

i2i Systems

# 5G Core



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 **i2i Systems**  
innovation to integration

# i2i 5G CORE

## A REVOLUTIONARY 5G CORE NETWORK THAT WORKS FOR YOU

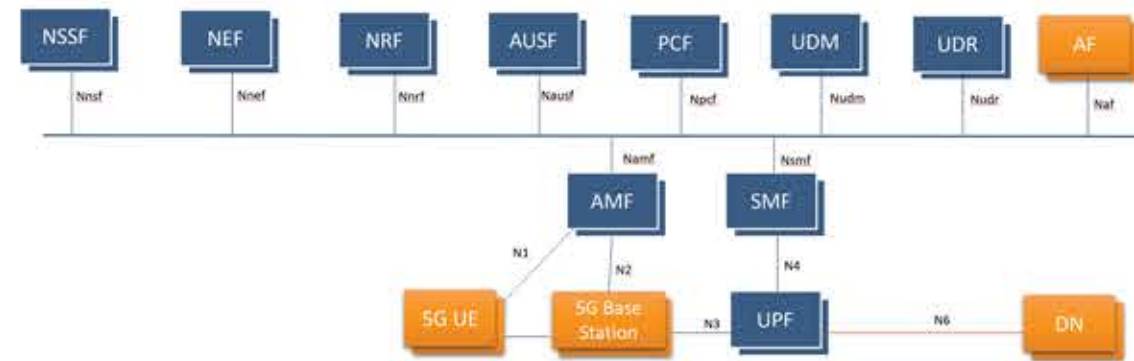
i2i Systems is expanding its current BSS/OSS portfolio with the development of 5G Core Network by combining its power of 20+ years of experience in Telecom Industry with the cutting edge technologies and frameworks.



i2i 5G Core is fully compliant with 3GPP standards and specifications supporting SA (Standalone) mode and interoperability with EPC. The technical architecture is based on the following contemporary design principles:

- Service Based Architecture (SBA)
- Cloud-native & Heterogeneous Deployment
- Network Slicing
- Stateless Architecture & Seamless Scaling via MANO
- Supports both VNF and CNF deployment
- Control Plane User Plane Separation (CUPS)
- Unified Data Management
- Multi-Connectivity with minimized AN-CN dependencies
- Application Programming Interfaces & Exposure to 3rd Party Applications
- Shared infrastructure models allowing easy MVNO deployments

### i2i 5G Core Functions



### Features

#### i2i 5G Core Features

- Registration/Deregistration
- Registration with AMF Re-allocation
- Service Request
- PDU Session Establishment/Modification/Release
- Authentication/Authorization
- AM/SM Policy Control
- RAN and AMF Triggered AN Release
- NG Setup, NG Reset, NG Failure
- NAS Integrity Protection & Ciphering
- NRF Registration/Discovery
- Network Slicing
- Handover
- Home-routed Roaming
- Local Breakout Roaming
- Event Exposure
- OAuth 2.0
- Interoperability with EPC
- Non-3GPP Access
- UE Reachability/Mobility
- IPv4/IPv6
- Lawful Interception
- Support for Charging
- Support for SMS
- Support for Location and Emergency Services
- EMS/NMS Integration

### Technology & Performance

i2i 5G Core NFs (Network Functions) are deployed on a virtualized infrastructure, which provides a distributed, redundant, stateless and scalable architecture by enabling addition or removal of NF instances within an NF set. The NF set consists of individual and functionally self-sufficient NF instances that may be distributed to different locations. For providing scalability, new instances of NFs can easily be added to or removed from the NF set, as the NFs are “stateless” and store state information in a separate cluster. Consequently, NFs behave as static entities independently and work as one single dynamic entity as a whole.

In order to achieve ITU IMT-2020 performance objectives, in-memory databases and caching mechanism along with asynchronous and non-blocking messaging are being used between the components within an NF and between the NFs. Control plane NFs use HTTP/2 which helps to reduce latency and increase performance and scalability; while UPF uses DPDK library in order to bypass OS kernel networking routines to reduce latency in the user plane.

i2i 5G Core supports performance metrics, logs, alarms, and statistics by issuing periodic or on demand counters which can then be used by the EMS (Element Management System) for KPI measurements and reporting purposes.



### Contact Experts

Please do not hesitate to contact us for any information you may deem necessary for your needs.