

Amdocs Matrixx Charging technical data sheet



Amdocs Matrixx Charging delivers a digital monetization solution that combines 3GPP-compliant converged charging with digital monetization capabilities not typically found in a charging system for customer engagement, subscriptions, promotions, payments, partners and data management.

All customer and partner charges are generated in real-time, including usage, one-time, recurring and subscription across all lines of a CSP's business. This gives all customers, be they B2C, B2B or B2B2X customers or partners, a digital-first experience with always available and accurate service and balance information, including visibility of their complete unbilled spend position.

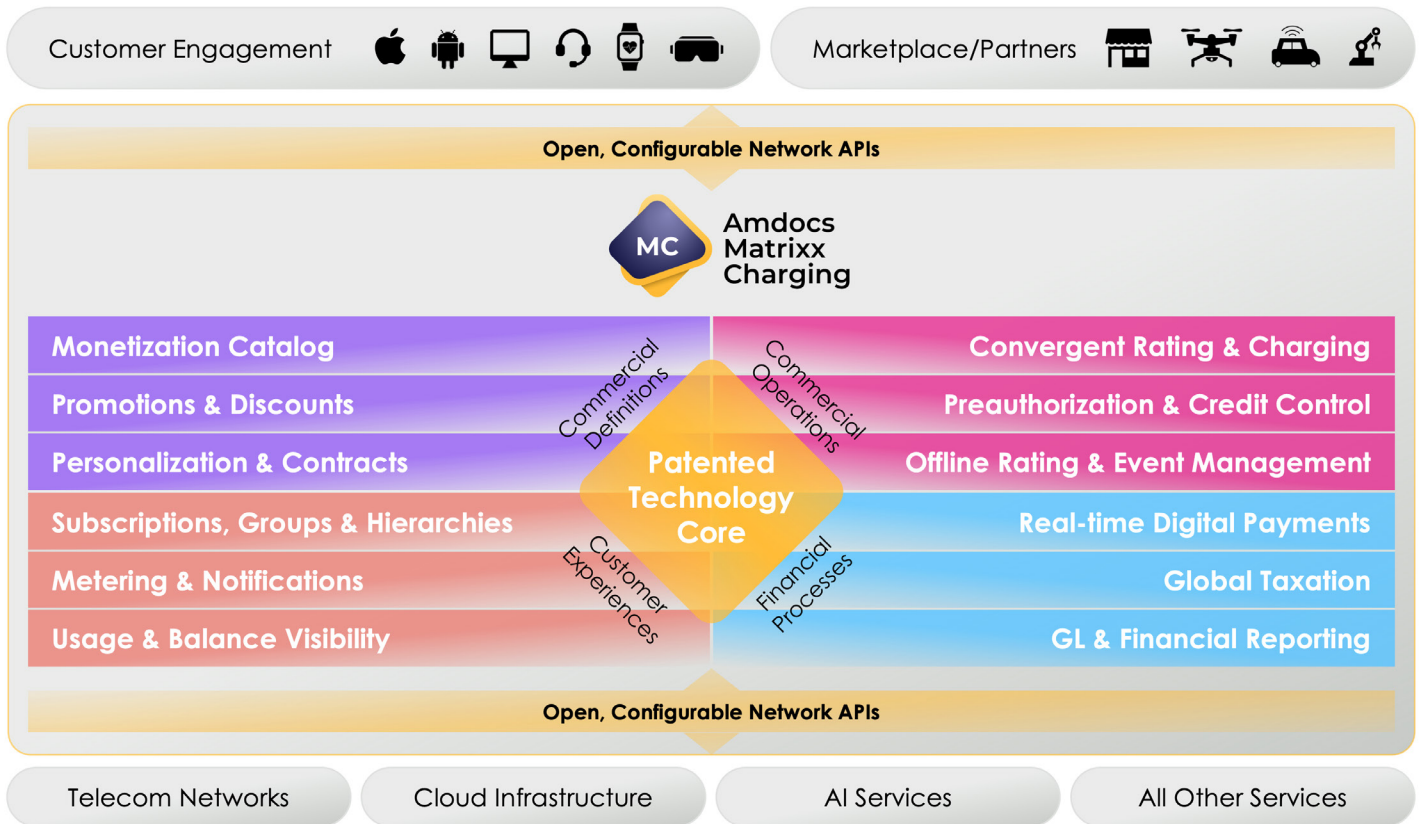
Amdocs Matrixx Charging is both a 5G Converged Charging System (CCS/CHF) and 4G Online Charging System (OCS) and includes 3G, 2.5G and 2G legacy cellular support. As an access network-agnostic platform, the same monetization solution supports services provided over cellular, fixed, Wi-Fi, cable and satellite networks. Offline control extends from typical mobile network charging to include post-event ingestion of service usage from any network or type of charge, including IoT, cloud services, partner offers and more. The flexibility and innovation of Amdocs Matrixx Charging allows it to be used for new services and monetization use cases being defined, Network as a Service, API monetization, network slicing and AI, as well as those yet to be defined.

For network-based services, Amdocs Matrixx Charging delivers high speed, ultra-low latency performance and simplified, automated operations. It is architected as a microservices-based, cloud native solution for deployment across public cloud (hyperscalers), on premise data centers, hybrid and multi-cloud environments. Amdocs Matrixx Charging supports integration into CI/CD and automation pipelines to fully realize the performance, reliability and elasticity benefits of a modern cloud native environment.

Designed for highly agile, omnichannel businesses, Amdocs Matrixx Charging is a no-code solution with open, configurable APIs for extensibility and ecosystem enablement both northbound to the BSS domain and southbound to networks. It easily integrates with mobile, fixed, edge and cloud networks as well as existing IT infrastructure to unlock revenues across channels, networks and data sources. TMF Open APIs are supported, with Amdocs Matrixx Charging achieving silver certification, helping to reduce implementation time and effort.

Amdocs Matrixx Charging is the bridge between northbound IT systems (such as for customer engagement and external catalogs) via open APIs and southbound 4G and 5G network core environments via Diameter or an HTTP/2 Service Based Interface. CAMEL, INAP and MAP SIGTRAN-based interfaces are natively supported by Amdocs Matrixx Charging for direct support of legacy services and networks. This bridging role enables the platform to provide agile and adaptable monetization solutions that support prepaid, postpaid and pay now consumers as well as enterprise, IoT, Industry 4.0 and private network opportunities.

Key Product Features



The key features of the Amdocs Matrixx Charging solution deliver agility in multiple dimensions enabled by its patented technology core.

Amdocs Matrixx Charging was designed for the modern service provider, supporting today's transaction volumes in real-time with guaranteed accuracy. The Amdocs Matrixx Charging Technology Core is the high-speed decision engine and in-memory database that underpins the transformative capabilities of the solution. Its configurable decision-table architecture eliminates the need for custom development to support new business requirements. The high-speed decision engine eradicates performance bottlenecks so that every customer interaction is instant and precise. The Technology Core processes business rules in parallel, supporting concurrent balance updates that are guaranteed to be accurate and do not exceed credit limits for subscriber groups sharing a balance or allowance.

Commercial Definitions, Commercial Agility: New Offers, Faster and Cheaper

Monetization Catalog

This is a configuration-based pricing and policy catalog providing rich monetization rules for charging, discounts, bonuses, tax and proration for all products, bundles and offers whether they are services, goods or content. Reusable building blocks and parameterization allow commercial catalogs to interface via APIs and support individualized customer offers with minimal complexity in the Amdocs Matrixx Charging catalog. Configurable rating rules can be loaded and made available immediately.

The MyMATRIXX GUI provides an easy-to-use HTML5 browser-based interface for administrative users to configure and manage all pricing-related settings in the Amdocs Matrixx Charging monetization catalog. Approved changes are then compiled for further testing or production release.

Promotions & Discounts

Amdocs Matrixx Charging delivers flexible, real-time promotions and discounting that apply percentage-based reductions or fixed-amount discounts during the rating and charging process. Discounts can be applied across products and triggered by activities including usage, purchases, recurring billing cycles, recurring in arrears, or cancellations.

Numerous promotions and discount use cases can be configured within Product Offers. Advanced configuration options support sequential or parallel discount application, constraints based on rate tags, balances, or external attributes, and time-, usage-, and volume-based rules. Discounts can be applied to individual products, bundled packages, subscriptions, or group hierarchies, enabling both highly targeted and broad promotional campaigns.

Personalization & Contracts

Personalization features enable customers to adjust parameters on their offers at the time of purchase or at any time, in real-time, while their service is active, to suit their changing needs. “Build your own” plans and dynamic sharing are supported by Amdocs Matrixx Charging out of the box.

Finance contracts support installment-based device financing and commitment based service pricing, including the application of early termination and late payment fees. Contract parameters including duration, up-front payments, installment amounts, offer grants and discounts are configurable via the Amdocs Matrixx Charging GUI and provisionable through APIs, with the solution enforcing charging adherence to contractual terms.

Customer Experiences, Customer Agility: Complete Transparency and Control

Subscriptions, Groups & Hierarchies

All recurring and subscription charges, including device and contract charges, are calculated by Amdocs Matrixx Charging in real-time on purchase and at the start of a cycle rather than at the end. One-time charges are generated immediately upon purchase. Charge calculation includes promotions, discounts, bonuses, proration and taxation where required, with flexible revenue recognition models including advanced, deferred, linear and consumption based.

Amdocs Matrixx Charging subscriber groups may include individuals with multiple devices, families, affinity groups, small businesses or large enterprise hierarchies. While there is no systematic limit to the number of levels allowed in a group hierarchy, most complex enterprise hierarchies can be supported with up to seven (7) nested levels.

All subscribers of every type are delivered accurate, real-time views of balances and subscriptions, including user configurable thresholds, spending limits and notifications.

Metering & Notifications

Metering and notifications provide powerful real-time insight and engagement capabilities that proactively communicate with customers and allow them to monitor usage and control spending. Flexible meters track usage, events, and spending across services, subscriptions, and groups, enabling personalized thresholds, smarter rating, and proactive alerts while managing financial liability. Combined with end-to-end, real-time notifications, operators can trigger timely, contextual messages to customers based on behavior, balances, or service events. This drives transparency, improves customer experience, and enables targeted engagement, from spend alerts to service usage milestones, all with full auditability and delivery flexibility across channels.

Subscriber-configured and system-generated real-time notifications are created and delivered over push, SMS, USSD and email. Amdocs Matrixx Charging provides templates to enrich and format personalized messages. Triggers can be set and applied to spending control, promotions and regulatory compliance, with actionable information delivered through URL and metadata.

Usage & Balance Visibility

Amdocs Matrixx Charging provides usage and balance visibility through real-time charging and exposure of subscriber consumption and balances across all services and networks. Operators, external systems, and subscribers can access up-to-date information on balances, credit limits, meters, quotas, and service usage through APIs, notifications and integration interfaces.

Financial Processes, Financial Agility: Real-Time Generation and Visibility

Real-Time Digital Payments

Amdocs Matrixx Charging offers customers a choice of how and when to pay. The system supports real-time digital payments, including credit cards and bank debits, with options for immediate or deferred settlement. Payment models include ad hoc purchases, recurring autopay, threshold-based autopay and advanced recharge, with configurable retries when payment attempts fail, and grace periods.

Global Taxation

Cycle management is flexible with auto-renewal at the start of a cycle for allowances and recurring charges. Grace periods can apply. Tax can be added at the end of the cycle where tax jurisdictions require this or in real-time by rating. The breakdown of taxes associated with each charge is included in the event.

Because billing cycles are flexible, Amdocs Matrixx Charging supports tax calculations flexibly. Recurring charges and allowances usually are auto-renewed at the start of a cycle and grace periods can apply. To accommodate tax requirements, Amdocs can calculate and apply taxes only at the end of the cycle, but the platform can also calculate and apply taxes to every event in real-time when processed by the rating engine. Detailed tax breakdowns are included in every charge event record. Global value added tax rules can be configured in Amdocs Matrixx Charging, or the platform can be integrated with external sources of North American tax data.

GL & Financial Reporting

Configurable chart of accounts and transaction templates map every Amdocs Matrixx Charging charge transactions to the correct account codes in real-time, producing auditable events and posting files daily to be extracted and imported into ERP systems.

The platform provides data export capabilities that capture subscriber information and transaction records triggered by provisioning activities, service usage, charging events, or internal system processes. Exported data can be streamed or delivered to external storage and downstream platforms for further processing, analytics, reporting, reconciliation, and integration with enterprise ecosystems.

Commercial Operations, Operational Agility: Cloud Native, Carrier-Grade, Standards-Based Real-Time Processing for Any G Network

Convergent Rating & Charging

Amdocs Matrixx Charging provides highly configurable, real-time charging for all services, goods and content. It is 3GPP compliant and fully convergent across offerings, customer segments including consumer, enterprise and wholesale, and payment models including prepaid, postpaid, hybrid and pay now. Discounts and taxes can be calculated during rating, and group shared balances and allowances are managed in real-time for very large groups with up to tens of thousands of users.

Rating is supported in real-time on the same platform that handles rating. Events can be reprocessed in parallel instances without impacting real-time operations.

Preauthorization & Credit Control

Amdocs Matrixx Charging provides advanced pre-authorization and real-time credit control capabilities across 5G Converged Charging System (CCS/CHF), and 4G Online Charging System (OCS), and includes 3G, 2.5G and 2G legacy cellular charging interfaces, enabling operators to accurately manage subscriber balances, spending limits, and service entitlements in real-time.

The platform supports session-based and event-based charging with flexible reservation, authorization, and quota management functions that help prevent revenue leakage while ensuring uninterrupted customer experiences.

Amdocs Matrixx Charging provides configurable pre-authorization and real-time credit control capabilities to ensure sufficient subscriber balance before service usage, while dynamic quota allocation and balance management help optimize network resource utilization and enforce spending controls across converged digital services.

Offline Rating & Event Management

Offline Rating extends from typical cellular network charging to include post-event ingestion of any service usage, that can be from fixed, cable, satellite and IoT networks. As an access network-agnostic platform, the same monetization solution supports services provided over cellular, fixed, Wi-Fi, cable and satellite networks.

Amdocs Matrixx Charging effectively manages events generated from both the real-time and offline rating processes and creates event streams that provide an ordered, unbounded and continuous flow to be delivered to external event-handling systems. Solutions are available to transform, consolidate, vector and filter specific events for further analysis, enrichment, correction, storage and monitoring.

Security

Administrative user authentication and role-based access control are used for web applications (GUI-based tools or API access). User credentials and role-based definitions can be provisioned in a centralized Identity Management system (Keycloak) that uses OAuth2.

TLS encryption is used for data protection and privacy in web-based interfaces. TLS protection is supported in network interfaces – Diameter and 5G SBA. Encryption in-use and at-rest is provided as part of infrastructure with cloud-based offerings depending on the cloud provider chosen. Examples include AWS EFS encryption (encryption at-rest) and Google Confidential Compute (encryption in-use).

Amdocs Matrixx Charging web clients, where applicable, are fully compliant with the OWASP Top 10.

Deployment Options

Amdocs Matrixx Charging can be implemented in network edge, telco cloud, private and public cloud environments. It is deployed as a cloud native, containerized application, orchestrated and managed by Kubernetes. It can be delivered on bare metal or virtualized infrastructure.

See cloud native infrastructure requirements section for more details.

With 5G, continuous evolution and the introduction of new services and capabilities drive the need for increasingly flexible performance and elastic scale, making cloud native deployments the primary choice for most organizations, providing:

Platform Abstraction

The ability to take advantage of the practically-infinite scale of the cloud, or to deploy within a secure private data center, the cloud native architecture benefits from the portability and ubiquity of the Kubernetes ecosystem.

Container-Based Deployments

Easily orchestrated, fast start-up times and lightweight implementation, allowing high utilization of the underlying hardware.

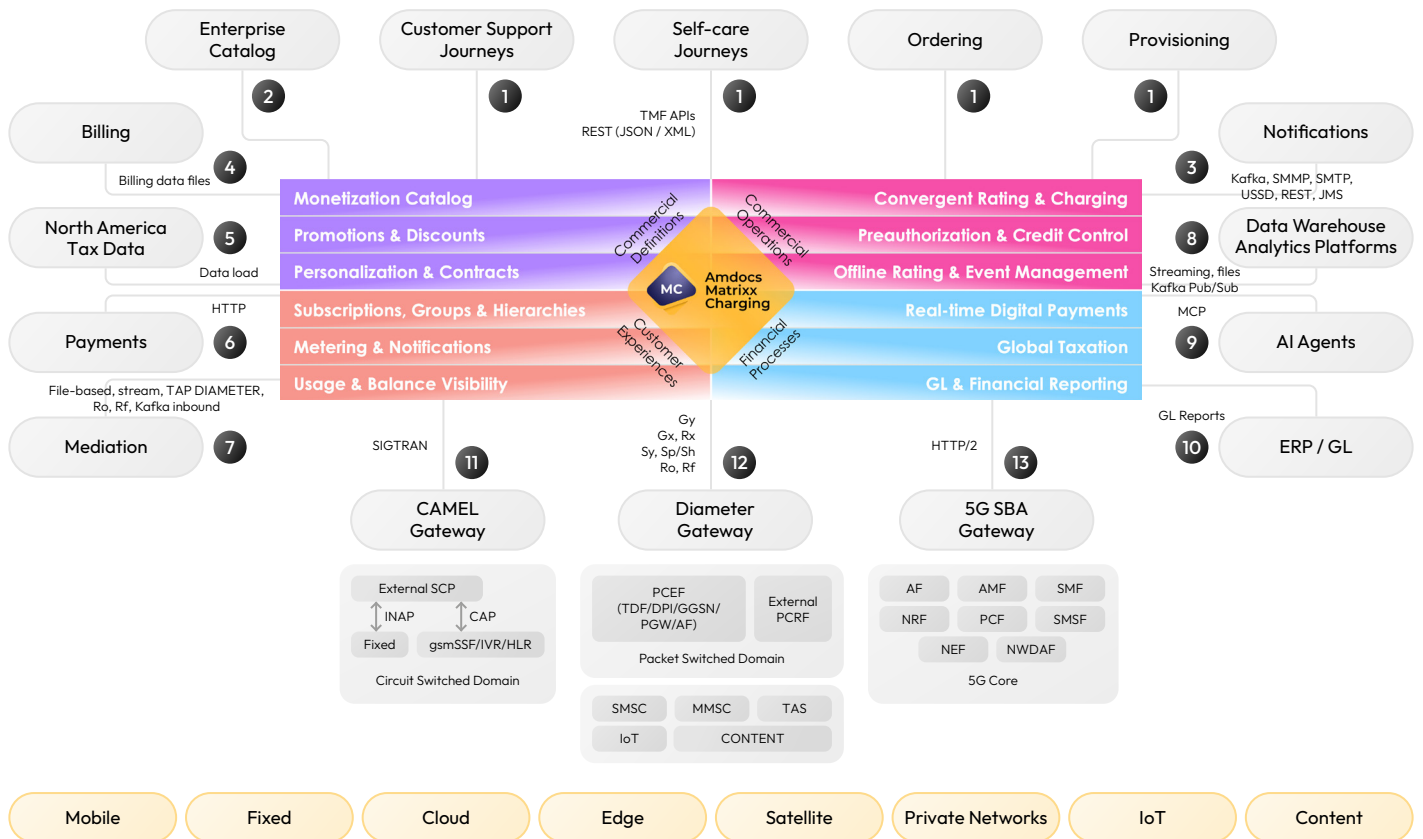
Loosely-Coupled Microservices

Designed from the ground up as optimally-sized autonomous business functions that independently scale, are easily upgraded, ephemeral and easily replaced.

DevOps

Highly-automated orchestration and processes allowing for continuous development, integration and delivery.

Key Integration Points



This diagram depicts Amdocs Matrixx Charging key integration points with customer engagement systems, BSS, enterprise systems and network functions.

The Business API Gateway is a secure, configurable and extensible REST API gateway for northbound apps and OSS/BSS integrations with REST/XML, REST/JSON and Java APIs. Features include API routing, call aggregation, transformation and enrichment with full security. Amdocs Matrixx Charging has a rich set of out of the box APIs, including catalog, pricing and subscriber lifecycle with data and function exposed consistently to all channels, simplifying integration.

Network Gateways and APIs connect southbound to networks and are configurable to meet vendor-specific requirements.

1 Customer Support & Self-Care Journeys, Ordering and Provisioning

Customers, marketplaces and partners, self-care apps, engagement systems, CRM and other customer-facing channels interact with Amdocs Matrixx Charging using TM Forum, REST or Java APIs through the Business API Gateway. Journeys include account, usage and balance queries, group and hierarchy management, sales quoting, ordering and provisioning.

2 Enterprise Catalog

The enterprise catalog items can sync to the monetization catalog in Amdocs Matrixx Charging via REST and TM Forum APIs to facilitate the rapid definition and roll-out of new or modified offers.

3 Real-time Notifications

Amdocs Matrixx Charging can generate customer notifications based on threshold breaches, low balance, offer purchases and lifecycle changes which are sent via SMPP, USSD (MAP-SIGTRAN), SMTP or published using a native JMS/XML framework.

4 Billing

Amdocs Matrixx Charging generates events or aggregated events for every session and interaction, and these are streamed in near real-time to external billing and revenue management systems. Amdocs provides an event streaming micro-service with Apache Kafka or Google Pub/Sub connectors to manage and deliver event streams to external target systems.

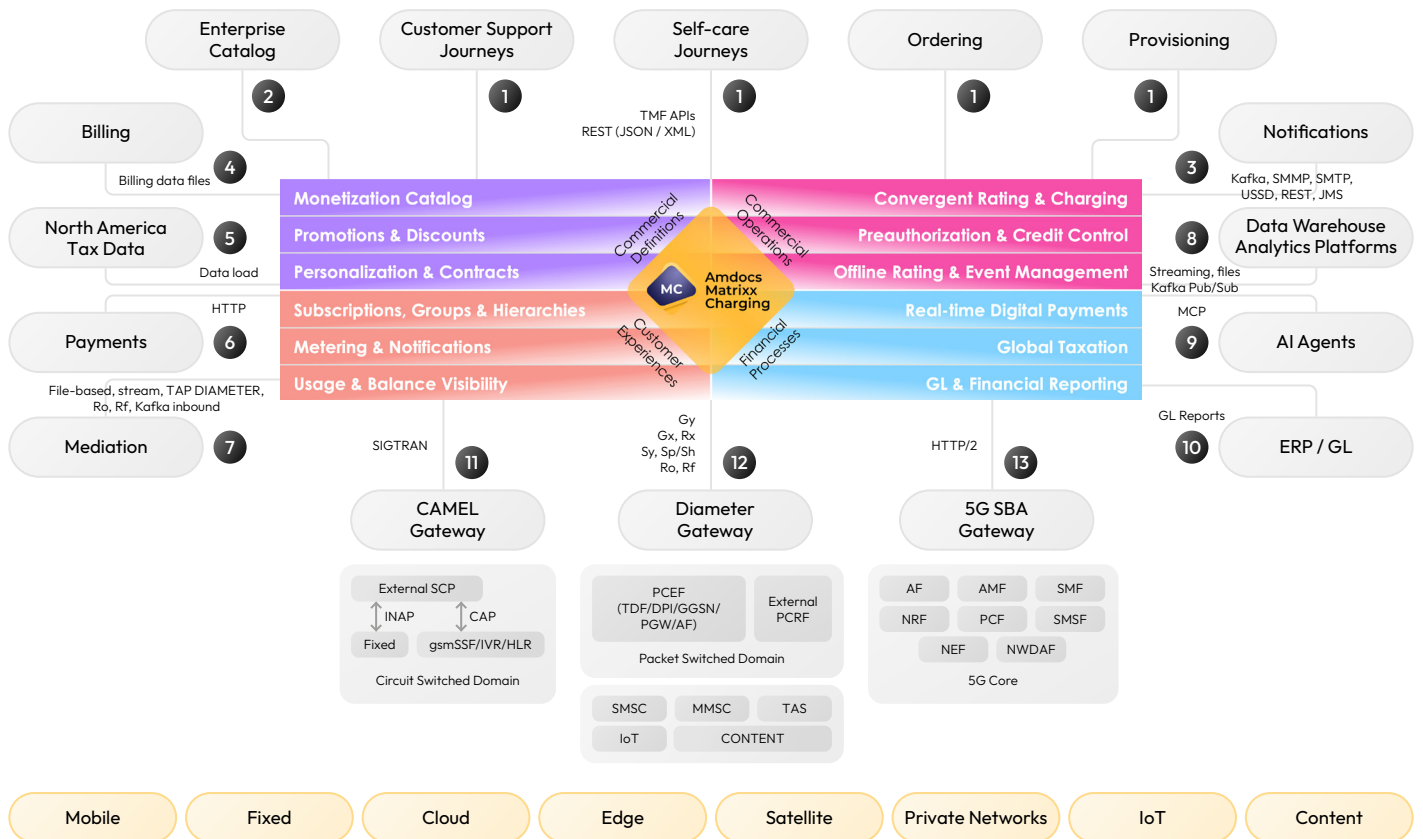
5 North American Tax Data

Operators may license and upload periodic taxation data from CCH, an Amdocs partner, and configure it in the Amdocs Matrixx Charging platform to support US jurisdictional taxation. CCH also licenses tax data for other markets like Canada and US territories in a form that enables future Amdocs taxation support for those markets.

6 Payments

An extendable payment framework is pre-integrated into the Barclaycard, Braintree, CyberSource, Datatrans, mPay and RomCard payment gateway and can be adapted for other payment gateways.

Key Integration Points



7 Mediation

Offline rating is supported by streaming offline charging events/records via Kafka or by converting CDRs and TAP records into Diameter Ro requests using third-party mediation. For Kafka-based integration, offline charging events/records are consumed by the Amdocs Kafka consumer micro-service which sends these events into the Amdocs Matrixx Charging engine for charging/rating.

8 Data Warehouse / Analytics Platforms

Amdocs Matrixx Charging generates events for every session, journey and interaction with objects in the platform. This data is a valuable source of information for BI/analytics platforms and in Data Warehouses. Amdocs Matrixx Charging provides a streaming micro-service with Apache Kafka or Google Pub/Sub connectors to manage and deliver event streams to external target systems.

9 AI Agents

Amdocs Matrixx Charging provides a Model Context Protocol (MCP) interface that enables AI agents to access the platform in real-time for balances and subscriber data. This allows AI-driven applications to automate workflows, analyze usage patterns, and support customer care and operational processes through standardized integration capabilities.

10 ERP / GL

Amdocs Matrixx Charging generates Event Detail Records (EDRs) for all General Ledger (GL) balance changes and all charging transactions. Each record contains detailed charge record and balance impact information, including taxation and

discount breakdown and all GL assignments. The associated GL information for all EDRs is processed daily to provide aggregate GL posting information that can be integrated with an ERP financial system.

11 CAMEL Gateway

Amdocs Matrixx Charging supports real-time, circuit-switched charging using CAP 1, 2, 3, 4 for voice and CAP 3, 4 for SMS and with MAP for network queries (MNP and USSD query services support).

12 Diameter Gateway

Amdocs Matrixx Charging is compliant with 3GPP Online Charging System (OCS) standards and supports real-time charging for all services, using Ro or Gy interfaces. A subset of 3GPP-compliant Policy and Charging Rules Function (PCRF) functionality is supported natively via Gx. All Diameter integration can be locally configured without coding.

13 5G SBA Gateway

Amdocs Matrixx Charging is compliant with 3GPP Release 17 specifications for Service Based Architecture (SBA), Charging Function (CHF) and Network Repository Function (NRF) interworking. Amdocs Matrixx Charging provides Converged Charging System (CCS) functionality within a 5G core environment through the CHF, providing charging services to network functions (e.g., SMF, PCF, SMSF, AMF, NEF) with support for converged charging (over N4x reference points) and spend control (over N28 reference point). The SBA Gateway provides a flexible parameter mapping mechanism, allowing specification changes and vendor-specific parameters to be configured locally without product coding.

Cloud Native Infrastructure Requirements

The following minimum environment configurations are required to run Amdocs Matrixx Charging:

Kubernetes Distribution

A production-grade, fully supported Kubernetes distribution for public or private cloud such as Amazon EKS, Google GKE and Google Confidential GKE Nodes, Microsoft Azure AKS, Red Hat OpenShift Container Platform (OCP) or VMware TKG.

Amdocs Matrixx Charging also offers an Embedded Kubernetes option, including services and support based on Red Hat OCP, giving telcos the option of both platform and application services from a single vendor.

Worker Nodes

Linux x86-based public or private cloud or bare metal worker nodes.

Persistent Volumes

For local storage solutions (EBS, local SSD, etc.), a small space for host OS and container images is required. For shared storage solutions (file storage, EFS, NAS, NFS/SAN, etc.) Amdocs Matrixx Charging is ReadWriteMany (RWX) and requires fast shared storage for transaction log files. Standard shared storage is used for archiving transaction log files, checkpoints and events.

Load Balancers/Ingress Controllers

Production grade cloud platform network load balancer for non-HTTP ingress traffic (such as Diameter) along with an appropriate application load balancer or separate ingress controller and network load balancer for HTTP traffic (5G SBI – Service Based Interface and Business API transactions from IT/BSS systems).

Networking

Standard Kubernetes Container Network Interface for networking. Optionally, single root I/O virtualization (SR-IOV) networking for the processing pods for improved network performance.