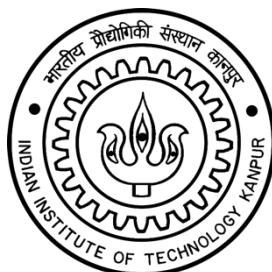
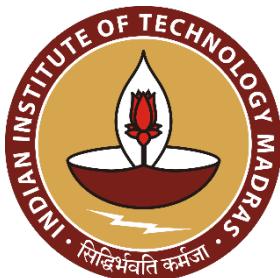


# 5G BASEBAND UNIT

An initiative for indigenisation of Telecom Infrastructure



## 3GPP 5G NR

Meets the baseband processing requirements of 3GPP 5G NR  
Quad core Arm Cortex-A53 processor  
Dual-core Arm Cortex-R5 real-time processor

## CRAN

Supports Cloud RAN architecture  
Enables massive centralization of processing resources

## PCIe

PCIe form factor  
PCIe 3.0 interface  
QSFP+ interface

## BBU

Baseband Unit, with a server, can process L1, L2, & L3 layers  
FPGA fabric for L1 processing



Contact us:  
Dr. Rohit Budhiraja  
ACES 201, IIT Kanpur,  
Kanpur, 208016  
[rohitbr@iitk.ac.in](mailto:rohitbr@iitk.ac.in)

# 5G BASEBAND UNIT

*An initiative for indigenisation of Telecom Infrastructure*

## Specifications

### General

- PCIe 3.0 PCIe 3.0 x16 compliant
- Standard height, Full length

### Technical

- FPGA fabric: 425K LUTs
- Processing System :Quad ARM Cortex-A53, Dual ARM Cortex-R5
- Memory : 8 GB DDR4-2666 DIMM
- FEC: Polar and LDPC
- Boot modes: SD card and QSPI Flash
- High speed interfaces
- Operating Voltage: 12V DC
- Health monitoring: Voltage, current & temperature
- Cooling: Both active and passive

### Interfaces and Peripherals

- Fronthaul : eCPRI
- Backhaul: QSFP+
- 100G ethernet, 10 G Ethernet
- Interlaken
- PCIe 3.0 x16
- UART, JTAG



Contact us:  
Dr. Rohit Budhiraja,  
ACES 201, IIT Kanpur,  
Kanpur, 208016  
[rohitbr@iitk.ac.in](mailto:rohitbr@iitk.ac.in)