

Aplicom T10 G & Silver Cloud

IoT made easy



Aplicom[®]

Easy access to your tracking and telemetry data

Machines and vehicles produce data that you can utilize to enhance your business and reduce the environmental footprint of your operation.

Aplicom Silver Cloud[®] helps you efficiently and reliably integrate this data into your own operational systems.

Aplicom[®]

Aplicom Silver Cloud

Aplicom Silver Cloud device management enables **carefree operation** of your device fleet via the following **online remote access** mechanisms.

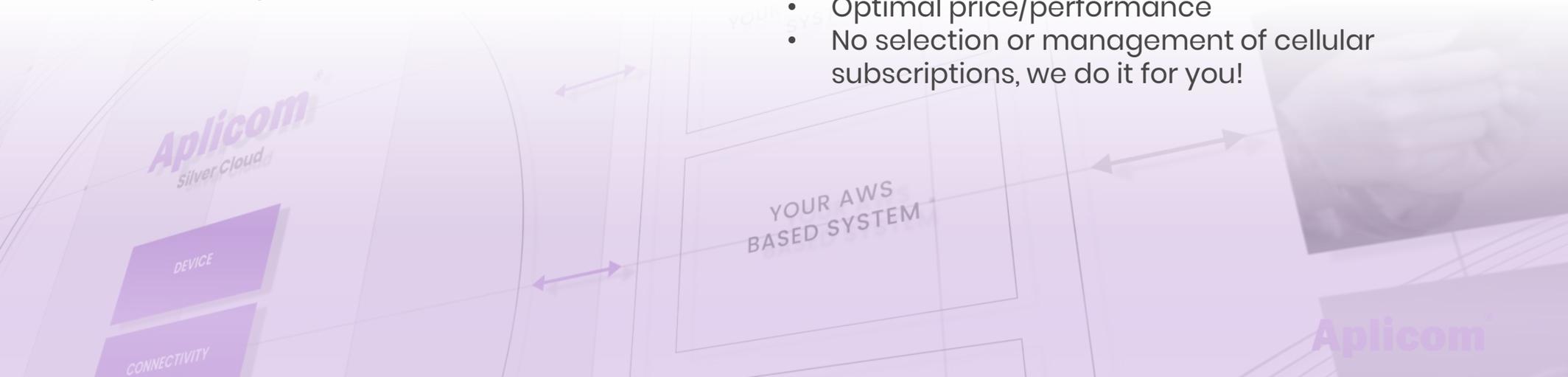
- Get list of devices
- Check the status of each device
- Configure devices remotely – what data is sent and where
- Update Aplicom device software

Aplicom Silver Cloud enables **easy IoT integration** to your own systems.

- Devices send data directly to your IoT management system
- Data is sent over MQTT, the established industry standard protocol

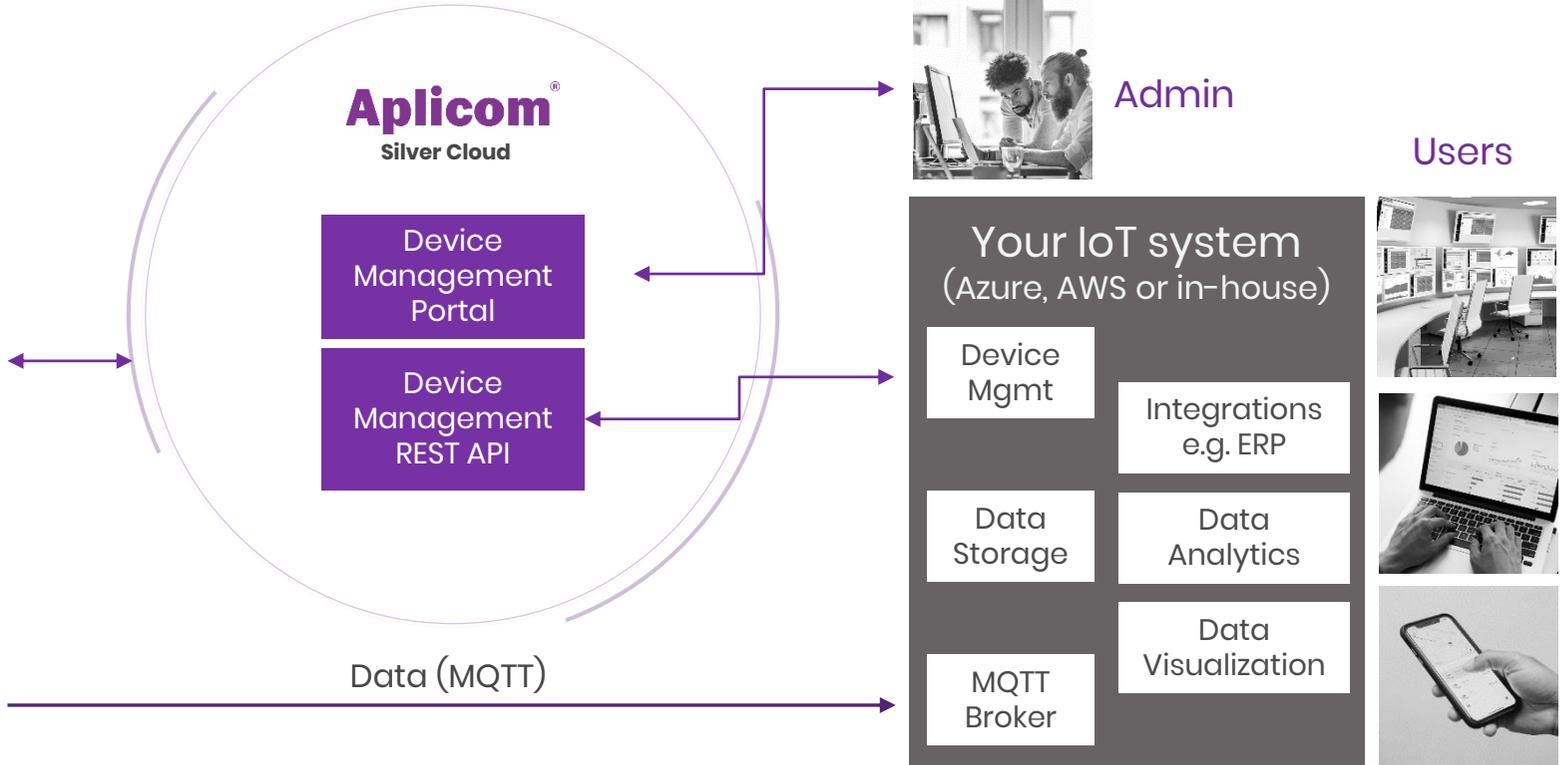
Enjoy **hassle-free connectivity**

- Fixed monthly cost
- Optimal price/performance
- No selection or management of cellular subscriptions, we do it for you!



Overview

Equipment



Device Management

State-of-the-art device management makes up the core of modern IoT systems.

Aplicom Silver Cloud device management enables:

- Lower device-related operation costs
- Fast on-boarding of devices and services
- Easy roll-out of security updates
- Device management tasks can be efficiently automated via Silver Cloud REST API.
 - Automation is especially useful when rolling out new devices and services.
 - You can lower operational workload and increase customer satisfaction by adding automated device management tasks to your own self-service portal.

Aplicom[®]
Silver Cloud

DEVICE

CONNECTIVITY

Configuration parameters

- Device functionality is configured through Silver Cloud device management
- Configuration parameters define sensor sensitivity, what data is captured, and when it is sent

Configuration options

When data is sent

- Time triggered (interval in seconds)
- Motion triggered (enable/disable)
- Digital input change (enable/disable)
- Distance travelled (metres)
- Direction changed (degrees)

Sensitivity

- Motion sensitivity (mg)
- Motion wakeup sensitivity (mg)
- Voltage threshold (mV)

CAN bus

- List of CAN ID's to follow
- Baud rate (kB/s)
- Transmit interval (seconds)

Power management

- Digital input power down (enable/disable)
- Real time clock wakeup time (seconds)
- Power down delay (seconds)

Data structure

- Data is sent to the MQTT broker in JSON format
- All data traffic is TLS v. 1.2. encrypted, using X.509 certificates

Available JSON Data content

Data

- Time
- Digital input status
- GPS time
- Heading
- Latitude
- Longitude
- Satellite count
- Snapshot count
- Speed (km/h)
- Maximum speed (km/h)
- Trip (km)
- Power level (mV)

CAN

- ID
- Protocol type identifier
- Data

Info

- Event ID
- Event Info
- GPS jamming detected
- A-GPS data invalid

Calculated machine usage time

- Operating time in seconds
- Based on four alternative methods
- All data sets are always delivered
- Movement, detected by acceleration
- Digital input on/off
- Device power-on time
- Voltage level threshold

CAN ID Forwarder

- Monitor vehicle or machine CAN bus data sources (ECUs)
- Record CAN data from desired CAN IDs
- Send data to an IoT system
- Activate CAN feature and select monitored data by Silver Cloud device management

Typical applications:

- Operating hours
- Unit identification (Vehicle Identification Number, VIN)

Device On-boarding

Device receives configuration

- Data delivery parameters
- Operation starts

Device connects to power, wakes up and connects to Silver Cloud

Device delivery with active cellular subscription

Device checks for available software updates

Ready!

If available

Download new SW in background

Reboot to new SW



Aplicom T10 G Features

4G LTE-M Cellular connectivity
2G Fallback

Battery-free design

- No battery chemicals
- Safe and easy recycling
- Service-free

Power 8-32VDC

Power consumption typically
< 100 mA, ~60 mA, in operational mode
< 1,5 mA in power down mode
Transient and polarity protected
Automatic internal 2A fuse

Input voltage measurement

Software controlled power management



GNSS with assisted A-GPS

Real Time Clock with date, time and wake-up

CAN bus interface

Three-axial accelerometer

+/- 16 G

Device wake-up by movement

Two digital inputs:

- 1 x digital input with selectable IGN on/off
- 1 x digital input
- Unit wake-up function
- Digital input capture

Aplicom T10 G Features

Rugged, water resistant polycarbonate enclosure
Sealing IP67 rated
No connectors in unit

Internal antennas for communication and GNSS

Factory installed SIM

6 wire cable with open end

- Power
- Two digital inputs
- CAN high
- CAN low
- Ground
- Length: 0.5 m



Structurally rigid enclosure design

Red/green indicator LED

Dimensions 109 x 75 x 27 mm (LxWxH)

Weight : 110 g

Approval standards

2011/65/EU

2014/53/EU

1999/519/EC



E-type: UNECE R10

Designed and manufactured in Finland



Aplicom[®]

Aplicom T10 G limited lifetime warranty

- Device warranties are valid as long as the unit is connected to Silver Cloud Device Management
- Warranty covers manufacturing defects and component failures that are not caused by external factors, or by using the device against manufacturer instructions, or by using it for purposes it was not designed for
- Silver Cloud General Conditions apply



Aplicom[®]

Product and Services

Silver Cloud Starter Kit

- Two T10 G units with Silver Cloud subscription

Silver Cloud service, T10 G unit and service

- Cellular connectivity, device management and an ongoing warranty for the device, as long as device is active in the service
- Device, SIM and six months of service
- Ongoing invoicing of service starts on monthly basis after initial period automatically



Aplicom[®]

A green tractor is positioned in a field, pulling a large, curved metal implement. The scene is set during sunset, with the sun low on the horizon, casting a warm glow over the landscape. In the background, a small town or village is visible, with houses and trees silhouetted against the sky. The overall atmosphere is peaceful and rural.

Aplicom[®]

YOUR SUSTAINABLE TELEMATICS PARTNER

Aplicom, Palokankaantie 18, FI-40320 Jyväskylä, Finland
www.aplicom.com, sales@aplicom.fi

Aplicom® and Aplicom Silver Cloud® are registered trademarks of Aplicom Ltd.
©Copyright Aplicom Ltd. 2021, All rights reserved
Specifications subject to change without notice