

# USSi Gateway



## USSD for IP Multimedia Subsystem data networks

Protects  
Investment  
in USSD

Extends  
USSD to  
4G/5G Networks

Frees-up  
Network  
Resources

## Why USSi Gateway?

USSD is the primary channel that 2G/3G customers use to consume essential USSD services like:

- **Customer Self-Care:** data bundle purchases, price-plan changes, VAS subscriptions
- **Airtime Management:** airtime loans, balance enquiry, top-ups, credit transfers
- **Call Request and Set-up:** please-call-me back, prepaid roaming callback
- **m-Commerce:** mobile money, banking
- **Infotainment:** news, sports

Today's 4G/LTE and tomorrow's 5G data networks, however, do not come with native USSD support!

As a temporary workaround to enable 4G/5G customers to use USSD, operators switch customers over to their circuit-switched networks; and switch them back to their data networks after they finish using USSD (CSFB). This back-and-forth switching between different networks is inefficient because it consumes a great deal of signalling and radio resources. As a result, customers experience slower service interactions on 4G/5G than they would if they were using native 2G/3G USSD.

## What is USSi Gateway?

Pharos' USSD over IP Multimedia Subsystem (USSi) Gateway bridges your existing SS7 mobile network with the rest of the internet-connected world; without you needing to make any changes to your existing USSD applications/services.

The gateway is a SIP-to-MAP protocol convertor that enables smartphone-using subscribers to seamlessly use existing USSD services over 4G/5G. It eliminates the need to switch subscribers over to 2G/3G network to use USSD, which frees-up network signalling and radio resources. As a result, it provides customers with a similar responsive USSD user experience to that provided by 2G/3G.

On top of this, USSi Gateway extends the investment in and lifespan of your existing SS7-based USSD services and infrastructure because it allows you to provide a fluid USSD experience to all subscribers, regardless of their handset radio technology.

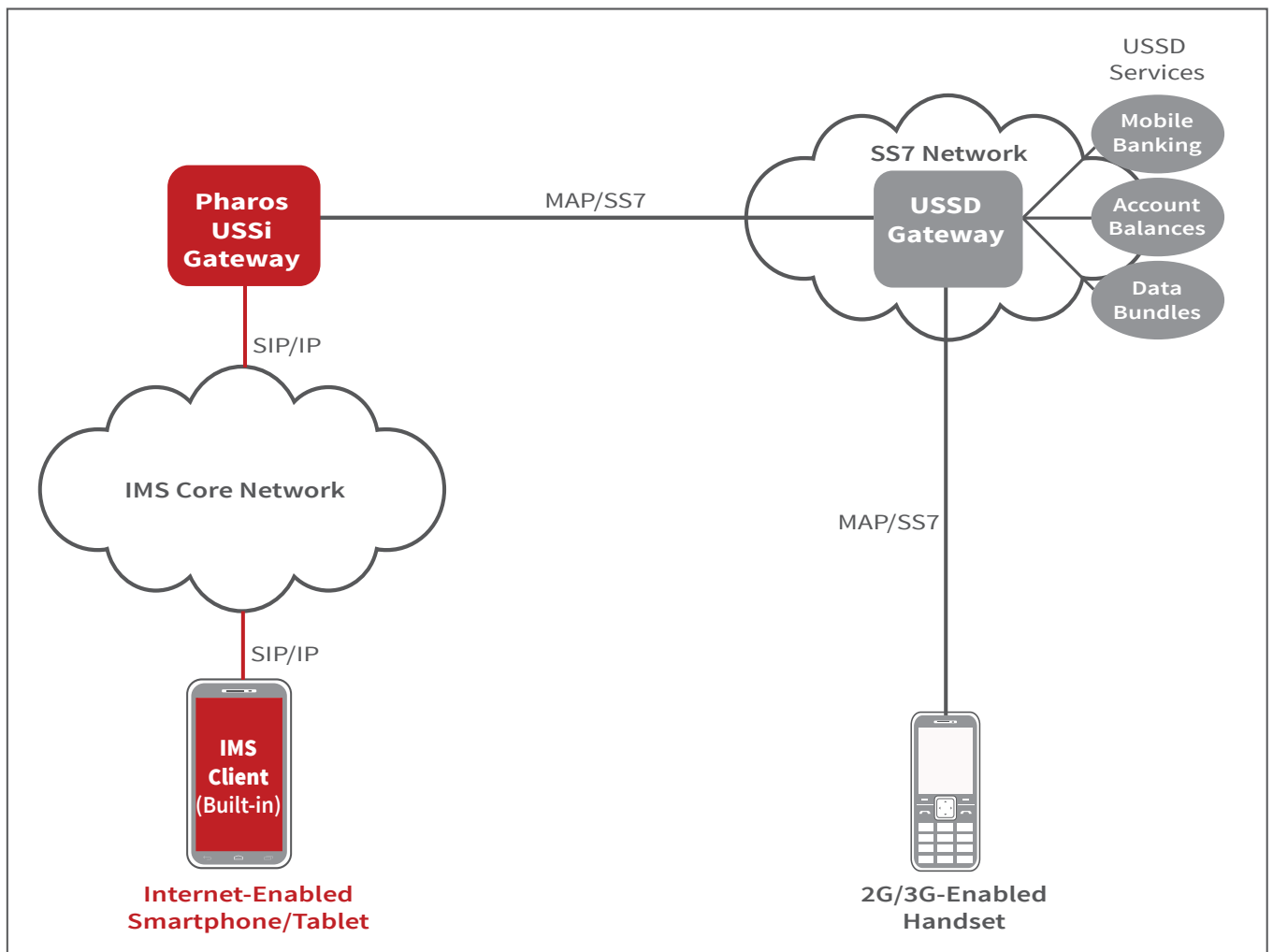
With network interfaces for both GSM and IMS, Pharos' USSi Gateway makes the network's USSD technology transparent to applications and subscribers alike.

## Key Benefits

- Provides the same self-care services to both feature phone and smartphone-using subscribers
- Leverages your existing USSD services and infrastructure
- Provides subscribers on LTE/5G with the same fluid USSD user experience provided natively on GSM/UMTS
- Eliminates the need for using Circuit Switched Fallback (CSFB)

## Key Features

- Enables subscribers to use USSD on 4G/LTE and 5G
- Provides USSD service redundancy and high-availability
- Runs in a virtualised environment
- Deploys on-premises or to the cloud
- Provides centralized O&M, reporting, and monitoring



## Bridging Data & Mobile Telephony Networks

### Standards Compliance

- **3GPP 24.390:** Unstructured Supplementary Service Data (USSD) using IP Multimedia (IM) Subsystem (IMS)
- **IETF RFC 3261:** SIP: Session Initiation Protocol
- **IETF RFC 6086:** SIP INFO Method and Package Framework

### USSD Expertise

Since 2002, Pharos has been providing USSD solutions and top-notch support to numerous mobile network operators in Africa, Europe, and the Middle East.

Our USSD products are field-proven in Tier-1 operators, where they provide 99.999% availability and scale easily to meet the most demanding needs.

### Related Products

#### SNAP

Carrier-grade SS7 Stack for deploying SMS, USSD, and Location-Based Services.

#### USSD System VI

A USSD Gateway system and complete solution for doing anything and everything USSD.

#### IP SM Gateway

Extends the use of SMS to IP Multimedia subsystem (IMS) data networks.

**Please get in touch with us to find out more...**

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We consistently provide customers with products that are cost-effective and well-engineered. And, make certain that each of our products enriches the lives of the people and businesses with the highest levels of reliability, performance, and efficiency. Our customers in Africa, Europe, the Middle East, and Australasia use our products to generate revenues, improve operational efficiency, and strengthen customer loyalty.

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