Dasa-Rägister
EN ISO 9001:2008
IQ-0107-12

ISTITUTO D'ISTRUZIONE SUPERIORE "G. CELLI"
con sezioni associate
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61043 C A G L I (PU)

Si richiede che il progetto presentato dalla vostra ditta rispecchi il più possibile le caratteristiche del capitolato tecnico predisposto dal referente tecnico che si riporta di seguito e che è depositato agli atti della scuola.

Capitolato Tecnico

Fornitura richiesta

CPE-Y3: Apparato per la connessione ad Internet Wireless odu e idu
- deve includere 3 anni di garanzia on site ed aggiornamenti dei firmware
odu
- Frequenza di funzionamento 5500-5700 MHz
- Enclosure in plastica certificato IP67
- Antenna direttiva integrata a doppia polarizzazione da 20 dB
- Protezione antifultime con scaricatore integrato IEC-61000-4-5 fino a 2Kv
- Tecnologia MiMo
- Protocolli 802.11 a/c/n
- Polarizzazione Dual Slant
- Throughput massimo tcp fino a 250 Mb/s
- RoHS Compliant (direSva 2002/95/CE)
- Norma di sicurezza EN60950-1
- OFDM, TDD (disabile CSMA/CD), TDMA
Idu
- PoE output: 24V/48V selectable by means external jumper (maximum rated voltage 51V)
- PoE: In line/off line pair
- Battery connector & ground
- Main Surge Protec-on for data and power line 20kV
- Overvoltage Protec-on: Solid State overvoltage protector for data&power line
- Overcurrent Protec-on: PTC Resettable Fuse based
- ESD Protec-ons: by means SLV2,8 based system
- Addi-onal Protec-ons: Protection aganist DC input reversal
- n° 1 CAN Bus Port PORT 2,0 B up to 1 Mbit/sec
- n° 1 CAN Bus Termina-tion PORT with 120ohm termina+on
- n° 1 USB Port: miniUSB 2.0 type A (device) for fw upgrqde & data logging
- n° 1 24V-48V Selec-on Port: PORT with jumper connec+on
- n° 2 Ethernet Port GIGABIT ETHERNET 10/100/1000 base T

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ACCP-Y3: Apparato per Access Point Wireless ad alte prestazioni, con antenna adattiva per il minimo inquinamento
- deve includere 3 anni di garanzia on site ed aggiornamenti dei firmware
Accesso
- Fino a 8 SSID diversi
- Accesso dedicato protetto per Docenti
- Accesso dedicato protetto per uffici amministrativi
- Sistema di accesso dedicato libero previa registrazione captive portal e ricezione di password tramite sms, con scadenza programmabile, gestito dal fornitore per almeno 3 anni
- Federazione accessi sugli hotspot forniti per un unico login su tutti gli edifici e le sezioni distaccate dello stesso Plesso scolastico
High Performance
- Two-stream MIMO 2x2:2
- Concurrent dual-band (5GHz/2.4GHz)
- 867 Mbps (5 GHz) and 300 Mbps (2.4 GHz) of user throughput
- Up to 4dB of signal-to-interference and noise (SINR) improvement and up to 10dB of interference mitigation
- Capable of supporting up to 500 clients
- Channel selection delivering up to 50 percent capacity gain over alternative background scanning
- Minimum RX Sensitivity Up to -100 dBm
- Wi-Fi Standards IEEE 802.11a/b/g/n/ac 2.4GHz and 5GHz
- Power Save Supported
- n. 2 Ethernet Ports auto MDX, auto-sensing 10/100/1000 Mbps, RJ-45, POE port (on one port)
- Up to 30 simultaneous VoIP Clients
- Frequency Band: IEEE 802.11 b/g/n: 2.4 – 2.484 GHz, IEEE 802.11a/ac: 5.15 – 5.25 GHz; 5.25 – 5.35 GHz; 5.47 – 5.725 GHz; 5.725 – 5.85 GHz
- Band balancing
- Adaptive channel selection
- Automatic mesh
- Per-user PSK
- Time-based SSIDs
Configuration
- Web User Interface (HTTP/S)
- CLI (Telnet/SSH), SNMP v1, 2, 3
- TR-069 vis FlexMaster
- Auto AP Software Updates FTP or TFTP, remote auto available
- Mobile app management
Adaptive antennas and Automatic interference mitigation

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- Beamforming adaptive antenna pattern TX Gain Up to 4 dB, RX Gain 3-5 dB (PD-MRC)
- Automatic interference mitigation, optimized for high-density environments Up to 10 dB
- Mobile device ready: dual polarized adaptive antennas with 64 antenna patterns per radio for ultra-reliability
- Full omnidirectional polarization diversity
- Concurrent support for HD IPTV, VoIP and data
- Support for isochronous, multicast IP video streaming
- Four queues per client station
- Differentiated services with multiple SSIDs
- Support for multiple BSSIDs with unique QoS and security policies
- WPA-PSK (AES), 802.1X support
- Zero-IT and Dynamic PSK
- Captive portal and guest accounts
- RADIUS and Active Directory support
Certifications
- Europe
- WEEE/RoHS compliance
- EN-60601-1-2 (Medical)
- Wi-Fi Alliance
- EN50121-1 Railway EMC
- EN50121-4 Railway Immunity
- IEC 61373 Railway Shock & Vibration
- UL 2043 plenum rated
- 5GHz UNII-1 (2014)
SEC-Y3: Apparato firewall, per l'accesso simultaneo ad almeno due connettività internet, con funzioni di filtraggio di contenuti, antivirus, antispam, antiintrusione
- deve includere 3 anni di garanzia on site, aggiornamenti dei firmware e di tutte le definizioni
- Interfacce Ethernet (fisse): 4 GE rame
- Porte I/O (retro): 2 x USB 2.0, 1 x COM (RJ45)
- Alimentazione: CC esterna con regolazione automatica: 12V, 100-240VAC, 50-60 Hz
- Default zones for LAN, WAN, DMZ, LOCAL, VPN and WiFi
- Custom zones on LAN or DMZ
- Routing: static, multicast (PIM-SM) and dynamic (BGP, OSPF)
- Protocol independent multicast routing with IGMP snooping
- Bridging with STP support and ARP broadcast forwarding

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- 802.3ad interface link aggregation
- Full configuration of DNS, DHCP and NTP
- IPv6 support with tunnelling support including 6in4, 6to4, 4in6, and IPv6 rapid deployment (6rd) through IPSec
- Remote Ethernet Device (RED) support
- VLAN DHCP support and tagging
- Multiple bridge support
- Unlimited number of users licensed
- Malware scanning: block all forms of viruses, web malware, trojans and spyware on HTTP/S, FTP and web-based email
- Advanced web malware protection with JavaScript emulation
- Live Protection real-time in-the-cloud lookups for the latest threat intelligence
- Second independent malware detection engine (Avira) for dual-scanning
- Real-time or batch mode scanning
- Pharming Protection
- HTTP and HTTPS scanning on a per user or network policy basis with customizable rules and exceptions
- SSL protocol tunnelling detection and enforcment
- Certificate validation
- High performance web content caching
- File type filtering by mime-type, extension and active content types (e.g. Activex, applets, cookies, etc.)
- YouTube for Schools enforcement
- SafeSearch enforcement
- L'appliance deve essere disponibile in tre tagli (Small, Medium, Big) a seconda del throughput richiesto: *Modello Small*
- Throughput firewall 2Gbps
- Throughput IPS 200 Mbps
- Throughput antivirus (proxy) 500 Mbps
- Max connessioni simultanee 2.000.000
- Max nuove connessioni/secondo 18.000
- Storage: 8 GB - RAM: 2GB
Modello Medium
- Throughput firewall 3Gbps
- Throughput VPN 300 Mbps
- Throughput IPS 700 Mbps
- Throughput antivirus (proxy) 430 Mbps
- Max connessioni simultanee 3.000.000
- Max nuove connessioni/secondo 25.000

- Storage: 64 GB - RAM: 2GB
Modello Big
- Throughput firewall 3.5Gbps
- Throughput VPN 350 Mbps
- Throughput IPS 900 Mbps
- Throughput antivirus (proxy) 520 Mbps
- Max connessioni simultanee 6.000.000
- Max nuove connessioni/secondo 28.000
- Storage: 64 GB - RAM: 4GB
Application Protection and Control
- Enhanced application control with signatures and Layer 7 patterns for most known applications
- Application control based on category, characteristics (e.g. bandwidth and productivity consuming), technology (e.g. P2P) and risk level
- Per-user or network rule application control policy enforcement
- Custom application traffic shaping options to limit or guarantee upload or download priority and bitrate individually or shared
Email Protection and Control
- Reputation service with spam outbreak monitoring based Recurrent-Pattern-Detection
- Block spam and malware during the SMTP transaction
- Detects phishing URLs within e-mails
- Global & per-user domain and address black/white lists
- Recipient Verification against Active Directory account
- E-mail scanning with SMTP, POP3, and IMAP support
- Dual antivirus engines
- True-File-Type detection/scan within archive files
- Scan embedded mail formats: Block malicious and unwanted files with MIME type checking
- Quarantine unscannable or over-sized messages
- Filter mail for unlimited domains and mailboxes
- Automatic signature and pattern updates
- Live Anti-Virus real-time cloud lookups
Logging and Reporting
- Reports with custom report options
- Data anonymization
- Report scheduling to multiple recipients by report group with flexible frequency options
- Log retention customization by category
- Full log viewer

- Dashboards for traffic, security, and user threat quotient
- Application reports for user app risks, blocked user apps, web risks, blocked web attempts, search engine, web server usage, web server protection, and user data transfer and FTP traffic
- Network and threat reports for intrusion attacks, advanced threat protection, wireless, and Security Heartbeat
- VPN reports
- Email usage and protection reports
- Compliance reports for HIPAA, GLBA, SOX, FISMA, PCI, NERC CIP v3, and CIPA
CABLEX - Cavo ethernet da esterno
- CAT5e, Shielded
- Ethernet Support Up to 1 Gbps
- Conductor Wire Gauge 24 AWG
- Conductor Solid Bare Copper
- Conductor Diameter 0.500 ± 0.005 mm
- Insulation Type Solid PE
- Insulation Thickness AVG: 0.295 mm, MIN: 0.29 mm
- Anti-Crosstalk Divider
- Cable Shield (Aluminum Foil) Thick: 0.060 mm, Extent: 20 mm
- ESD Drain Wire 0.4 TC
- Rip Cord
- Secondary Cable Shield (Braid) 16*8*0.16AA Density: 95%
- Jacket Material PE
- Jacket Thickness AVG: 0.52 mm, MIN: 0.46 mm
- Reference Standard ISO/IEC 11801, TIA/EIA568B.2
CABLIN - Cavo ethernet da interno
- CAT5e, Shielded
- Ethernet Support Up to 1 Gbps
- Conductor Wire Gauge 24 AWG
- Conductor Solid Bare Copper
- Conductor Diameter 0.500 ± 0.005 mm
- Cable Shield (Aluminum Foil) Thick: 0.060 mm, Extent: 20 mm
- ESD Drain Wire 0.4 TC
- Rip Cord
- Reference Standard ISO/IEC 11801, TIA/EIA568B.2

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SW5L3-Y3 - Switch Gigabit L3 5 porte Manageable
- deve includere 3 anni di garanzia on site ed aggiornamenti dei firmware
- n. 5 10/100/1000 Ethernet port
- Layer-2 switching features and protocols, and Layer-3 routing capability
- n. 2 SFP Ports
- Web User Interface (HTTP/S)
- CLI (Telnet/SSH), SNMP v1, 2, 3
- Auto AP Software Updates FTP or TFTP, remote auto available
- Mobile app management
SW24L3-Y3: Switch Gigabit L3 24 porte Manageable
- deve includere 3 anni di garanzia on site ed aggiornamenti dei firmware
- n. 24 10/100/1000 Ethernet port
- non-blocking throughput: up to 26 Gbps
- Switching Capacity: 52 Gbps
- Forwarding Rate: 38.69 Mpps
- Rack- or Wall-Mountable
- Fanless
- MSTP/RSTP/STP
- VLAN, Private VLAN, Voice VLAN
- Link Aggregation
- DHCP Snooping, IGMP Snooping
- TACACS+, RADIUS, 802.1X, MAC Filtering, ACL
- DiffServ, CoS
- Static Routing, Policy-Based Routing
- CLI (Telnet/SSH), SNMP v1, 2, 3
CASE - Armadio elettrico a muro
Aramadio elettrico a muro in vetroresina:
- dimensioni 53x60x25
- piastra metallica e barra din
- interruttore magnetotermico e differenziale autoriarmante
- Barra 5 PoE + Scaricatori 10/100/1000
- barra 8 prese

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INST - Mano d'opera posa in opera e configurazioe apparati
- Installazione dell'impianto da parte di tecnici esperti
- Supervisione del progettista
- Preparazione del foglio di collaudo
FORM - Addestramento all'uso del sistema
- Formazione ai docenti ed amministratori per l'uso del sistema
- Consegna di un manuale d'uso e di un poster per l'utilizzo del sistema da parte degli alunni
WS1-Y3: Computer fisso Workstation
- deve includere 3 anni di garanzia on site
- Computer fisso workstation business
- Processore Intel® Core™ i5/4gen
- Windows 7 Professional (aggiornabile a Windows 10)
- RAM 4GB
- HD 500GB
- Schermo LCD 19"
NB1-Y3: Computer portatile
- deve includere 3 anni di garanzia on site
- Computer portatile business
- Processore Intel® Core™ i5/5gen
- schermo 14"
- RAM 4GB
- HD 500GB
- Windows 7 Professional (aggiornabile a Windows 10)
PRESETH - Prese etherne a muro complete di scatola e frutto
- Scatola esterna
- 1 frutto cat 5e
- utilizzo di cavedi esistenti, escludendo canaline se non per brevissimi tratti

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PATCH - Cavo patch ethernet
- cavo sftp cat 5e
- lunghezza 50cm
ARNET - Armadio di rete a pavimento
- Scatola esterna
- 1 frutto cat 5e
- utilizzo di cavedi esistenti, escludendo canaline se non per brevissimi tratti

IL DIRIGENTE SCOLASTICO

Prof. Sergio Lombardi