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|  | <p align="center"><b>Ministero della Pubblica Istruzione</b><br/> <b>IC RUDIANO</b><br/> Via De Gasperi, n. 41 - 25030 Rudiano (BS)<br/> TEL. 0307069017 - FAX 0307069018<br/> email: <a href="mailto:bsic86100r@istruzione.it">bsic86100r@istruzione.it</a> <a href="mailto:bsic86100r@pec.istruzione.it">bsic86100r@pec.istruzione.it</a><br/> internet: <a href="http://www.icrudiano.gov.it">www.icrudiano.gov.it</a><br/> C.F. 82002390175 C.M. BSIC86100R</p> |
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Scuole primarie di :  
Rudiano  
Roccafranca  
Urago d'Oglio

Scuole secondarie di 1° grado di:  
Rudiano  
Roccafranca  
Urago d'Oglio

**Rudiano 08/06/2016**

#### **CAPITOLATO TECNICO**

Programma Operativo Nazionale "Per la scuola – Competenze e ambienti per l'apprendimento" 2014-2020 - Asse II Infrastrutture per l'Istruzione-Fondo Europeo di Sviluppo Regionale (FESR)- Obiettivo specifico – 10.8 – "Diffusione della società della conoscenza nel mondo della scuola e della formazione e adozione di approcci didattici innovativi" – Azione 10.8.1 Interventi infrastrutturali per l'innovazione tecnologica, laboratori di settore e per l'apprendimento delle competenze chiave", a seguito partecipazione Avviso pubblico prot. AOODGEFID/9035 del 13 luglio 2015, con comunicazione MIUR prot. AOODGEFID/1764 del 20/01/2016 è risultata assegnataria del finanziamento per il Progetto WIRELESS NELLA SCUOLA-AMPLIAMENTO RETE LAN/WLAN: POSIZIONAMENTO , COLLEGAMENTO E CONFIGURAZIONE DI ACCESS POINT ALL'INTERNO DELLA RETE PREESISTENTE, "- Codice identificativo : 10.8.1.A2 – FESRPON-LO-2015-17.

**Lotto unico CIG: Z291A36584 - CUP:H26J15000580007**

| Descrizione e caratteristiche                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Quantità |
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| <p>'Access Point wireless N per applicazioni indoor, tecnologia dual band e velocità fino a 300 Mbps in ciascuna banda.</p> <p>Sicurezza garantita dalla crittografia WPA/WPA2 e dall'autenticazione RADIUS.</p> <p>AirPremier indoor 802.11a/b/g/n Concurrent Dual-band Unified Access Point with PoE - Compatible with IEEE 802.11a/b/g/n - Concurrent 802.11a/b/g/n Wireless Connectivity. Embedded multi-directional Smart Antenna - UL2043, plenum rated, Supports IEEE 802.11 a/n and b/g/n wireless data encryption with 64/128-bit WEP for security.Supports enhanced security – WPA2-Personal &amp; WPA2-Enterprise , Supports MAC filter and RADIUS authentication- Supports 802.3af PoE - Supports one 10/100/1000 Ethernet port. Up to 16 Virtual APs (VAP) per radio, 32 VAPs per AP. Standalone Mode . Supports AP Clustering, enabling APs to form a cluster for simple management and configuration. Supports WDS – AP acts as a Wireless Bridge to connect two networks. Can be managed via Web GUI, CLI or SNMP.Centralised management via DWS-4026 and DWC-1000 - Functions as a standalone access point or in conjunction with DWS-4026 and DWC-1000- Optional PoE injector DPE-101GI</p> | 09       |
| <p>Wireless Controller- Manages 6 APs per controller - Manages up to 4 controller in one peer group - 802.11n Dual-band Access Points - Controller Clustering for single-IP management - Wired and Wireless Captive Portal for robust client authentication- Adaptable Wireless enables Tunnel (L3 Tunneling) and Non-Tunnel (VLAN Forwarding) Modes - Seamless L2/L3 fast roaming from AP to AP - AP-AP Tunnel enables client traffic to be forwarded across subnets at the edge - Supports WEP,</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 02       |

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| Dynamic WEP, WPA/WP2 Personal/Enterprise security- Wireless Intrusion Detection System (WIDS) and Wireless Intrusion Prevention System (WIPS) - Rogue AP Detection, Classification and Mitigation - Auto Power Adjustment and Auto Channel Selection for managed APUpgradable Product Feature: - Manages up to 24 APs per controller, max. 96 APs per peer group - Dual-WAN, one port is configurable to DMZ - WAN type: Static IP, Dynamic IP, PPPoE, PPTP, L2TP- Support Network Address Translation - Route failover - SSL/ IPSec/ PPTP/ L2TP VPN - VPN Hub & Spoke, VPN pass-through (IPSec/ PPTP/ L2TP)                                                                          |    |
| Switch POE<br>10-porte 10/100/1000Mbps Gigabit PoE Smart Switch and 2 SFP ports - 8 x 10/100/1000Mbps Auto-Negotiating Ports- 2 x Mini-GBIC SFP ports - Advance power saving features, time-based PoE- 802.3af & Pre-standard 802.3at, max PoE budget 78W- Fanless design - Half-/Full-Duplex, auto-negotiation, Auto MDI/MDIX- IEEE 802.3x Flow Control- 802.3ad Link Aggregation- Asymmetric VLAN, Auto Voice VLAN- LLDP/LLDP-MED- 802.1p priority queues- MAC/IP filtering- MAC/IP-based ACL- 802.1X port-base Access Control, Port Security- D-Link Safequare Engine- Smart Console Utility, web based management, compact CLI- D-View 6.0 support- Compact 13" desktop enclosure | 02 |
| Licenza Software Router filtering e firewall                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 02 |

**La realizzazione di ogni punto rete deve essere comprensiva di posa in opera di canalina passa cavo e cavi di rete della lunghezza necessaria al collegamento fra Switch di rete e Access point- eventuale perforazione di pareti per il passaggio cavi – lavori per configurazione apparati**

**La fornitura andrà distribuita sui plessi interessati come da seguente tabella  
Scuola primaria di Rudiano**

| Descrizione e caratteristiche                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Quantità |
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#### **Scuola secondaria di Rudiano**

| <b>Descrizione e caratteristiche</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Quantità</b> |
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**Il supporto tecnico dovrà essere assicurato per almeno 36 mesi con assistenza on site ed intervento entro le 24 ore dalla segnalazione, garanzia prodotti almeno 36 mesi.**