

POLTE

Positioning Technologies

Polte provides innovative positioning technologies for the Internet of Things and beyond. Polte is the leader in Cloud Location over Cellular (C-LoC), the most advanced positioning solution aimed at the low-power, wide-area cellular IoT market.

Polte Corporation Snapshot
Headquartered in Dallas, TX

What we do	Polte develops location solutions leveraging cellular networks
Value Proposition	Best accuracy possible using 4G LTE & 5G signals Deep indoor and extensive outdoor coverage Lowest cost, longest battery life for devices → IoT to Smartphones
Technology	Software-only cloud-based location platform leveraging 4G & 5G signal data relayed by IoT and other connected devices
Patents	30 issued, 44 pending globally
Who we are	18 employees Thought leaders, entrepreneurs & engineers with deep experience in radar, wireless, telecom, embedded devices, and algorithms from Numerex, T-Mobile, MetroPCS, Government/ Public Sector, Bell Labs, startups

Polte's C-LoC Makes Great Location Easy

Cloud Location over Cellular (C-LoC) is a revolutionary SaaS-based location solution that makes it simple for developers to add the best location capability to their IoT projects.

Value Proposition

- **BEST PERFORMANCE:** C-LoC outperforms all other cellular location approaches using 4G & 5G signals to accurately determine location of devices indoors and outdoors; 3-10x more accurate.
- **LESS HARDWARE:** Software-only solution leveraging just the cellular IoT modem; replaces the need for GPS and Wi-Fi, thus reducing cost, power, and footprint of IoT devices.
- **EASY FOR DEVELOPERS:** simple, familiar dev interfaces in device and in the cloud.
- **SIMPLE TO DEPLOY:** C-LoC leverages standard, globally available 4G & 5G reference signals with no complex network integration and no impact to network capacity; can be deployed OTT.
- **SECURE:** location is not determined on device eliminating device-based vulnerabilities; resistant to spoofing.

Sample Use Cases

Adult Beverage Manufacturing

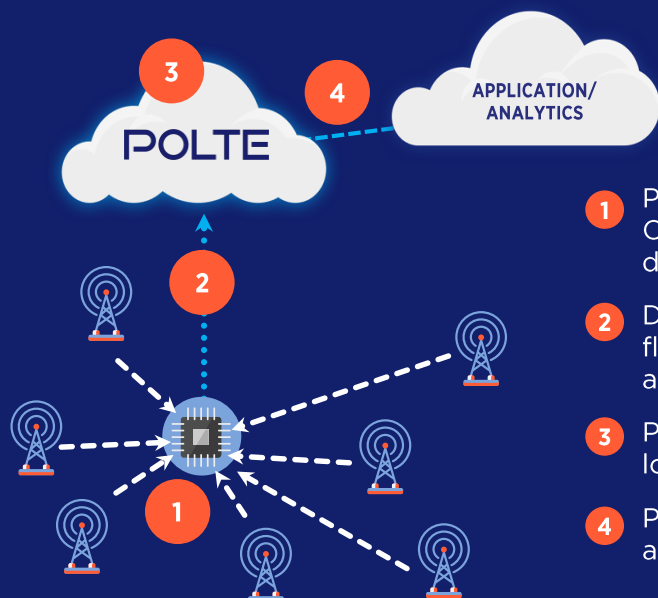
Manufacturers ship millions of cases of wine each year but are unable to effectively track them to their end destination. Low-cost, low-power tracking devices enable quick location in case of a recall.

Industrial IoT

Large manufacturing facilities frequently need to locate specialized equipment on a moment's notice. Low-cost tracking devices can pinpoint the location of equipment to keep productivity on track.

Personal Safety/Security

One-click-emergency wearables help locate people in case of emergency. Location in these devices also enables geofencing for use cases such as memory care patients.



- 1 Polte-enabled Device detects 4G/ 5G signals (including Cat-1, Cat-M, NB-IoT) and compresses data into a small data packet (200-400 bytes for Cat-M)
- 2 Device sends data packet to Polte Cloud; Polte provides flexible cloud interfaces to support a wide variety of cloud architectures and platforms
- 3 Polte Cloud utilizes proprietary algorithms to determine location
- 4 Polte Cloud securely sends location information via API to applications/ analytics

PolTE C-LoC Comparison

	Polte, LTE	Industry, LTE	Industry, GPS	Industry, Wi-Fi
Location (GPS, Wifi, and Cellular) Sampling Rate	5 minutes			
Cellular Location Accuracy (m)	10 - 200	300 - 3000	10 - 100	25 - 300
Location Scan Duration (sec.)	6 to 7	4 to 5	25	3 to 4
Power Usage per Location sample (mAs)	350 - 400	420 - 500	400 - 500	200 - 500*
Location Scan Timeout a.k.a. locate failure (sec.)	20	60	180	60
Power Usage per Locate failure	1100 - 1200	5000 - 6000	2700	3700 - 5000
HW Integration add-on	None	None	Chip and antenna	Chip and antenna
Cost impact	✓	✓	✗	—
Size impact	✓	✓	✗	✗
Works indoors	✓	✓	✗	✓
Works dense urban	✓	✓	✗	✓
Works urban	✓	✓	✓	—
Works outdoors suburban / rural	✓	✓	✓	✗
Network learning	✓	✓	✗	—
Security	✓	✓	—	✗
Easy to upgrade UE	✓	✓	✗	✗

*Wi-Fi power is AP density dependent

For more information, contact us at sales@polte.com or go to www.polte.com