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**Network Management System**

Friendly web-based GUI

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Summary

NMS (Network Management System) is a comprehensive management software that controls and monitors base station and CPE equipment supporting TR069 communication protocol. NMS can be located in the front-end computer room to manage a single device, or it can be located in a centralized location to manage multiple devices. NMS is based on the most advanced mechanism and technology, and a single set software can manage and monitor up to 10,000 devices.

The management system includes the following extensive functions:

Data Statistic Equipment Management

 Core Network Management Configuration Management

Alarm Management Performance Management

Upgrade Management Log Management

System Management Task Management

Authority Management Platform Monitoring

Block Diagram



System Requirements

|  |  |  |
| --- | --- | --- |
| **Hardware** | **Quantity of NE ＜ 100** | **100 ＜ Quantity of NE ＜ 10000**  |
| CPU | 4 cores or more, 1.5 GHz or more | 8 cores or more, 2.1GHz or more |
| RAM | 16GB or more | 64GB or more |
| SSD | 200GB or more | 2TB or more |

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| --- |
| **Software** |
| Operating system | Rocky 9.4 or higher |
| Language | English |
| Database | MYSQL 8.0.21 |
| Tomcat | Tomcat 9 jre11 |
| Rabbitmq | 3.8.7 |
| Redis | 6.0.5 |
| Docker | 19.03.9 |
| Docker-compose | 2.17.2 |

Function

|  |  |
| --- | --- |
| **Function**  |  |
| Menu on NMS  |  |
| Dashboard | Dashboard | Show the quick links and statistical information |
| Base Station | gNB Monitor | gNB basic information monitoring and gNB configuration |
| eNB Monitor | eNB basic information monitoring and eNB configuration |
| MML | MML and MML Script modify device configuration |
| Upgrade | Base station upgrade files and upgrade tasks management |
| Reboot | Base station restarting task management |
| Shutdown Task | Base Stations Remote Shutdown Management |
| Backup/Restore | Configuration backup and restore |
| Log | Base station log management, base station gather log, operation log, and parameter value change log. |
| Topo | Base station topology |
| CBSD CertFile | CBSD certification file management |
| CPE | CPE Monitor | CPE information monitoring and CPE configuration |
| Upgrade | CPE upgrade files and upgrade tasks management |
| Reboot | CPE reboot management |
| Log | CPE log management, CPE log file, operation log, and parameter value change log. |
| CBSD CertFile | CBSD certification file management |
| Core Network\* | Configuration | Query and configure core network parameters |
| Alarm | Alarms raised by core |
| Element Information | Check basic information of core element  |
| UE Info | Manage and check the UE information under the core |
| GIS | NE Location | GPS location display on the map |
| Site | Site | Manage the site location information |
| Device Group | Device Group | Manage devices in groups |
| Alarm | Alarm View | Alarm management, including current alarms, historical alarm information, alarm filtering, alarm email forwarding, alarm synchronization configuration, and alarm statistics |
| Alarm Library | Alarm information and the introduction of the alarm |
| Performance | KPI View | Check the KPI of different NE |
| KPI Measurement | Upload status of base station PM files |
| KPI Management | KPI management |
| KPI Alarm | KPI alarm management |
| Advance | SAS | CBRS Domain Proxy |
| Batch Task | Monitor | Parameter value monitoring and display |
| Configuration | Batch configuration management |
| MR Mange | Measurement Report | MR file collection task management |
| MR File | MR file management |
| Analyze | MR file analysis |
| Device Blocklist | Device Blocklist | Device blocklist management |
| System | Setting | System configuration management |
| SSH | SSH Proxy |
| PING | PING detecting tool |
| TCP Dump | NMS packet capture |
| NTP | NMS NTP management |
| Load | Server load monitoring |
| Logs | NMS log management, including NMS operation logs, northbound access logs and NMS platform logs |
| Data Model | Configuration management |
| Upgrade | NMS update and roll-back management |
| License | License management |
| Authority | Authority management |
| Area | Area management |

 \*Manage the core which build-in integrated gNB

Dashboard and gNB Management 



Ordering Information

|  |  |
| --- | --- |
| **Part Code** | **Part Description** |
| license1 | Network Management System, with XX element license. Including server. |
| license2 | Network Management System, with XX element license. Excluding server, with 1-year free remote service. |
| license3 | Network Management System, maintenance cost for 1 year. |

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