

RELIABLE CITY SERVICES DEPEND ON RELIABLE CITY DATA.

RF CONNECTIVITY FOR SMART CITIES & INFRASTRUCTURE

RF Antennas.
Engineered Around Your
Application.

THE ANTENNA IS THE PHYSICAL LINK BETWEEN THE CITY ASSET AND THE NETWORK.

Smart meters, environmental sensors, lighting, parking, waste systems and public infrastructure all depend on dependable communications. Bloomice engineers the antenna, mounting, cable and connector around the real urban installation - from buried chambers and street cabinets to exposed poles, buildings and higher-capacity city gateways.

DENSITY CHANGES THE RF ENVIRONMENT

A coverage map does not describe the link from a basement meter, a steel traffic cabinet or a sensor beside a busy junction. Buildings, interference, mounting position and deployment scale determine how much network performance the city asset can actually use.



SMART METERING & BURIED ASSETS



ENVIRONMENTAL MONITORING & STREET IoT

01 DENSE NETWORKS

High device concentration, overlapping networks and busy cells increase the importance of efficient radiation and consistent installed performance.

02 INSTALLATION VARIABILITY

The same device may sit in a basement, meter box, cabinet, pole or public space. Enclosure material, orientation and clearance change the RF result.

03 STRUCTURES AND DETUNING

Buildings, metalwork, street furniture and nearby electronics can attenuate, reflect or detune the signal before it reaches the network.

04 SCALE AND LIFETIME COST

Marginal links create retries, higher power use and repeat visits. Small RF compromises become significant when multiplied across a city-wide estate.

TYPICAL CONNECTED CITY APPLICATIONS

SMART METERING

Water / gas / electricity

LIGHTING & ENERGY

Columns / controls / monitoring

PARKING & KERBSIDE

Sensors / signs / payment

ENVIRONMENTAL

Air / weather / noise / flood

WASTE & CLEANSING

Bins / collections / assets

CITY GATEWAYS

CCTV / Wi-Fi / public safety

FROM CHAMBER TO CITY GATEWAY

THE RIGHT ANTENNA FOR THE ASSET

Six antenna routes span buried metering, 868 MHz sensor networks, 2.4 GHz local links and cellular backhaul. Match the radio, enclosure and mounting conditions before deployment.



01 MARCO POLO LTE

BEST FIT Below-ground meters & street chambers

FORMAT & CAPABILITY

700-2655 MHz / omni / ground-plane independent / IP67 / IK09

A robust chamber format with flexible mounting, cable and connector options.



02 868MOD88-12

BEST FIT Embedded environmental & bin sensors

FORMAT & CAPABILITY

868 / 915 MHz ISM / LoRa / 88 x 12 mm FR4 PCB / self-adhesive

Integrates within non-metallic housings; validate clearance and placement.



03 BODY ADYNA B1155

BEST FIT Low-power street assets & monitoring

FORMAT & CAPABILITY

868 / 915 MHz / 5 mm high x 30 mm diameter / M10 / IP68 installed

Discreet panel mounting for compatible LoRa and ISM sensor equipment.



04 BODY ADYNA MINI Wi-Fi

BEST FIT Lighting controls & local wireless links

FORMAT & CAPABILITY

2.4 GHz / Wi-Fi / Bluetooth / Zigbee / IP68 / body mount

Compact local connectivity for street furniture, kiosks and controls.



05 CUADO L 5G

BEST FIT Cellular terminals & monitoring assets

FORMAT & CAPABILITY

617-960 / 1427-2690 / 3300-5000 MHz / IP65 / self-adhesive

Encapsulated dipole, 150.9 x 77.5 x 4.35 mm, with cable and connector options.



06 MIMO-PLUS 5G NR / LTE

BEST FIT City gateways & high-data systems

FORMAT & CAPABILITY

2G / 3G / LTE / 5G NR / MIMO / IP66 / wall or pole

Cellular backhaul for CCTV and gateways, including gateways serving local Wi-Fi.



FROM FIELD ASSET TO CITY OPERATIONS

ENGINEER THE INSTALLED CITY LINK

Selecting the product is only the start. Position, enclosure interaction, cable loss, connector sealing and installed-state validation determine whether dependable data reaches the city platform.

FIVE QUESTIONS BEFORE AN ANTENNA IS SPECIFIED

- 01 NETWORK?**
Cellular, 868 MHz or 2.4 GHz; bands, duty and migration.
- 02 CITY ASSET?**
Meter, sensor, cabinet, column, building or shared gateway.
- 03 ENVIRONMENT?**
Structures, metalwork, density, weather, access and exposure.
- 04 RF PATH?**
Position, orientation, cable loss, connector, routing and sealing.
- 05 ROLLOUT?**
Power budget, repeatability and validation before estate-wide

APPLICATION-LED PRODUCT ROUTES

The correct antenna architecture follows the city asset, required data path and installed environment - not simply the modem specification.

PRODUCT	PRIMARY CITY APPLICATION	CONNECTIVITY / FORMAT
MARCO POLO LTE	Buried meter / street chamber	LTE / NB-IoT / LTE-M / chamber
868MOD88-12	Embedded environmental / bin sensor	868 / 915 MHz / embedded PCB
BODY ADYNA B1155	Low-power street asset / enclosure	868 / 915 MHz / panel mount
BODY ADYNA MINI WI-FI	Lighting / kiosk / local wireless	2.4 GHz / Wi-Fi / body mount
CUADO L 5G	Cellular terminal / monitoring asset	LTE / 5G / IP65 / adhesive
MIMO-PLUS	High-data city gateway	LTE / 5G MIMO / wall or pole

RELIABILITY AT SCALE IS A SYSTEM PROPERTY Antenna + mounting + cable + connector + network + power + validation

BRING BLOOMICE THE ASSET, THE RADIO AND THE URBAN ENVIRONMENT.

We will help define the antenna, mounting, cable, connector and validation route around the application.

