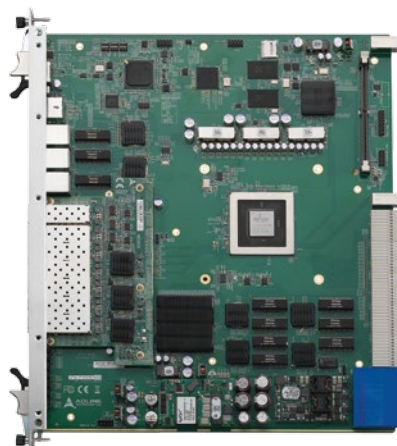# aTCA-3710

40 Gigabit Ethernet AdvancedTCA® Fabric Interface Switch Blade

Features

- 640/ 320G Bandwidth Fabric Interface Switch for 14/6-slot 40GbE Chassis
- Broadcom BCM56334 24-port GbE Base Interface Switch with 2-port 10GbE
- Freescale QorIQ P2041(Quad Core) @ 1.2GHz Control Plane Processor
- 14-port 10-Gigabit Ethernet SFP+ uplink port, Front Panel
- ADLINK Switch Manager with L2/L3 full functions

AdvancedTCA®

Specifications

Control Plane

CPU	Freescale QorIQ P2041(quad-core) @ 1.2GHz
Memory	4GB, DDR3 SDRAM on VLP mini-DIMM sockets
Flash	Boot image: 2x 1MB (SROM, redundant)
	Optional: 1x 2GB (Micro-SD Card, SROM redundant)
	OS storage: 2x 8GB (Micro SSD card, redundant)
Management	Serial console port to Control Plane or IPMC, front panel RJ-45
	10/100/1000BASE-T, front panel RJ-45
	USB 2.0, front panel

Data Plane

Fabric Switch	Broadcom BCM56846 640Gbps bandwidth multilayer switch
	Optional: pin-to-pin compatible BCM56842 320Gbps bandwidth multilayer switch
Base Switch	Broadcom BCM56334 24-port Gigabit Ethernet switch with 4-port 10GbE HiGig2 (iPss)

Fabric Interface

Channels	aTCA-3710/640G: 13x 40GbE Fabric Interface channels, for 14-slot system
	aTCA-3710/320G: 5x 40GbE Fabric Interface channels, for 6-slot system
Egress	12x 10GbE SFP+, front panel
	Optional: one 10GbE port to base switch (BCM56334) by IC switch
Inter-Switch	40GbE inter-switch link

Base Interface

Channels	13x 10/100/1000BASE-T Base Interface channels, for 14-slot system
Egress	12x 10GbE SFP+, front panel
	One 10GbE port to Base Switch (BCM56334) by IC switch
ShMC Port	2x 10/100BASE-TX ShMC ports compliant to PICMG® 3.0 R2.0 ECN002
Inter-Switch	10/100/1000BASE-T inter-switch link

IPMC

Chipset	Smart Fusion A2F500 MCU with Pigeon Point Systems firmware
IPMI	Dual redundant IPMB, IPMI v2.0-SOL support

Software support

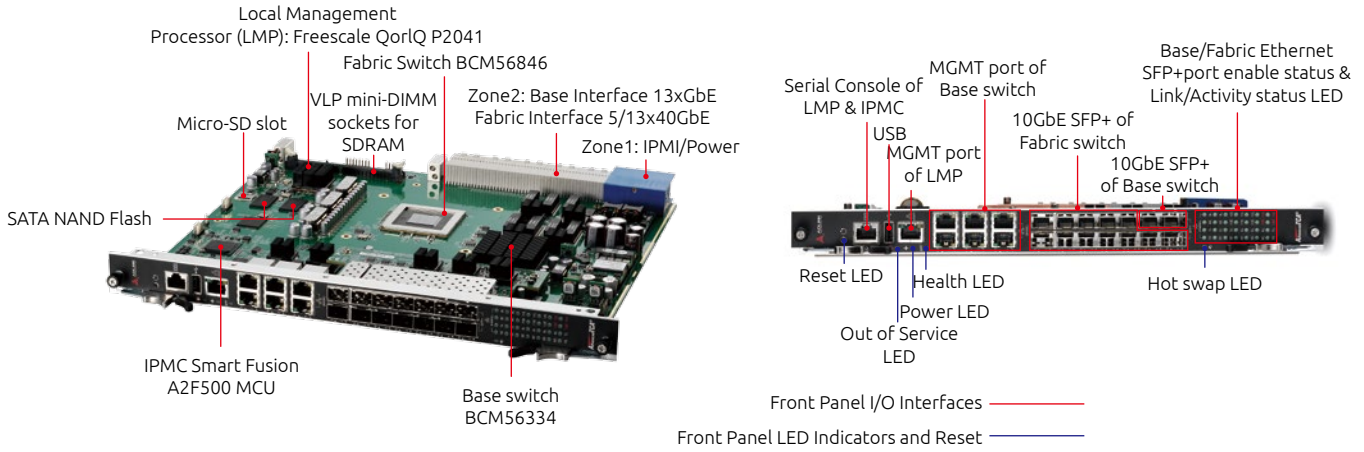|	
Operating system	Broadcom SDK running under Open Linux 3.0
Blade/Shelf Management	CLI, Telnet, SNMP Agent, IPMI, Management API
ADLINK Switch Manager	Layer 2/3 Fast Forwarding, Port Mirror, VLAN, Trunk, STP, ACL, Link Aggregation, Pipe, static routing, OSPFv2, RIP v1 & v2

Mechanical and Environmental

Form Factor	PICMG® 3.0 R3.0
	PICMG® 3.1 R2.0 option 3/9/9-KR/3-KR
Dimensions	322.25mm x 280mm x 6HP (L x W x H)
Weight	2.77 kg.
Operating Temp.	0˚C to +55˚C
Storage Temp.	-40˚C to +70˚C
Humidity	5 to 95%, non-condensing
Shock	20G peak-to-peak, 11ms duration, non-operating
Vibration	Operating: 0.5Grms, 5-500Hz each axis Non-Operating: 1.88Grms, 5-500Hz each axis
Power Consumption	120W
Certifications	FCC, CE, UL, NEBS Level 3 (Design)

Ordering Information

Model Number	Description/Configuration
aTCA-3710/640G	640G Bandwidth Fabric Switch, for 14-slot system
aTCA-3710/320G	320G Bandwidth Fabric Switch, for 6-slot system
ADSN	ADLINK Software for Network. Including functions of Port Configuration, customized Port Mirror, VLAN Setting, Trunk group, ACL, static Route, Management API

Mechanical Layout

Local Management
Processor (LMP): Freescale QorIQ P2041

Fabric Switch BCM56846

VLP mini-DIMM
sockets for
SDRAM

Zone2: Base Interface 13xGbE
Fabric Interface 5/13x40GbE

Zone1: IPMI/Power

Micro-SD slot

SATA NAND Flash

IPMC Smart Fusion
A2F500 MCU

Base switch
BCM56334

Serial Console of
LMP & IPMC

MGMT port of
Base switch

Base/Fabric Ethernet
SFP+port enable status &
Link/Activity status LED

USB
MGMT port
of LMP

10GbE SFP+ of
Fabric switch

10GbE SFP+
of Base switch

Reset LED

Health LED

Hot swap LED

Power LED

Out of Service
LED

Front Panel I/O Interfaces

Front Panel LED Indicators and Reset

Functional Diagram

LED

SFP+ #1

⋮

SFP+ #11

10GbE x11

SFP+ #12

MUX

**Fabric Switch
(BCM56842/56846)
8/24 x40GbE**

40GbE x13

Fabric Interface

SFP+ #1

10GbE x1

SFP+ #2

10GbE x1

**Base Switch
(BCM56334)
24 x1GbE**

10/100M

ShMC1

10/100M

ShMC2

RJ-45 #1

⋮

RJ-45 #6

1GbE x6

1GbE x13

Base Interface

4GB, DDR3 SDRAM

2*2GB, Chip SSD

2*1MB, Boot Flash

1GbE x1

PCI-E x2

1GbE x1

PCI-E x1

USB

USB 2.0

RJ-45

1GbE x1

LMP

UART (pay load)

IPMC

IPMB-A

IPMB-B

ZONE1

MUX

UART (SOL)

RJ-45

RS-232

DIP SW

UART (debug)