB Ports (Client / Server):** 1 / 2
		  - **Onboard Storage:** 240 GB
		  - **Included Transceivers:** 2x SFP (SX 1 GE)
		• **Capacity:**
		  - **IPv4 Firewall Throughput (1518 / 512 / 64 byte, UDP):** 36 / 36 / 22 Gbps
		  - **IPv6 Firewall Throughput (1518 / 512 / 86 byte, UDP):** 36 / 36 / 22 Gbps
		  - **Firewall Latency (64 byte, UDP):** 3 μs
		  - **Firewall Throughput (Packet per Second):** 33 Mpps
		  - **Concurrent Sessions (TCP):** 5 Million
		  - **New Sessions/Second (TCP):** 280,000
		  - **Firewall Policies:** ~10,000
		  - **IPsec VPN Throughput (512 byte):** 20 Gbps
		  - **SSL-VPN Throughput:** 2.2 Gbps
			The Servers Installed at the Company Wholesaler with Excise e-governance application has a sensitive data of Excise revenue and other important data, A firewall is installed for network security which monitors and restricts incoming and outgoing network traffic and decides whether to allow or block specific traffic based on a defined set of security rules.	1

		- **Concurrent SSL-VPN Users:** 5,000
		- **IPS Throughput:** 8 Gbps
		- **CAPWAP Throughput:** 5.5 Gbps
		- **Maximum Number of Registered Endpoints:** 2,000
		
		• **Power:**
		  - **AC Power Supply:** 100–240V AC, 60–50 Hz
		  - **Power Consumption (Average / Maximum):** 128 W / 187 W
		  - **Current (Maximum):** 110V/7A, 220V/3.5A		

16	Lan Patch cards 2mtrs	• 4 Pairs Unshielded Twisted Pair (UTP) Cable • **Conductor Metal:** Bare Copper • **Color Code:** Gray • **Conductor:** 24 AWG • **Insulation Material:** HD-PE • **Jacket Material:** PVC UL94V-0 • **Heat-resistant:** 60oC minimum (Temperature limited) • **Flame property:** The purpose of the vertical flame test is to screen out flammable wires. It follows the VW-1 (UL); FT-1 (CSA) standards.	Cable required for providing network connectivity between equipment which will be installed within Company Wholesaler premises.	As per usage
17	Internet (Dedicated) + 2 Static IPs	• 10mbps	Required to establish the connectivity and data or Transactions exchange between Locally installed servers and Central Server.	1
18	Ports to be open	• 5434, 8082 and 2202	Following ports to be open	