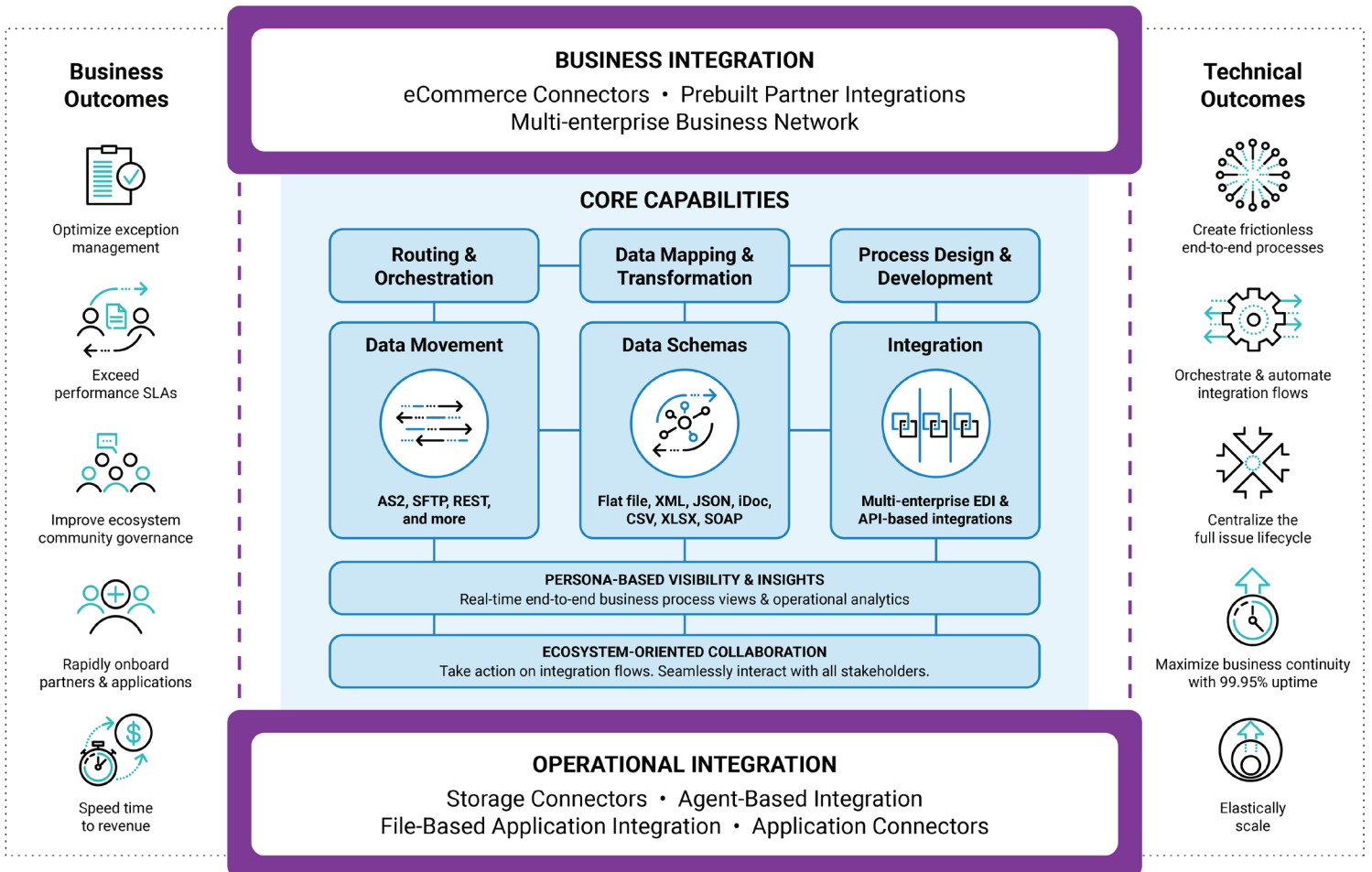# Technical Data Sheet

Cleo®

Eliminate the friction, complexity, and effort for ecosystem integration

Cleo Integration Cloud simplifies ecosystem integration, providing maximum agility and insight to enable multi-enterprise business workflows, such as Order-to-Cash (OTC), Load Tender-to-Invoice (L2I), and Procure-to-Pay (P2P). Cleo offers powerful capabilities designed to eliminate integration friction and complexity while increasing business readiness, process adaptability, and business-process enablement across your ecosystems. Cleo's single, cohesive platform helps your business:

- **Rapidly onboard partners** and align data across internal systems, eCommerce marketplaces, and modern applications, to streamline end-to-end integration workflows

- **Drive intelligent decision-making** and comprehensive trading partner community governance with real-time visibility through content-rich and context-aware operational views

- **Accelerate multichannel revenue** by designing, building, operating and optimizing integrations that underpin business processes such as Order-to-Cash or Load Tender-to-Invoice

- **Eliminate operational complexity** with flexible by utilizing a blend of self-service and managed services for maximum operational control, agility and insight

Ecosystem Integration Platform Architecture

Business Outcomes

Optimize exception management

Exceed performance SLAs

Improve ecosystem community governance

Rapidly onboard partners & applications

Speed time to revenue

BUSINESS INTEGRATION
eCommerce Connectors • Prebuilt Partner Integrations
Multi-enterprise Business Network

CORE CAPABILITIES

Routing & Orchestration

Data Mapping & Transformation

Process Design & Development

Data Movement
AS2, SFTP, REST, and more

Data Schemas
Flat file, XML, JSON, iDoc, CSV, XLSX, SOAP

Integration
Multi-enterprise EDI & API-based integrations

PERSONA-BASED VISIBILITY & INSIGHTS
Real-time end-to-end business process views & operational analytics

ECOSYSTEM-ORIENTED COLLABORATION
Take action on integration flows. Seamlessly interact with all stakeholders.

OPERATIONAL INTEGRATION
Storage Connectors • Agent-Based Integration
File-Based Application Integration • Application Connectors

Technical Outcomes

Create frictionless end-to-end processes

Orchestrate & automate integration flows

Centralize the full issue lifecycle

Maximize business continuity with 99.95% uptime

Elastically scale

Cleo Integration Cloud is a cohesive ecosystem integration platform centered on core capabilities to orchestrate end-to-end multi-enterprise workflows.

Core Capabilities

At the center of Cleo Integration Cloud is a set of core capabilities to design, deploy, operate, and optimize end-to-end business workflows

ROUTING AND ORCHESTRATION

Dynamic data movement of multi-enterprise, multi-application data flows that power business ecosystems

- Protocol connector depth & preconfigured trading partner connections
- Batch and real-time transfers; scheduled and event-based
- Secure content collaboration to enable all trading partners

DATA MAPPING AND TRANSFORMATION

Multi-pattern data integration that helps drive revenue-creating business processes through optimized integration, including Order-to-Cash

- Any-to-any data mapping and transformation
- Diverse support for EDI and non-EDI format requirements
- B2B and API-based integration capabilities

PROCESS DESIGN AND DEVELOPMENT

Multi-enterprise API and EDI-based integration for complete integration, and streaming and batch dataflow management

- Self-service, managed services, or a blend for integration development
- Intuitive application integration process design and development
- Data looping and conditional constructs for complex-API batch and streaming processes

PERSONA-BASED VISIBILITY AND INSIGHTS

Comprehensive visibility across end-to-end business processes that enhance business insight and drive better decision-making

- Real-time operational and business activity views for business and technical users
- Metrics to rapidly identify new revenue opportunities
- Provide critical data-based value to your ecosystem of partners, suppliers, and customers

ECOSYSTEM-ORIENTED COLLABORATION

Eliminate the black-box approach to integration, and maintain operational control over your trading community and integration environment

- Provision secure access to operational visibility with trading partner scorecard
- Create reports and notifications to keep internal and external stakeholders tuned in
- Deepen collaboration with trading partners to drive new revenue

Key Business Outcomes

Cleo Integration Cloud empowers technical and business users to deliver business outcomes that result in improved customer experiences and stronger ecosystem partnerships

OPTIMIZE EXCEPTION MANAGEMENT

Take direct action to proactively address issues

- Hands-on troubleshooting to ensure critical response-time SLAs
- Share tickets and collaborate to accelerate time to resolution

EXCEED PERFORMANCE SLAS

Meet even the most stringent SLAs tied to your integration performance

- Tighten process orchestration to eliminate white space
- Sync data across systems, reducing errors and manual intervention

IMPROVE ECOSYSTEM COMMUNITY GOVERNANCE

Dynamically manage integrations with your ecosystem of trading partners

- Rapidly adapt to meet evolving trading partner change requirements
- Handle any integration or data syntax demand

RAPIDLY ONBOARD PARTNERS AND APPLICATIONS

Eliminate complexity to save time and resources in onboarding

- Increase onboarding and migration process automation
- Simplify design-time and onboarding work

SPEED UP TIME TO REVENUE

Accelerate multi-enterprise trading partner and application integration

- Streamline and automate integration across entire business processes
- Simplify design-time by eliminating custom coding

Key Technical Outcomes

The depth and breadth of the technical capabilities empowers organizations to deliver technical outcomes with ease, resulting in improved organizational agility

CREATE FRICTIONLESS END-TO-END PROCESSES

Business process optimization and integration on a single platform

- Optimize key revenue-driving business processes
- Enable integration that spans business and operational ecosystems

ORCHESTRATE AND AUTOMATE INTEGRATION FLOWS

Connect and integrate partners, SaaS, and legacy systems for seamless integration across your ecosystem

- Increase data accuracy and reliability
- Leverage a rich and diverse library of business and application connectors

CENTRALIZE THE FULL ISSUE LIFECYCLE

Take direct action with self-service exception management

- Reprocess transactions and share status tracking with trading partners and internal stakeholders
- Single pane of glass for transparency across all stages of the exception management process

ELASTICALLY SCALE

Gain the power of resilient web-scale platform technologies

- Support propulsive business growth
- Flexibly scale and dynamically adapt to meet peak seasonal demand

99.95% UPTIME SLA

Advanced support for always-on business continuity

- Maintain highly available, highly reliable relationships across your ecosystem
- Avoid data loss, and enable disaster recovery and event handling

Business Ecosystem Connectors

Cleo centralizes and supports diverse business and application integration needs on a single platform, offering enhanced integration capabilities through hundreds of available connectors designed to flexibly integrate your partners, applications, on-premise systems, data and infrastructure

PRECONFIGURED MULTI-ENTERPRISE CONNECTORS

Eliminate manual onboarding processes and speed the time to value with prebuilt connectors to accelerate your ability to do business across the world's largest supply chain ecosystems

Retail	Logistics	Wholesale
▪ Walmart	▪ XPO	▪ Sysco
▪ Target	▪ UPS	▪ Reinhart
▪ Amazon	▪ FedEx	▪ Cardinal Health

And hundreds more trading partner connections for every industry

SUPPORTED B2B/EDI STANDARDS

ANSI X12   *Includes VICS and UCS subsets*

▪ 002001	▪ 003040	▪ 004040	▪ 005050	▪ 007030
▪ 002002	▪ 003050	▪ 004050	▪ 006010	▪ 007050
▪ 002003	▪ 003060	▪ 004060	▪ 006020	▪ 008010
▪ 002040	▪ 003070	▪ 005010	▪ 006030	
▪ 003010	▪ 004010	▪ 005020	▪ 006040	
▪ 003020	▪ 004020	▪ 005030	▪ 006050	
▪ 003030	▪ 004030	▪ 005040	▪ 007010	

EDIFACT

▪ D 00A	▪ D 06A	▪ D 12B	▪ D 19A	▪ D 97B
▪ D 00B	▪ D 06B	▪ D 13A	▪ D 911	▪ D 98A
▪ D 01A	▪ D 07A	▪ D 13B	▪ D 912	▪ D 98B
▪ D 01B	▪ D 07B	▪ D 14A	▪ D 912UK	▪ D 99A
▪ D 01C	▪ D 08A	▪ D 14B	▪ D 921	▪ D 99B
▪ D 02A	▪ D 08B	▪ D 15A	▪ D 932	▪ S 93A
▪ D 02B	▪ D 09A	▪ D 15B	▪ D 93A	▪ 090001
▪ D 03A	▪ D 09B	▪ D 16A	▪ D 93B	▪ 090002
▪ D 03B	▪ D 10A	▪ D 16B	▪ D 94B	▪ 091001
▪ D 04A	▪ D 10B	▪ D 17A	▪ D 95B	▪ 091101
▪ D 04B	▪ D 11A	▪ D 17B	▪ D 96A	
▪ D 05A	▪ D 11B	▪ D 18A	▪ D 96B	
▪ D 05B	▪ D 12A	▪ D 18B	▪ D 97A	

TRADACOMS

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NON-EDI

▪ XML / cXML	▪ Flat file (single	▪ Database
▪ iDOC	format, delimiter,	▪ Spreadsheet
▪ JSON	single / multi-record)	▪ CSV
▪ SOAP		

ACCELERATORS

Ready-to-deploy critical business process integrations so you can configure instead of code, transact faster with any ecosystem entity, and gain real-time integration visibility.

APP ACCELERATORS

▪ NetSuite-to-Amazon SP-API (FBM)	▪ TruckMate-to-X12
▪ NetSuite-to-Shopify	▪ More coming soon
▪ NetSuite-to-X12	

Operational Ecosystem Connectors & Boosters

Integrate your entire ecosystem. Achieve frictionless integration with flexible and versatile connectors to enable on-premise and cloud application integration use cases, supporting a wide array of modern technical or business requirements

APPLICATIONS

Seamlessly connect and integrate data across critical cloud applications and core on-premise business systems to rapidly configure and orchestrate frictionless, fully-automated integrations

eCommerce platforms and marketplace Connectors

- ▪ Amazon Seller Central SP-API (FBM)
- ▪ Adobe Commerce
- ▪ Shopify

eCommerce platforms and marketplace Boosters

- ▪ Amazon Seller Central SP-API (FBM)

CRM

- ▪ Salesforce CRM

ERP

- ▪ Acumatica
- ▪ NetSuite
- ▪ Oracle E-Business Suite
- ▪ Oracle JD Edwards EnterpriseOne
- ▪ SAP R/3
- ▪ Microsoft Dynamics 365 SCM

CIC AGENT

Support hybrid integration through highly available connectivity to private infrastructure with mTLS encryption, x509 certificate exchange, and control in the cloud

- ▪ File system integration (File Share / NFS, SMB)
- ▪ Database integration
- ▪ IBM I integration

INTERNET PROTOCOL CONNECTORS

Leverage standard data transfer protocols to universally move data with time-tested security

- ▪ FTP, FTPs client/server
- ▪ SFTP (SSH FTP) client/server
- ▪ email (SMTP/SMTPs)

BUSINESS PROTOCOL CONNECTORS

Gain speed in business transactions by utilizing protocols with built in business controls including digital receipts and signatures for your business document exchanges

- ▪ AS2

TRADING PARTNER MAILBOX

Standardize order capture and empower trading partners with self-managed person-to-system integration for any file and format

PREBUILT INTEGRATIONS

Accelerate the optimization of dynamic end-to end business processes, simplifying EDI-to-ERP integration with fully-formed, prebuilt workflows for Order-to-Cash

- ▪ Acumatica
- ▪ Oracle JD Edwards EnterpriseOne
- ▪ Oracle NetSuite
- ▪ SAP R/3

Operational Capabilities

Comprehensive visibility and control across end-to-end business processes with persona-based experience and actionable insights that deepen user control, accelerate troubleshooting deliver improved data-driven decision-making

REAL-TIME VISIBILITY & ACTIONABLE INSIGHTS

- End-to-end visibility for API and EDI-based integrations
- Activity dashboard for real-time operational and business activity views
- Business process visibility with customizable message summaries
- Payload drill downs for operational insights and troubleshooting
- Compare raw and transformed data and Functional Acknowledgments
- Consolidated and collaborative issue life cycle views
- Self-service reference tables
- Manual job retry for multiple payload processing failure
- Trading partner scorecard

CIC COCKPIT WITH RADAR™
(Real-time Analytics, Data-driven Actions & Results)

- Configure trading partner and system-level alerts
- Subscribe to real-time notifications on events, expectations, and SLAs
- Measure performance and keep track of key metrics

ALERTS & NOTIFICATIONS

- Report scheduler to automate data feed
- Event-based alert notifications
- Export data in CSV

Developer Capabilities

Design and build end-to-end integrations. Instrument highly efficient, fully-automated dataflows to streamline operations and optimize business processes

CIC STUDIO

- Self-service integration design-time environment
- Rich low-code development capabilities
- Support complex orchestration requirements with routing, integration sequencing, iteration, and condition constructs
- Enable synchronous and asynchronous execution
- Project generator to accelerate trading partner onboarding
- Outbound validation
- Time zone and scheduler configuration

BUILD ECOSYSTEM CONNECTORS

Our team can help you create and support custom integrations to any core business application, database, or ecosystem endpoint with the Cleo platform

Platform APIs

- REST/JSON
- API Consumer
- API Provider

**Database
(via JDBC type 4 or greater)**

- DB2
- MS SQL Server
- MySQL
- Oracle
- POSTgreSQL

Flat file

Connector framework

- SOAP Web Services (SOAP/WSDL)
- RESTful Web Services

Developer resources

- Cleo GitHub
- Cleo Developer

Security Features

Cleo Integration Cloud provides flexible control to ensure the integrity and security of your sensitive and proprietary data

- Verify signed payloads
- Accept encrypted payloads
- Require secure HTTPs connection
- Sign, encrypt and compress payloads
- Customizable connection timeout
- Checkpoint restart to resume failed transfers

Authorization

- OAuth 2.0 access tokens
- Credentials vault

Authentication

- HTTP Authentication
- SAML integration with identity providers including OneLogin, Auth0, Azure Active Directory, and more

Encryption Mode

- PGP encryption-handling capabilities
- Explicit/implicit FTPs
- ASCII armor text encoding

Cryptographic Protocols

- TLS (1.0, 1.1, 1.2), TLS-C, TLS-P
- SSL 3.0

Content Type

- Cleo Integration Cloud data movement is content-agnostic
- Support transfer of any data type including, ASCII, Binary, EDIFACT,
- X12, XML, Text and more

Receipts

* Request MDN Receipts
- Synchronous, asynchronous (HTTP/S)
- Require signing

Data Mode

- Active, Passive

Compression Algorithms

- ZIP, ZLIB

Certificate/Key Exchange Algorithms

- RSA, PSK
- diffie-hellman-group-exchange-sha256
- curve25519-sha256

Data Integrity Algorithms

SHA-1, MD2, MD5, RIPE-MD-160, SHA (256, 384, 512)

Encryption Algorithms

RC2 (40, 64, 128), DES, TripleDES, CAST5, AES (128, 128-cbc, 128-ctr, 192, 192-cbc, 192-ctr, 256, 256-cbc, 256-ctr), Arcfour (128, 256), Camellia (128, 256), RC4 (40, 64, 128), Twofish (128, 192, 256), Blowfish, HMAC (MD5, MD5-96, SHA-1, SHA1-96, SHA2-256)

Platform Certifications

Cleo Integration Cloud is designed for data security, process integrity, and system interoperability. Tested and certified, Cleo solutions enable customers to comply with constantly evolving industry regulations and mandates

- SOC 2® Type 2
- Drummond Certified AS2

Platform Support

Cleo Integration Cloud support outcomes are backed by over 700 collective years of team experience in driving expedited resolutions to even the most complex integration issues

SUPPORT

Cleo provides exceptional customer support to optimize incident management and accelerate resolution for production and non-production technical issues

- 24/7 technical support coverage
- Phone, web, email
- Anytime access via customer portal and knowledge base (KB)

SERVICES

Your roadmap to successful integration modernization starts with Cleo for end-to-end implementation, migration, and operations

- Business consulting, strategy, design, testing, and deployment
- Fully-managed integration services available
- Cleo University (training) & Cleo Connect (annual customer conference)

CLOUD OPERATIONS

Mitigate risk, stay ahead of compliance requirements, and keep your integration capabilities on the cutting edge

- Seamless cloud platform updates
- Frequent capability enhancements
- Eliminate downtime from traditional patches and batch updates

CUSTOMER SUCCESS

Dedicated to your success with dynamic support for every integration stage backed by experience from thousands of successful deployments

- Dedicated customer success manager
- Guidance based on well-established best practices
- Metric-driven health score monitoring relative to benchmarks

Deployment Options

Cleo's platform is available as a multi-tenant cloud solution offering a combination of cloud-based infrastructure and flexible service models

- Get integration backed by experts
- Extend your integration center of excellence
- Leverage a powerful blend of self-service and managed services

Cleo Integration Cloud provides the industry's most flexible and versatile deployment options that easily map to your business objectives. As such, Cleo Integration Cloud is available via private cloud deployment as a user-managed solution. For more information on private deployments, contact Cleo today.
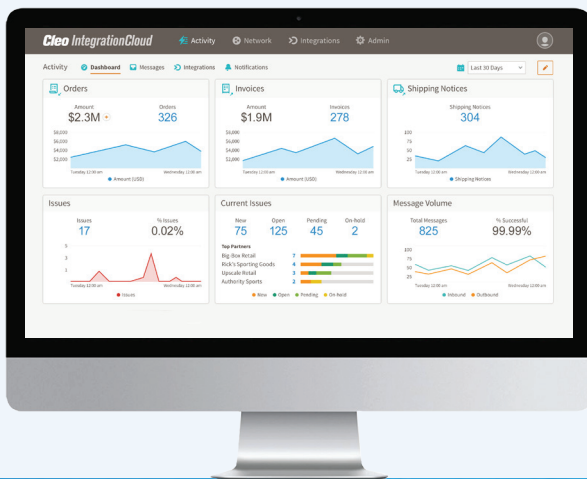
Need Proof?

SEE CLEO INTEGRATION CLOUD IN ACTION.

Schedule your live, interactive demo to learn how you can enable fluid multi-enterprise, multi-cloud, and multi-application hybrid integration flows across your ecosystem of customers, partners, and suppliers.

REQUEST DEMO

Recognized "Leader" in iPaaS and EDI categories on G2

ABOUT CLEO INTEGRATION CLOUD

Cleo Integration Cloud (CIC) is a cloud-based integration platform, purpose-built to design, build, operate and optimize critical Ecosystem Integration processes. The CIC platform brings end-to-end integration visibility across API, EDI and non-EDI integrations. It gives technical and business users the confidence to rapidly onboard trading partners, enable integration between applications, and accelerate revenue-generating business processes. On the platform, businesses have the choice of self-service, managed services, or a blended approach – ensuring complete flexibility and control over their B2B integration strategy.

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