

4G (LTE/WiMAX) Base Transceiver Station AMC



KEY FEATURES

- Single-width, full-height Advanced Mezzanine Card (AMC)
- OBSAI compliant architecture and interfaces (CPRI interfaces optional)
- Platform supports both LTE and WiMAX radio access standards
- Single sector Base Transceiver Station (BTS) in a single card
- Supports up to 10 MHz RF channel widths
- Supports 2 x 2 MIMO RF configurations
- Downstream bandwidth up to 100 Mbps, upstream 50 Mbps
- Two 1 GigE Transport connections
- Two RP3-01 connections to Remote Radio Heads (RRH)
- RRH changes to operate at a different frequency
- PHY layer software on dual picoChip PC203-10 signal processors
- MAC and Transport software on Wintegra WinPath3 processor
- Redundant and non-redundant configurations
- Low power

BENEFITS

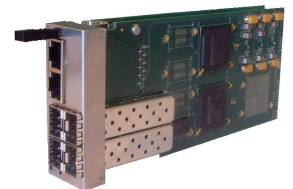
- Very compact card measuring 73.8(w) x 29.9(h) x 181.5(d) (mm)
- Easy integration with other AMC products
- Supports both 4G access standards as different software loads
- Simplifies integration of broadband wireless access
- Flexible allocation of spectrum to match a wide range of scenarios
- Increases capacity available to the remote user
- Enables multiple high bandwidth applications over wireless
- Supports multiple sector data
- RF heads can be up to 10 km from the base station
- Base station equipment remains independent of RF used
- Expandable and flexible software defined PHY layer processing
- Efficient design using one processor for single sector BTS in a single card
- Allows system to be configured for specific requirements
- Suitable for mobile base station

Product Description

The 4G Base Transceiver Station (BTS) card is a highly integrated single-width, full-height Advanced Mezzanine Card (AMC). The card provides a hardware platform designed to support software defined 4G BTS functionality and is specifically designed to support both LTE and WiMAX radio access network standards.

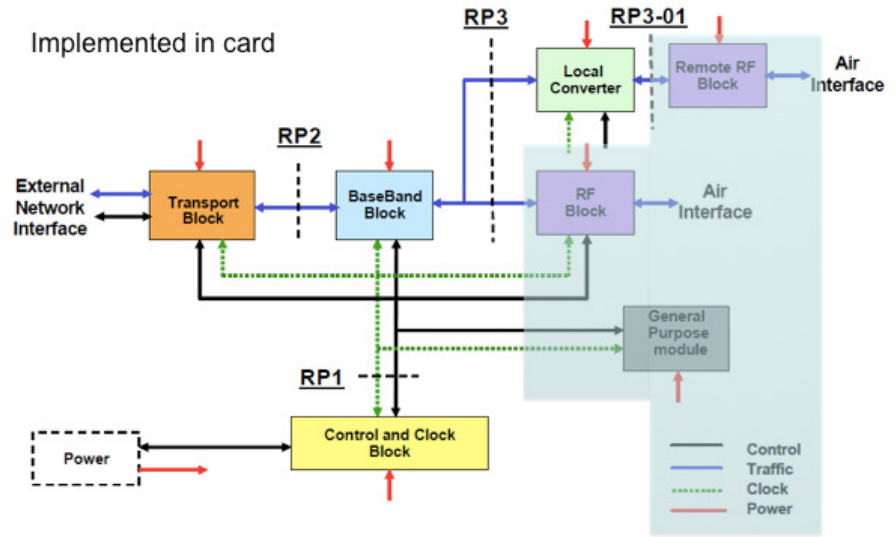
The card is compliant with Open Base Station Architecture Initiative (OBSAI) and supports two front panel 1 GigE Transport connections and two front panel RP3-01 connections to Remote Radio Heads (RRH).

A GPS receiver is integrated into the card to provide BTS synchronization enabling the creation of a complete single sector BTS based on this card alone. The card can be used in single or multiple sector non-redundant or redundant configurations of up to 8 sectors with N+1 sparing for the baseband functionality and 1+1 sparing for the Clock, Control and Transport functionalities.

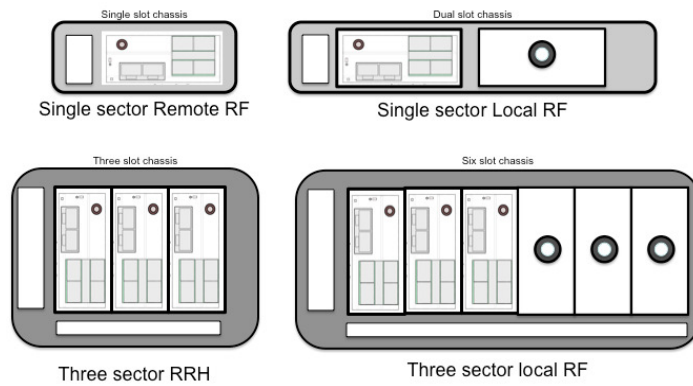


Configurations

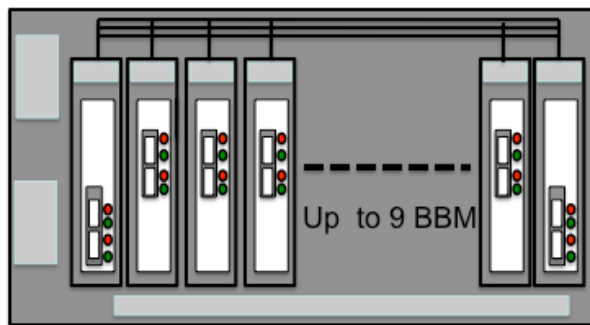
The 4G BTS card implements all the functionality of a complete single sector BTS and adheres to the OBSAI interface specifications.



The 4G BTS card can be used to create a range of non-redundant configurations.



In redundant configurations, a partially populated version of the card is used. This version omits the GPS clock functionality and the Transport connectivity which leaves the Band-Band Module (BBM) functionality only. This card is paired with a Transport, Clock and Control AMC to create redundant configurations providing N+1 sparing of the baseband cards and 1+1 sparing of the Clock, Control and Transport Cards.



www.AccipiterSystems.com
Advanced Information

Specifications

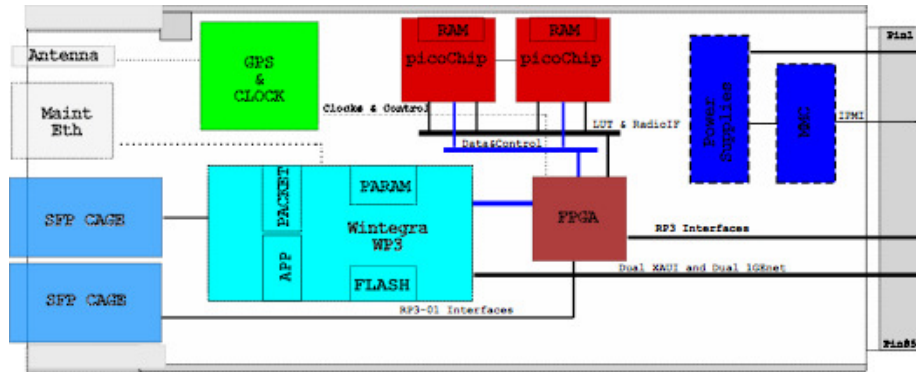
Mechanical	Form factor PICMG AMC.0 R2.0 73.8mm (w) x 29.9mm (h) x 181.5mm (d) (Single-width, full-height) Hot swap support
Main processor	Wintegra WP3
-Cores	2 MIPS 34K cores 650 MHz
-Packet engines	6 or 12 450 MHz
-Memory	
Packet	512 MByte DDR3 RAM
Parameter	128 MByte DDR3 RAM
Application	512 MByte DDR3 RAM
Flash	256 MByte NAND FLASH
-I/O	
Data & Control	PCIe 1x to FPGA
Transport	2 x GigE to SFP on front panel
Management	1 x Fast Ethernet to RJ45 on front panel
Backplane	2 x 1000Base-BX (AMC.2 compliant) to AMC ports 0 and 1
PHY layer processing	2 x XAUI 10 GE to AMC ports 4-7 and 8 -11
-Memory	2 x picoChip PC203-10
-I/O	128Mbyte per picoChip PC203-10
Processor I/F	Proc I/F to FPGA
FPGA	IPI interface between PC203-10's
-Functions	2 x ADI interface per PC203-10 to FPGA Altera EP2AGX95 thru EP2AGX260 ...as build option
GPS clock	Proc I/F to PCIe interface including DMA
IPMI	ADI to RP3 and 3.072 Gbps RP3-01
Front Panel	LUT assist for picoChip PC203-10's
Backplane Interface	Integrated GPS receiver for Stratum 2 level synchronization
Environmental and Safety	Integrated MMC based on PigeonPoint software
-Operating temperature	2 x SFP for RP3-01 connections
-Power consumption	2 x SFP for 1 GE Transport Connections
	1 RJ45 WP3 Management Interface
	1 GPS aerial connection
	AMC LEDs
	Port 0 & 1 1000BaseBX
	Ports 4 – 7 & 8 – 11 XAUI
	Dual Intelligent IPMI bus system and reference clock interfaces
	0 °C – 45 °C
	35 W max

Standards Compliance

- IEEE
- OBSAI
- PIGMG

802.3
RP3, RP3-01
IPMI 2.0, PICMG 3.1, MicroTCA,0 AMC
OAMC 2.0

A high-level block diagram of the 4G BTS AMC is illustrated below.



Ordering
Information

Contact Accipiter Systems.

All other trademarks are the properties of their respective owners. All specifications within this document are subject to change without notice.



Accipiter Systems
412 Fox Meadow Drive
Wexford, PA 15090
Main Phone: +1 724 933 8895
Fax: +1 724.933.8838

www.AccipiterSystems.com

Information:
info@accipitersystems.com

Advanced Information