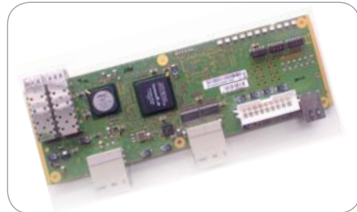


# OBSAI/CPRI Local Converter Card

Product Brief

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## Overview



*The OBSAI/CPRI Local Converter card is low-cost hardware platform designed for Wireless Base Station applications for WiMAX and GSM/SCDMA/LTE standards. It converts digital base band IQ and O&M channel data into high-speed OBSAI RP3-01 or CPRI standard formats enabling quick and reliable optical communications with Remote Radio Heads. The smallest form factor available in the industry also enables customization in the AMC/uTCA format.*

## Description

The OBSAI / CPRI Local Converter Card has been designed for Wireless BTS applications including WiMAX and GSM/WCDMA/LTE standards. It interfaces to digital base band DSP cards solution with relative O&M and synchronization channels into the OBSAI RP3-01 or CPRI complaint frame formats. The card has two (2) optical links with SFP (Small Form Pluggable) form factor up to 3.072 Gbps each supporting the latest OBSAI RP3-01 v.4.0 and CPRI v.4.0 standards, and it interfaces to base band DSP blocks via either parallel or low speed serial interface. The converter includes either

OBSAI RP3-01 or CPRI IP cores from Radiocomp including the related management software. The embedded Altera Nios II processing environment handles all the OAM&P (Operation, Administration, Maintenance and Provisioning) operations over Ethernet and UART/RS232. Platform operations and bootloader/firmware access is managed locally with the Radiocomp software package which is included in the product. The LC card can also be delivered as a reference design for advanced customization and integration in existing base station and test equipment cards.

## IP Technical description

### General Features

- Digital card for Base Station applications for WiMAX 802.16e-2005 and GSM/WCDMA/LTE standards
- Integrates high performance dual SERDES channels up to 3.072 Gbps
- Integrates Radiocomp's OBSAI RP3-01 and CPRI IP solutions and management software

### OBSAI RP3-01/CPRI IPs Key Features

- Support 768 / 1.536 / 3.072 Gbps rates for OBSAI RP3-01 v.4.0
- Support 614.4 / 1.288 / 2.456 / 3.072 Gbps rates for CPRI 4.0

### Embedded Processing Features

- Altera NiosII CPU  
RTOS with OBSAI RP1 TCP/IP or UDPCP support  
Support for customized SOAP/XML O&M Support
- Flash Memory  
Configurations and firmware storage
- Alarm Monitoring  
Local monitoring of internal alarms

### Synchronization

- The LC card has direct I/Os in LVDS format for High precision BTS Clock and Synchronization references

### Interfaces

- Optical Links  
Principal link to the RRH
- Redundant/Secondary link to RRH
- Digital Base Band IQ interface  
Low speed serial interfaces or parallel interface
- Ethernet  
Local and Remote OAM&P operations
- Local Access and Power  
Local unit configuration and monitoring via RS232 / JTAG
- External Power Supply with 5V and 3.3V

### Delivery Package

- LC HW platform or Reference Design
- User Manual and Quick Start Guide
- Radiocomp Software Package for OBSAI / CPRI configurations