Interworking Controller Next Generation

The IWORX-P, a further member of Infineon's interworking family, is a flexible communication network controller. It functions as an interworking element enabling the transport of the ATM traffic over PDH based networks. It is found in 3 G mobile infrastructure as well as in WAN Routers or multiservice applications. The IWORX-P supports all features of Infineon's established IWE-8 but integrates IMA, Microcontroller (e.g. for OAM functionality) and RAM additionally. It is supporting the adaptation of voice and video traffic via AAL 1 in line card applications with speeds of up to 16 Mbit/s. Shared location of 2 G and 3 G mobile networks for easy network migration path is enabled via AAL1 and CES. Being a system on a chip with integrated memory and controlled via high-level command interface (API), the IWORX-P is the optimized solution in terms of ease of use, space & power economy.



IWORX-P

Applications

- 3 G base transceiver stations (Node B) and radio network controller (RNC)
- Multiservice Linecards
- Multimedia Gateways
- DSLAM/DLC Uplink Cards
- WAN Routers

Features

ATM Adaptation Layer Functions

- AAL1 mode (ITU-T I.363-1)
  - Channelized and unchannelized Circuit Emulation Service (CES) (ATMF AF-VTOA 0078.000)
  - Support of Channel Associated Signaling (CAS)
  - Support of up to 256 AAL1 ATM connections
  - Built in SRTS and ACM clock recovery methods

ATM Layer Functions

- ATM OAM Fault Management according to ITU-T I.610 (99)
  - Alarm Indication Signal (AIS)
  - Remote Defect Indication (RDI)
  - Continuity Check (CC)
- Address Reduction & Header Translation

Transmission Convergence Sublayer Functions

- ATM TC sublayer (ITU-T G.804)
- ATM cell mapping on fractional E1/T1/J1 (AF-PHY-0130.00)
- IMA (ATMF AF-PHY 0086.000/ AF-PHY 0086.001)
- 4 IMA groups for up to 8 links
- 25 ms differential link delay com-pensation for IMA on chip

General Features

- Up to 16 Mbit/s datarate throughput
- Easy device configuration via Message Based Interface
- On chip memory and CPU for device configuration and operation
- System recovery support via read-back of configuration and connection data
- Power consumtion less than 2 W
- Power supply 3.3 V I/Os, 1.8 V core
- Temperature range -40°C to +85°C
- Package P-BGA-388

www.infineon.com/iworx

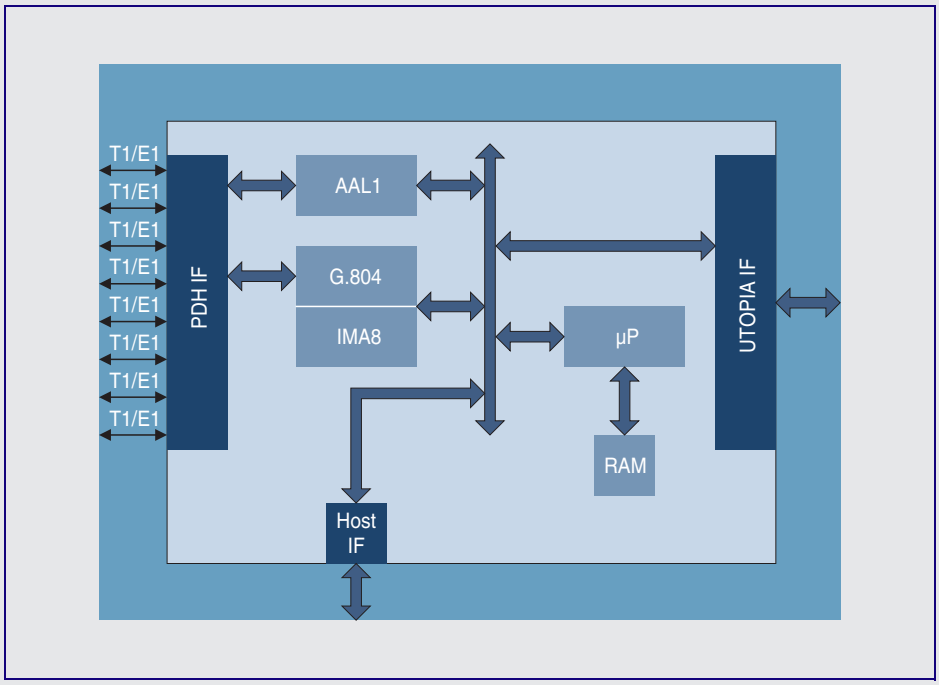
IWORX-P

ATM Interworking Controller
PXF 4222

Infineon technologies

Never stop thinking.

IWORX-P PXF 4222 Block Diagram



Product	Sales Code	Package
IWORX-P	PXF 4222 E	P-BGA-388

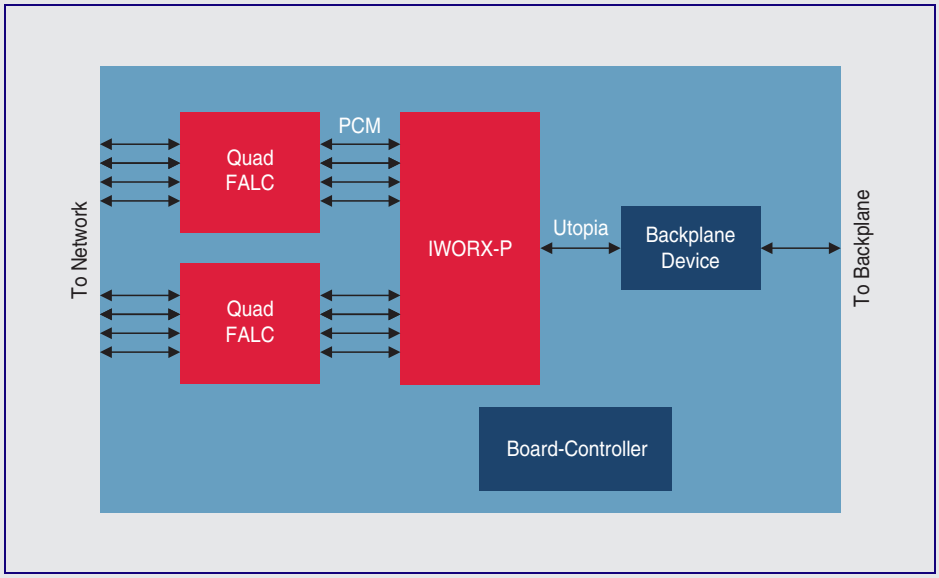
Interfaces

- 8 E1/T1/J1 interfaces with direct connection to external framers, e.g. QuadFALC®
- Utopia interface (ATMF AFPHY 0017.000, 0039.000), level 1 and 2 (Multi PHY Mode)
- 16/32-bit Microprocessor Interface (Intel or Motorola type)

Documentation and Support

- User's Manuals
  - Functional Description
  - Programmer´s Reference
- EASY 4222-R1 customer evaluation board
- Interworking Application wizard:
  - Configuration tool
  - Message Sequence Generator
- Low Level Driver

8 x E1/T1/J1 ATM-Linecard Application Example



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