Features

• DINAR1_K7_FMC-HPC is an active transposer card that bridges, using an FPGA, the signals between a DINAR1 expansion connector and a high pin count FMC (VITA 57.1) card:
  - A/Ds, DACs
  - Serial connectivity
  - Image Processing
  - Interface peripherals/debug
  - And others.
• Compatible with all DINAR1 positions on the DNV7F4A, DNV7F2A, DNV7F1A
  - Non hosted, stand-alone operation supported with external power supply.
• Active FPGA Interface: Xilinx Kintex-7 FPGA (FBG900):
  - 7K410T-3,-2,-2L (fastest to slowest)
  - 7K325T-3,-2,-2L
  - 3M ASIC gates (ASIC measure) when stuffed with Kintex-7 7K410T
    • 254k flip-flop/6-input LUTs (708k total FFs)
    • 3,578 Kbytes total FPGA block memory (1590, 18 kbit blocks)
    • 1540, 25x18 multipliers
• Dual SEARAY GTP Expansion headers, 6-lanes with option for 8-lanes
  - Cable option for connection the SEARAY GTP Expansion headers on host board.
  - PCIe, CX4, 8 SFP+ sockets or custom
• 8 DIP switches
• 8 bi-color LEDs (green/red)
• FMC reference design interfaces, in Verilog, included.

Description

The DINAR1_K7_FMC-HPC is an active transposer card that hosts a high pin count FPGA Mezzanine Card (FMC) on a DINAR1 expansion connector. This card is intended to bridge HPC FMC cards to a DINAR1 connector. The DINAR1_K7_FMC-HPC can be used on the following DINI Group Xilinx Virtex-7 products: DNV7F4A, DNV7F2A and DNV7F1A.

As far as compatibility, FMC is a troublesome standard, so we will need to look at the FMC card you intend to use on a case by case basis. Contact us at the factory for help.
### DINAR1_K7_FMC-HPC DINAR1 to FMC HPC Active Transposer with Kintex-7 FPGA

**Block Diagram**

![Diagram](image)

- **Kintex-7 FPGA Speed Grades (slowest to fastest):** `-1,-2,-3`
- **LUT Size:** `6-input`
- **FF's:** `508,400`
- **Gate Estimate:**
  - Max (100% util) (1000's): `4,881`
  - Practical (60% util) (1000's): `2,930`
- **Max I/O's:** `500`
- **Multipliers (25x18):** `1,590`
- **Memory Blocks:** `28,620`
- **Total:** `3,578`
- **Total (kbytes):** `2,003`

### Specifications

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<tr>
<th>Kintex-7 FPGA</th>
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