Tekelec EAGLE® 5

Related Publications

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EAGLE 5 Publications

EAGLE 5 Documentation Set

The EAGLE 5 customer-documentation set is a comprehensive group of electronic files available on an optical disc, such as DVD, and through the Tekelec Customer Support site (see *Locate Product Documentation on the Customer Support Site*). The disc shipped with each release contains the EAGLE 5 core documentation, several reference manuals, and related hardware and installation manuals.

Depending on the content and availability of an EAGLE 5 release, some manuals might not be included in the documentation for a release (for example, EPAP manuals would not be included in a release that is available only to LNP customers). Some manuals, such as *Systems Overview*, *Previously Released Features*, *Release Notices*, and *Dimensioning Guide for EPAP Advanced DB Features* are available only through the support site.

The current releases of all manuals are available through the Tekelec Customer Support site.

A complete documentation set of the EAGLE 5 provides information about the EAGLE 5 and the following supporting systems:

- EAGLE Collection Application Processor (ECAP)
- EAGLE LNP Application Processor (ELAP)
- EAGLE Provisioning Application Processor (EPAP)
- FTP-Based Table Retrieve Application (FTRA)

For releases that exclude any of the supporting systems, the documentation set will be adjusted accordingly. The manuals are listed per application; hardware manuals are listed separately.

EAGLE 5 Core Documentation

- The *Commands Manual* contains procedures for logging into or out of the EAGLE 5, a general description of the terminals, printers, the disk drive used, and a description of all the commands used in the system.
- The *Commands Pocket Guide* is an abridged version of the *Commands Manual*. It contains all commands and parameters, and it shows the command-parameter syntax. This is available only in print.
- The *Commands Quick Reference Guide* contains an alphabetical listing of the commands and parameters. The guide is smaller than the standard manuals and spiral bound for convenience. This is available only in print.
- The *Commands Error Recovery Manual* contains the procedures to resolve error message conditions generated by the commands in the *Commands Manual*. These error messages are presented in numerical order.
- The *Database Administration Manual – Features* contains procedural information required to configure the EAGLE 5 to implement the STP LAN, Database Transport Access, GSM MAP Screening, and EAGLE 5 Support for Integrated Sentinel features.

- The *Database Administration Manual - Gateway Screening* contains a description of the Gateway Screening (GWS) feature and the procedures necessary to configure the EAGLE 5 to implement this feature.
- The *Database Administration Manual – Global Title Translation* contains procedural information required to configure an EAGLE 5 to implement Global TitleTranslation features, including Enhanced Global Title Translation, Variable Length Global Title Translation, Interim Global Title Modification, Intermediate GTT Loadsharing, Flexible Intermediate GTT Loadsharing, Flexible Final GTT Loadsharing, ANSI/ITU SCCP Conversion, and Origin-Based SCCP Routing.
- The *Database Administration Manual - IP7 Secure Gateway* contains procedural information required to configure the EAGLE 5 to implement the SS7-IP Gateway.
- The *Database Administration Manual – SEAS* contains the EAGLE 5 configuration procedures that can be performed from the Signaling Engineering and Administration Center (SEAC) or a Signaling Network Control Center (SNCC). Each procedure includes a brief description of the procedure, a flowchart showing the steps required, a list of any EAGLE 5 commands that may be required for the procedure but that are not supported by SEAS, and a reference to optional procedure-related information, which can be found in the Database Administration Manuals for either Gateway Screening, Global Title Translation, or SS7.
- The *Database Administration Manual – SS7* contains procedural information required to configure an EAGLE 5 to implement the SS7 protocol.
- The *Database Administration Manual – System Management* contains procedural information required to manage the EAGLE 5 database and GPLs, and to configure basic system requirements such as user names and passwords, system-wide security requirements, and terminal configurations.
- The *Database Administration Manual – Flowcharts* contains the flowcharts that correspond to the procedures in these manuals:
  - *Database Administration Manual – Features*
  - *Database Administration Manual - Gateway Screening*
  - *Database Administration Manual – Global Title Translation*
  - *Database Administration Manual - IP7 Secure Gateway*
  - *Database Administration Manual – SS7*
  - *Database Administration Manual – System Management*
- The *Maintenance* manual contains procedural information required for maintaining the EAGLE 5 system. The *Maintenance* manual provides preventive maintenance procedures used in maintaining the different systems, including card removal and replacement procedures.
- The *UAM/UIM Pocket Guide* is an abridged version of the *Unsolicited Alarm and Information Messages* manual and contains all the corrective maintenance procedures used in maintaining the EAGLE 5. This is available only in print.
- The *UAM Emergency Pocket Guide* is an abridged version of the Maintenance Manual and contains the corrective maintenance procedures for critical and major alarms generated on the EAGLE 5. This is available only in print.
- The *Measurements* manual contains descriptions of the Maintenance and Administration Subsystem (OAM-based), Measurement Platform, and E5-OAM Integrated Measurements collection methods; the measurements that can be collected; and the reports that can be generated for the EAGLE 5.
- The *Previously Released Features Manual* summarizes the features of previous EAGLE 5 and IP7 Secure Gateway releases, and it identifies the release number of their introduction.

Note: This manual is available only through the Tekelec Customer Support Site (see *Locate Product Documentation on the Customer Support Site*).

- The *Tekelec 1200 Integrated Application Platform Maintenance Manual* provides hardware diagnostics and troubleshooting, LED descriptions for each component, overview of external hardware connections, and how to replace field-replaceable units.
- *Release Documentation* includes the following documents:
  - *EAGLE 5 Feature Notice* - Describes the features contained in the specified release. The Feature Notice also provides the hardware baseline for the specified release, describes the customer documentation set, provides information about customer training, and explains how to access the Customer Support website.

    Additional Feature Notices may be provided per subsystem.
  - *Related Publications* (this document) - Lists all EAGLE 5-related documents.
  - *Release Notice* - Contains Generic Program Loads (GPLs), a list of PRs resolved in a build, the Product Compatibility Matrix, the EAGLE-PIC Compatibility Matrix, and the latest known PRs per system and subsystem.

    Note: The *Release Notice* is maintained solely on the Tekelec Customer Support site to provide you with instant access to the most up-to-date release information (see *Locate Product Documentation on the Customer Support Site*).
  - *Systems Overview* - Provides high-level information on SS7, the IP7 Secure Gateway, system architecture, and LNP.

    Note: This manual is available only through the Tekelec Customer Support Site (see *Locate Product Documentation on the Customer Support Site*).
  - *Master Glossary* - Contains an alphabetical listing of terms, acronyms, and abbreviations relevant to the system.
- The *SEAS Commands Error Messages Manual* lists the error messages generated by the EAGLE 5 that are specific to the Signaling Engineering and Administration System (SEAS). It includes the SEAS commands that trigger the error messages, the equivalent system error messages and commands, and the explanatory text.

  Note: This manual is available only through the Tekelec Customer Support Site (see *Locate Product Documentation on the Customer Support Site*).
- The *SS7-over-IP Networks Using SIGTRAN* manual examines the reasons for transitioning to an SS7-over-IP network, the considerations that go into planning and dimensioning, and helpful information for implementing the network using EAGLE 5.
- The *Unsolicited Alarm and Information Messages* manual describes the EAGLE 5 system unsolicited alarm and information messages sent to the system terminal whenever there is a system fault, whenever a previous fault condition is corrected, or when a subsystem, equipment, and/or service is placed in or taken out-of-service. Each message has a trouble code and text associated with the trouble condition.

ECAP Documentation

- The *Feature Manual - ECAP* provides instructions and information on how to install, use, and maintain the Integrated Accounting Feature Application feature on the Eagle Collector Application

Processor (ECAP). This feature collects raw MSU data from the EAGLE 5, categorizes the data into groups, and feeds those groups to another system for accounting activities.

ELAP Documentation

- The *ELAP Administration and LNP Feature Activation* manual describes the EAGLE LNP Application Processor (ELAP) and the LNP feature in one manual.

  The ELAP part of the manual defines the user interface to the EAGLE LNP Application Processor (ELAP) on the Multi-Purpose Server (MPS)/ELAP platform. The manual defines the methods for accessing the user interface, menus, screens available to the user and describes their impact. It provides the syntax and semantics of user input and defines the output the user receives, including information and error messages, alarms, and status.

  The LNP part of the manual contains instructions and information to configure, use, and maintain ELAP-related features and functions on the EAGLE 5, including the LNP quantity feature, LNP services, LNP options, LNP subsystem application, Automatic Call Gapping, the Triggerless LNP (TLNP) feature, the LNP Short Message Service (LNP SMS) feature, and increasing the maximum allowed LRN and NPANXX quantities.
- The *LNP Database Synchronization Manual - LSMS with EAGLE 5* describes how to keep the LNP databases at the LSMS and at the network element (the EAGLE 5 is a network element) synchronized through the use of resynchronization, audits and reconciles, and bulk loads. This manual is contained in both the LSMS documentation set and in the EAGLE 5 documentation set.

EPAP Documentation

- The *Dimensioning Guide for EPAP Advanced* DB *Features* is used to provide EAGLE Provisioning Application Processor (EPAP) planning and dimensioning information. This manual is used by Tekelec personnel and EAGLE 5 customers to aid in the sale, planning, implementation, deployment, and upgrade of EAGLE 5 systems equipped with one of the EPAP Advanced Database (EADB) Features.

  Note: The *Dimensioning Guide for EPAP Advanced* DB *Features* is maintained solely on the Tekelec Customer Support site to provide you with instant access to the most up-to-date release information (see *Locate Product Documentation on the Customer Support Site*).
- The *EPAP Administration Manual* describes how to administer the EAGLE Provisioning Application Processor (EPAP) on the MPS/EPAP platform. The manual defines the methods for accessing the user interface, menus, and screens available to the user and describes their impact. It provides the syntax and semantics of user input and defines the output the user receives, including messages, alarms, and status.
- The *Provisioning Database Interface Manual* defines the programming interface that populates the Provisioning Database (PDB) for the EAGLE 5 features supported on the MPS/EPAP platform. The manual defines the provisioning messages, usage rules, and informational and error messages of the interface. The customer uses the PDBI interface information to write his own client application to communicate with the MPS/EPAP platform.

EPAP-Related EAGLE 5 Feature Documentation

- *Numbering Plan Processor (NPP) Overview* describes a generic software process to provision complex numbering plans and to modify parameters for digit string filtering, conditioning, and encoding. NPP is used by EAGLE 5 features; other manuals in this documentation set describe the specific

use of NPP for a feature. The manual defines the components of NPP and their interactions, and describes a test tool that can be used to verify NPP provisioning before it is used with live traffic.

- The *Feature Manual - Analyzed Information Features* provides information and instructions on how to configure, use, and maintain Analyzed Information features on the EAGLE 5. The Analyzed Information features are Info Analyzed Relay (IAR) Base, IAR Number Portability (IAR NP), IAR Additional Subscriber Data (IAR ASD), and IAR Generic Routing Number (IAR GRN). Service Portability and S-Port Subscriber Differentiation support for IAR NP are also described in the manual.
- The *Feature Manual - A-Port* describes a feature that provides the capability for IS41 mobile subscribers to change service provider while retaining their original Mobile Directory Number (MDN). This manual gives the instructions and information on how to configure, use, and maintain the A-Port feature on the EAGLE 5.
- The *Feature Manual - ATINP* describes a feature that provides the capability for IS41 subscribers to migrate to a GSM network and GSM mobile subscribers to migrate to an IS41 network. This manual provides instructions and information on how to configure, use, and maintain the IS41 GSM Migration (IGM) feature on the EAGLE 5. Service Portability support for ATINP is also described in the manual.
- The *Feature Manual - EIR* provides instructions and information on how to configure, use, and maintain the Equipment Identity Register (EIR) feature on the EAGLE 5. The feature provides network operators with the capability to prevent stolen or disallowed GSM mobile handsets from accessing the network.
- The *Feature Manual - G-Flex C7 Relay* describes features that support the efficient management of Home Location Registers in various networks. This manual provides instructions and information on how to configure, use, and maintain G-Flex,*G-Flex MAP Layer EAGLE 5 Routing*, and*EPAP Provisioning Blacklist* features and the*G-Flex Relay* function on the EAGLE 5.
- The *Feature Manual - G-Port* describes features that provide the capability for mobile subscribers to change the GSM subscription network within a portability cluster while retaining their original MSISDNs. This manual provides instructions and information on how to configure, use, and maintain the G-Port, MT-based GSM SMS NP, MT-based GSM MMS NP, and GSM MAP SRI Redirect to Serving HLR, G-Port SRI Query for Prepaid, G-Port SCCP Service Re-Route Capability, and MNP Circular Route Prevention features on the EAGLE 5. Service Portability support for G-Port SRI Query for Prepaid is also described in the manual.
- The *Feature Manual - IDP-Related Features* provides information and instructions on how to configure, use, and maintain IDP-related features on the EAGLE 5. The IDP-related features are Prepaid IDP Query Relay (IDP Relay), IDP Screening for Prepaid, IDP A-Party Blacklist, and IDP A-Party Routing. Service Portability and S-Port Subscriber Differentiation support for IDP Relay are also described in the manual.
- The *Feature Manual - INP/AINPQ* describes the INP feature that provides INAP-based Number Portability functions and the AINPQ feature that provides ANSI-41 INP Query functions. This manual provides information and instructions on how to configure, use, and maintain the INP, AINPQ, and INP Circular Route Prevention features on the EAGLE 5. Service Portability support for INPQ and INPMR services and S-Port Subscriber Differentiation for the INPMR service are also described in the manual.
- The *Feature Manual - IS41 GSM Migration* describes a feature that provides the capability for IS41 subscribers to migrate to a GSM network and GSM mobile subscribers to migrate to an IS41 network and keep their original telephone number. This manual provides instructions and information on how to configure, use, and maintain the IS41 GSM Migration (IGM) feature on the EAGLE 5.
- The *Feature Manual - MO SMS* addresses the number portability requirements of wireless network operators for delivery of Mobile Originated SMS messages in a number portability environment for GSM and IS41 and in the IS41-to-GSM Migration environment . The EAGLE 5 MO SMS features

apply number portability database lookup to SMS messages for IS41 and GSM networks. This manual provides instructions and information on how to configure, use, and maintain the MO-based GSM SMS NP, MO-based IS41 SMS NP, MO SMS IS41-to-GSM Migration, Portability Check for Mobile Originated SMS (MNP SMS), and Prepaid Short Message Service Intercept (PPSMS) features on the EAGLE 5. Service Portability and S-Port Subscriber Differentiation support for the MO-based GSM SMS NP and MO-based IS41 SMS NP features are also described in the manual.

- The *Feature Manual - TIF* describes the functions and use of the Triggerless ISUP Framework (TIF) and the TIF Number Portability (TIF NP), TIF SCS Forwarding, and TIF Simple Number Substitution (TIF SNS) features. TIF provides a method for querying entities (such as gsmSCF) to obtain number portability and routing information for subscribers directly from an EAGLE 5 acting as MNP SRF. The TIF NP feature uses TIF and NPP for incoming ISUP IAM message decoding, number conditioning, RTDB lookup for number portability information, and outgoing message formatting. The TIF SCS Forwarding feature determines when to use DTA to send relayed IAM and SAM MSU information to the SCS. The TIF SNS feature substitutes the calling party number in the ISUP IAM message with a single configured calling party number. The manual provides instructions and information about configuring and using TIF and the TIF features on the EAGLE 5. Service Portability support for TIF NP is also described in the manual.
- The *Feature Manual - V-Flex* describes the V-Flex Voice Mail Router (V-Flex) feature, which allows calls to be routed to a specific voice mail server (VMS) based on subscriber and call context data. This manual provides instructions and information on how to configure, use, and maintain the V-Flex Voice Mail Router (V-Flex) feature on the EAGLE 5.

EPAP-Related EAGLE 5 Maintenance

- The *EPAP Alarms on T1200 Platform Manual* includes T1200 platform alarms and EPAP application alarms.
- The *Tekelec 1200 Integrated Application Platform Maintenance Manual* provides hardware diagnostics and troubleshooting, LED descriptions for each component, overview of external hardware connections, and how to replace field-replaceable units.

FTRA Documentation

- The *FTP-Based Table Retrieve Application (*FTRA*) User Guide* describes how to set up and use a PC to serve as the offline application for the EAGLE 5 FTP Retrieve and Replace feature.
- The *FTP-Based Table Retrieve Application (*FTRA*) Software Installation Instructions* describes the FTRA software installation and upgrade on the Windows and Unix platforms.

Hardware, Installation, and Maintenance Documentation

- The *Hardware Manual - Signaling Products* contains hardware descriptions and specifications of Tekelec signaling products. These include the EAGLE 5, OEM-based products such as the ASi 4000 Service Control Point (SCP), the Netra-based Multi-Purpose Server (MPS), and the Integrated Sentinel with Extended Services Platform (ESP) subassembly.

  The *Hardware Manual* provides an overview of each system and its subsystems, details of standard and optional hardware components in each system, and basic site engineering. Refer to this manual to obtain a basic understanding of each type of system and its related hardware, to locate detailed information about hardware components used in a particular release, and to help configure a site for use with the system hardware.

- The *Installation Manual - EAGLE 5* contains cabling requirements, schematics, and procedures for installing the EAGLE 5 along with LEDs, connectors, cables, and power cords to peripherals. Refer to this manual to install components or the complete systems.
- The *Tekelec 1200 Integrated Application Platform Hardware Manual* provides a platform overview and describes the T1200 application cabinet and its components.
- The *Tekelec 1200/5100 Integrated Application Platforms Installation Manual* provides cabinet installation information for the Tekelec 1200 (T1200) and the Tekelec 5100 (T5100) platforms.
- The *Hardware Manual - Tekelec 1100 Application Server* provides general specifications and a description of the Tekelec 1100 Applications Server (T1100 AS). This manual also includes site preparation, environmental and other requirements, procedures to physically install the T1100 AS, and troubleshooting and repair of Field Replaceable Units (FRUs).

Locate Product Documentation on the Customer Support Site

Access to Tekelec's Customer Support site is restricted to current Tekelec customers only. This section describes how to log into the Tekelec Customer Support site and locate a document. Viewing the document requires Adobe Acrobat Reader, which can be downloaded at www.adobe.com.

1. Log into the *Tekelec Customer Support* site.

   Note: If you have not registered for this new site, click the **Register Here** link. Have your customer number available. The response time for registration requests is 24 to 48 hours.

2. Click the **Product Support** tab.
3. Use the Search field to locate a document by its part number, release number, document name, or document type. The Search field accepts both full and partial entries.
4. Click a subject folder to browse through a list of related files.
5. To download a file to your location, right-click the file name and select **Save Target As**.

Glossary

A

ANSI	American National Standards Institute An organization that administers and coordinates the U.S. voluntary standardization and conformity assessment system. ANSI develops and publishes standards. ANSI is a non-commercial, non-government organization which is funded by more than 1000 corporations, professional bodies, and enterprises.
AS	Application Server A logical entity serving a specific Routing Key. An example of an Application Server is a virtual switch element handling all call processing for a unique range of PSTN trunks, identified by an SS7 DPC/OPC/CIC_range. Another example is a virtual database element, handling all HLR transactions for a particular SS7 DPC/OPC/SCCP_SSN combination. The AS contains a set of one or more unique Application Server Processes, of which one or more normally is actively processing traffic. Application Simulator Test tool that can simulate applications and/or SMSCs.

D

Database	All data that can be administered by the user, including cards, destination point codes, gateway screening tables, global title translation tables, links, LNP services, LNP service providers, location routing numbers,

D

	routes, shelves, subsystem applications, and 10 digit telephone numbers.
DB	Database Daughter Board Documentation Bulletin

E

EIR	Equipment Identity Register A network entity used in GSM networks, as defined in the 3GPP Specifications for mobile networks. The entity stores lists of International Mobile Equipment Identity (IMEI) numbers, which correspond to physical handsets (not subscribers). Use of the EIR can prevent the use of stolen handsets because the network operator can enter the IMEI of these handsets into a 'blacklist' and prevent them from being registered on the network, thus making them useless.
ELAP	EAGLE Local Number Portability Application Processor
EPAP	EAGLE Provisioning Application Processor
ESP	Expanded Services Platform The Sentinel system with the hardware and software platform that provides the interface to the Integrated EAGLE and Sentinel monitoring system. The ESP hardware and software platform runs on the model 120 server.

F

F

FTRA	FTP-based Table Retrieve Application An application that runs in a PC outside of the EAGLE 5 and communicates with the EAGLE 5 Ithrough the IPUI feature and the FTP Retrieve and Replace feature.

G

G-Flex	GSM Flexible numbering A feature that allows the operator to flexibly assign individual subscribers across multiple HLRs and route signaling messages, based on subscriber numbering, accordingly.
G-Port	GSM Mobile Number Portability A feature that provides mobile subscribers the ability to change the GSM subscription network within a portability cluster, while retaining their original MSISDN(s).
GSM	Global System for Mobile Communications
GWS	Gateway Screening Used at gateway STPs to limit access into the network to authorized users. A gateway STP performs inter-network routing and gateway screening functions. GWS controls access to nonhome SS7 networks. Only an MSU that matches predefined criteria in the EAGLE 5's database is allowed to enter the EAGLE 5.

I

Integrated Sentinel	The Integrated Sentinel product provides monitoring capabilities for Signaling System 7 (SS7) links.

I

	Integrated Sentinel includes network surveillance capabilities and fault-management functions.
IP	Internet Protocol IP specifies the format of packets, also called datagrams, and the addressing scheme. The network layer for the TCP/IP protocol suite widely used on Ethernet networks, defined in STD 5, RFC 791. IP is a connectionless, best-effort packet switching protocol. It provides packet routing, fragmentation and re-assembly through the data link layer.
ITU	International Telecommunications Union

L

LNP	Local Number Portability
LSMS	Local Service Management System

M

MAP	Mobile Application Part
MPS	Multi-Purpose Server The Multi-Purpose Server provides database/reload functionality and a variety of high capacity/high speed offboard database functions for applications. The MPS resides in the General Purpose Frame.
	Messages Per Second A measure of a message processor's performance capacity. A message is any Diameter message (Request or Answer) which is received and processed by a message processor.

O

OEM	Original Equipment Manufacturer

P

PC	Point Code The identifier of a signaling point or service control point in a network. The format of the point code can be one of the following types: • ANSI point codes in the format network indicator-network cluster-network cluster member (**ni-nc-ncm**). • Non-ANSI domestic point codes in the format network indicator-network cluster-network cluster member (**ni-nc-ncm**). • Cluster point codes in the format network indicator-network cluster-* or network indicator-*-*. • ITU international point codes in the format **zone-area-id**. • ITU national point codes in the format of a 5-digit number (**nnnnn**), or 2, 3, or 4 numbers (members) separated by dashes (**m1-m2-m3-m4**) as defined by the Flexible Point Code system option. A group code is required (**m1-m2-m3-m4-gc**) when the ITUDUPPC feature is turned on. • 24-bit ITU national point codes in the format main signaling area-subsignaling area-service point (**msa-ssa-sp**).
PDB	Provisioning Database
PDBI	Provisioning Database Interface The interface consists of the definition of provisioning messages only. The customer must write a

P

client application that uses the PDBI request/response messages to communicate with the PDBA.

S

SCCP	Signaling Connection Control Part
SCP	Service Control Point Service Control Points (SCP) are network intelligence centers where databases or call processing information is stored. The primary function of SCPs is to respond to queries from other SPs by retrieving the requested information from the appropriate database, and sending it back to the originator of the request.
	Secure Copy
SEAC	Signaling Engineering and Administration Center
SEAS	Signaling Engineering and Administration System An interface defined by Bellcore and used by the Regional Bell Operating Companies (RBOCs), as well as other Bellcore Client Companies (BCCs), to remotely administer and monitor the signaling points in their network from a central location.
SS7	Signaling System #7
STP LAN	Signaling Transfer Point Local Area Network. A feature in the EAGLE 5 that copies MSUs selected through the gateway screening process and sends these MSUs over the Ethernet to an

S

external host computer for further processing.