



# CYRUS 1.0<sup>®</sup> System

## CYRUS 1.0

Our virtual Base Station, CYRUS 1.0, transforms the traditional base station into a software centric solution, providing full virtualization of all base station layers and functions, including Baseband L1 PHY, real-time processing on virtual machines. It enables high capacity and coverage in any environment and on any scale, from In-building with Distributed Antenna Systems (DAS), through Metro Networks in dense urban areas, to Mega-scale networks covering entire cities.

### System Overview

- Fully virtualized Base Station at the Mobile Edge
- Standard server with network attached HW accelerator
- Connects to any RRH / DAS (directly or via CYRUS 1.0 Bridge), S1 connection to EPC
- Real-time automation and orchestration
- Open interfaces (3GPP, CPRI)

### Supported Configurations/Sector

- +600 Concurrent Users
- 5/10/15/20MHz Channel BW
- Carrier Aggregation
- SISO, MIMO 2X2 (4X4)
- 256 QAM

## Diagram: The Virtual Base Station

### Setup I: CYRUS connects to a DAS via an analog interface using the CYRUS Bridge unit



### Setup II: CYRUS connects to a DAS directly via a digital interface



## Benefits

- **System Growth:** Capacity can be added via additional software licenses which can be done remotely.
- **Carrier Sharing:** CYRUS 1.0 can be shared among multiple carriers, further reducing the amount of equipment needed and the cost of the base station.
- **Reduced Footprint:** Elimination of radio attenuators with direct interoperability via open interface between CYRUS 1.0 and the DAS – 100 sectors in one IT rack.
- **5G-Ready:** Software upgrade to support 5G.
- **Network Efficiency:** Performing real-time baseband processing allows for dynamic and automated allocation of baseband resources based on pooling gain and actual data traffic which eliminates the need to over provision base stations to meet peak demand.
- **Low Latency / Local Applications:** Multi-vendor Open Mobile Edge Cloud for Carrier or Enterprise applications with local breakout (security, video conference, caching, and more)
- **Reduced Power Consumption:** Power consumption is much lower than the alternatives, < 200W per sector
- **Reduced Cooling Requirements:** Reduced power consumption also reduces the cooling requirements of the room where the base stations are located.

## CYRUS 1.0 System Elements

A typical CYRUS 1.0 system is made up of 2 software components and 3 hardware elements:

1. Compute Server - Standard x86 server
2. CYRUS Connect – see CYRUS Connect datasheet
3. CYRUS Bridge - see CYRUS Bridge datasheet
4. Virtual Base Station software - see CYRUS vBS datasheet
5. Rainbow software – see CYRUS Rainbow software datasheet

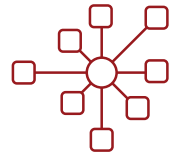
### Growth

Add capacity via software



### Sharing

Carriers can share the base station



### Space

100 sectors in 1 rack



### 5G

Add capacity and 5G



### Power

Low power consumption



### Cooling

Low cooling requirements



## About ASOCS

ASOCS is disrupting the traditional RAN market with an open and virtualized software solution, delivering 4G and 5G for both LAN and WAN cellular network solutions.

Our on-premise mobile clouds are delivered on commercial off-the-shelf IT hardware and O-RAN compliant radios, which allow operators and their customers to benefit from new levels of performance and reliability for delivering mission-critical tasks and localized private networks. It also provides enhanced insights and analytics about mobile usage.

Privately-held ASOCS serves carriers, tower companies, and enterprises in the retail, real estate, corporate offices, hospitality, hospitals and sports and entertainment markets, and has offices in Israel and the United States.



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