

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

C-TEL INFOSYSTEMS PVT LTD

: - Usage of Hardware for functioning of Excise e-governance application at Wholesaler

S. No	Item Description	Specifications	Purpose	Units
1	IP68 Grade Server (Primary & Secondary)	<ul style="list-style-type: none"> • 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 	<p>Installation of Excise e-governance application - Modules and Features to achieve Control and Regulation at Wholesales</p> <p><u>Features List:</u></p> <ul style="list-style-type: none"> • 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

			<ul style="list-style-type: none"> • Lab Sample reports • Destruction of Sedimented Stock etc. 	
2	IP 68 Industrial Grade PC (Client PC) with monitor Keyboard Mouse	<ul style="list-style-type: none"> • 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 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	<p>Basic Features:</p> <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> - Wi-Fi: 802.11 a/b/g/n/ac - Bluetooth: 4G FDD-LTE (B1/B2/B3/B4/B5/B7/B8/B20) - Radio Bands: <ul style="list-style-type: none"> - 3G: WCDMA(B1/B2/B5/B8) - 2G: GSM/EDGE/GPRS (850/900/1800/1900Mz) • Expansion and peripherals: <ul style="list-style-type: none"> - 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: <ul style="list-style-type: none"> - Micro SD/TF * 1, Micro SIM 2 - Type-C USB, 3.5mm Audio port, POGO PIN 	<p>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.)</p> <ul style="list-style-type: none"> • 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. <p>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.</p>	6

		<ul style="list-style-type: none"> - 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: <ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> - 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) 	<p>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.</p> <ul style="list-style-type: none"> • 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"	<ul style="list-style-type: none"> • Ethernet Specification: Integrated Ethernet LAN Enabled • Inbuilt Browser 	<p>Displaying Realtime Dashboard for Line wise Production, Active Shipments, Revenue Generated, Sales, Inventory, etc.</p>	1
	Network Equipment*			
6	Wireless Access Points	<ul style="list-style-type: none"> • 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 	<p>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</p>	2

		<p>auto MDX, auto-sensing 10/100 Mbps, RJ-45 ports</p> <ul style="list-style-type: none"> • 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 – 2.484GHz and 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 Wholesaler Location to operate / access the Excise e-governance application.	
7	6 PIN industrial power spike	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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

		<ul style="list-style-type: none"> • 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 Inlet): 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	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> - Print: LPD, RAW, WSD-Print - Management: SNMPv1, SNMPv3, SLP - TCP/IP Application Services: WINS (IPv4), DHCP, BOOTP, RARP, DHCPv6 (IPv6), AutoIP, 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)	<ul style="list-style-type: none"> • 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

		<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Interface: <ul style="list-style-type: none"> - 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: <ul style="list-style-type: none"> - 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 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

		<ul style="list-style-type: none"> - Concurrent SSL-VPN Users: 5,000 - IPS Throughput: 8 Gbps - CAPWAP Throughput: 5.5 Gbps - Maximum Number of Registered Endpoints: 2,000 <ul style="list-style-type: none"> • Power: <ul style="list-style-type: none"> - 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	<ul style="list-style-type: none"> • 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 Wholesaler premises.	As per usage
17	Internet (Dedicated) + 2 Static IPs	<ul style="list-style-type: none"> • 10mbps 	Required to establish the connectivity and data or Transactions exchange between Locally installed servers and Central Server.	1
18	Ports to be open	<ul style="list-style-type: none"> • 5434, 8082 and 2202 	Following ports to be open	