

Wireless Broadband Powers Cremona's Municipal Projects



ePMP Force 200

- 5 GHz
- 25 dBi antenna
- 5 | 10 | 20 | 40 MHz channel width



PTP 670

- 4.9-6.05 GHz RF Bands
- up to 27 dBm
- 250 km Range

Overview

IN THE ITALIAN PROVINCE OF CREMONA, the private company of SCRIP SpA (Network and Asset Company of Crema) has 53 area municipalities as public shareholders. SCRIP's mission is to represent, control, and govern various subsidiaries, as well as to act as the group leader with its own governance and management. Its operational objectives include searching for economies of scale and evaluating bids that require the cooperation of multiple municipalities.

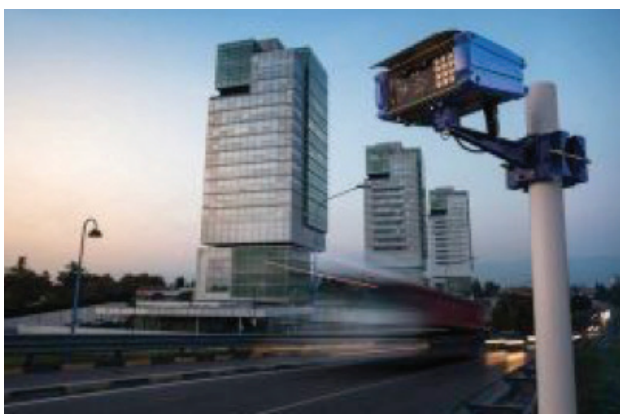


A significant example of these operations is the 10-year project to install and maintain 62 electronic gates, each equipped with two ANPRs (Automatic Number Plate Reader) which identify license plates to support traffic law enforcement.

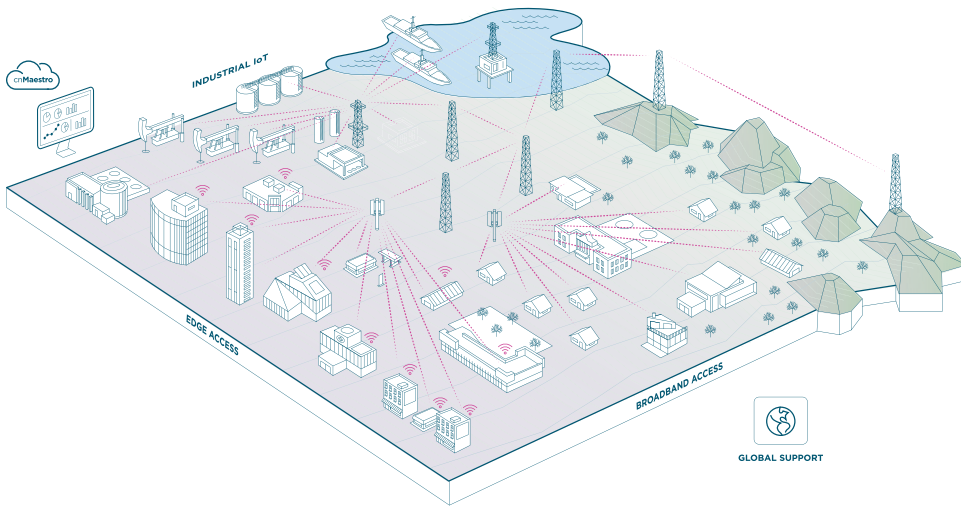
This project was completed through a public contract awarded to Maggioli SpA, a technology integrator specializing in products and services that facilitate digital transformation, process innovation, and simplification of public administration and companies.

Challenge

THE ANPR GATE PROJECT CALLED for the implementation of a data gathering network across multiple municipalities. The solution would be based on HiperLan network design due to security considerations, avoiding the sharing of sensitive information over public networks to minimize management costs stemming from the high traffic volume, which can reach peaks of 500,000 vehicles a day over the entire network.



The geographical features of the deployment area offered some challenges: flat terrain with many tall trees, rivers and irrigation channels, as well as a high level of interference from buildings. To ensure ample coverage despite these obstacles, Maggioli had to find a solution capable of efficient near-Line-of-Sight (nLOS) and Non-Line-of-Sight (NLOS) delivery despite foliage and other obstructions.



Why Maggioli Chose Cambium Networks

- Cambium Networks solutions offer superior function in near-Line-of-Sight and Non-Line-of-Sight conditions.
- LINKPlanner and cnMaestro™ simplify networks from design to deployment.

Solution

MAGGIOLI PROPOSED A CAMBIUM NETWORKS SOLUTION

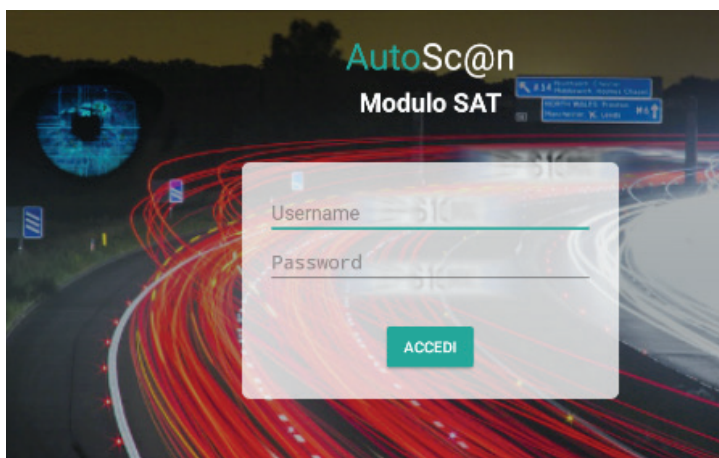
– specifically, 146 ePMP Force 180 and Force 200 point-to-point modules and 10 PTP 670 units, the Point-to-Point wireless broadband platform with high capacity Multi-Point functionality.

Initial deployment design began with identification of the gate locations, then defining possible aggregation schemes, and finally verifying the solution using LINKplanner, the Cambium Networks' software tool that evaluates and models optimum network design depending on geography, user density, throughput demands, and other parameters. The final configuration was then performed using cnMaestro™, the end-to-end cloud based or on-premises network management platform and wireless controller.



cnMaestro™

- Cloud-based or on-premises
- Zero-touch provisioning
- Remote access



Results

THE NEW EPMP AND PTP DEPLOYMENT supports real time data transfer: in less than two seconds, the data collected by the ANPR is read and transferred to a command center for verification, running the license plate numbers through law enforcement and other government databases. Results are made available to local and national police through a network of work stations or and mobile devices.