

# uCPE Update



NETWORKS

Current and Future Designs

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# Accton and Edgecore

- Leading Network ODM
  - > 3,300 employees worldwide, > 700 network engineers
  - High volume manufacturing facilities in China and Taiwan
- 
- Go-to-market subsidiary of Accton
  - Full portfolio of traditional and open network products
  - Leading contributor of network designs to OCP

The Accton logo consists of the word "Accton" in a bold, blue, sans-serif font.The Edge-core NETWORKS logo features the words "Edge-core" in a stylized font where each letter is contained within a black square. The first 'E' and the final 'E' are red, while the other letters are white. Below this, the word "NETWORKS" is written in a smaller, black, sans-serif font.This is a smaller version of the Edge-core NETWORKS logo, identical in design to the one on the right side of the slide.

# Most Network Design Contributions to OCP



## OCP-ACCEPTED™ DC and Telecom Products

- 1G Rack Mngmt Switch      Helix4
- 10G TOR Switch              Trident II
- 40G Spine Switch    Trident II
- 100G TOR & Spine Switch    Tomahawk
- 100G TOR & Spine Switch    XPliant
- 10G/100G Edge Switch      Qumran
- Open Rack Switch Adapter

## Design Contributions Pending IC approval

- 100G OMP800 Chassis      Tomahawk
- 100G OMP1600 Chassis      Tomahawk
- 25G TOR Switch              Tomahawk
- 64 x 100G Spine Switch      Tomahawk II

## Partner Designs, Edgecore Product

- Wedge40-16X              Facebook
- Wedge100-32X              Facebook
- Wedge100BF-32X          Barefoot
- Wedge100BF-65X          Barefoot

## OCP-ACCEPTED™ Access Products

- 1G PoE Switch              Helix4
- 802.11ac Wave1 Wi-Fi APs    BCM
- 802.11ac Wave2 Wi-Fi APs    QCA

## AT&T Spec, Edgecore Product Specification and design

- ASXvOLT16 10G OLT BCM Qumran & Maple

# Open Networking Software Partners

## Enterprise



## Packet Broker



## Data Center Fabric



## Service Provider



## Commercial

## Open Source



Open Network Linux

FlexSwitch

SONiC



# Current uCPE Offerings

# SAF51011I / SAF51001I: uCPE with WiFi



- Compute and Storage
  - Intel Atom C3000 (Denverton-NS)
    - SAF51001I: Atom C3538 (4C, 21.0GHz)
      - 32GB DDR4 SODIMM
      - 1x M.2 SATA SSD
      - 2x 2.5" HDD/SSD
    - SAF51011I: Atom C3758 (8C, 2.2GHz)
  - Intel QuickAssist; TPM; BMC
- Network
  - 1x 1G Combo for WAN
  - 1x 1G RJ45 for DMZ
  - 8 x 1G RJ45 for Switch LAN, with 4x POE (SAF51011I only)
  - Optional WiFi 802.11ac 2x2
- Form Factor
  - SAF51001I: Desktop; Internal PSU AC
  - SAF51011I : 1 RU; 1+1 Redundant Open PSU AC
- FIPS 140-2 Level 2 compliant

SAF51001I (Desktop)

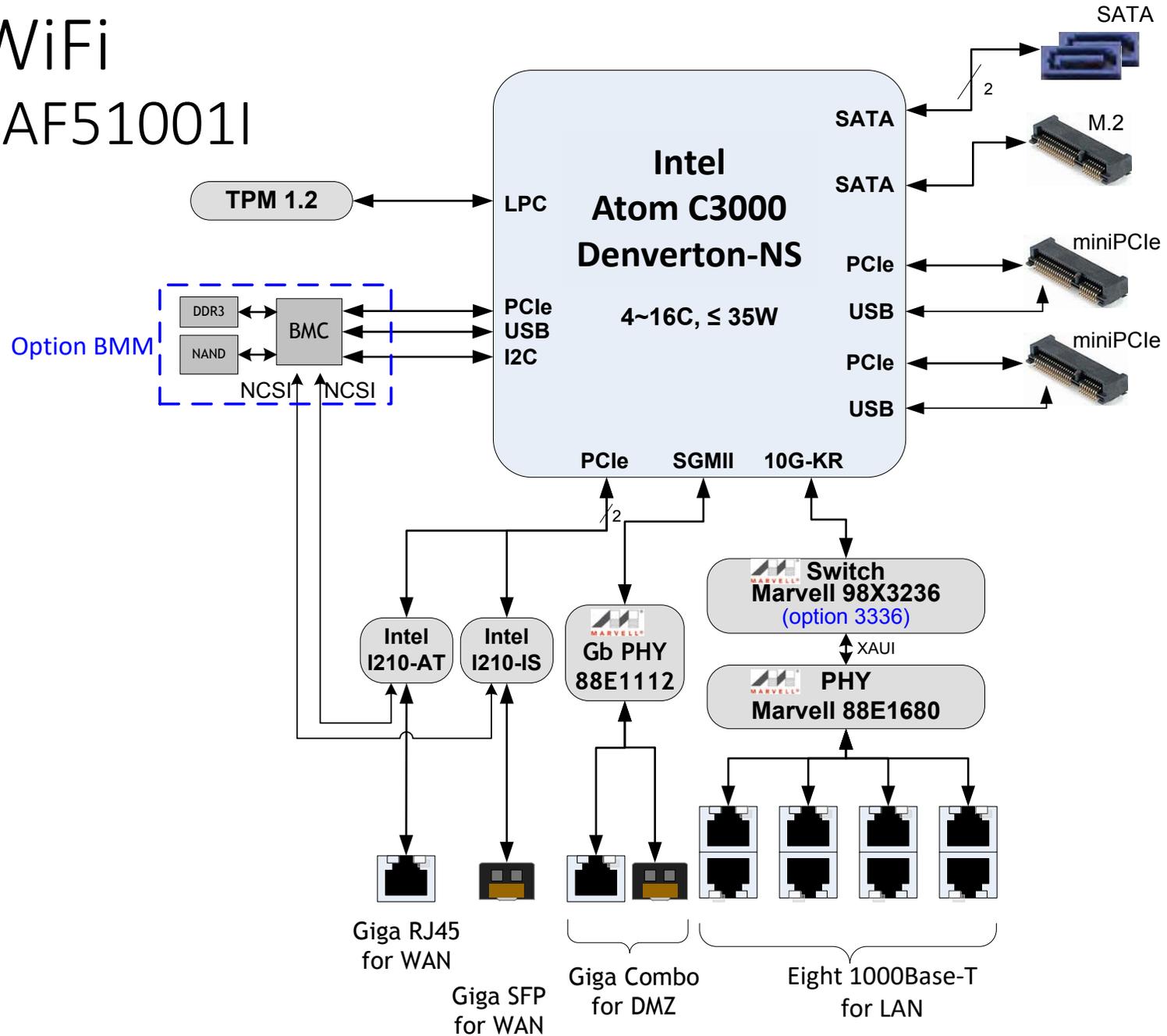


SAF51011I (1RU)



# uCPE with WiFi

## SAF51011I / SAF51001I



# SAF4101I / SAF4100I: uCPE Desktop & Rack

- Compute and Storage

- Intel Xeon D-1500 (Broadwell-DE)

- SAF4100I: Xeon D-1508 (2C/4T, 2.2GHz)
    - SAF4101I: Xeon D-1517 (4C/8T, 1.6GHz)
    - TPM; BMC

- 2x DDR4 SODIMM, max 32GB
  - 1x M.2 SATA SSD
  - 2x 2.5” HDD/SSD; default 1x 1TB



- Ethernet

- 1x 1G Combo for WAN
  - 1x 10G SFP+ for WAN/DMZ
  - 8 x 1G RJ45 for Switch LAN, with 4x POE (SAF4101 only)

- Form Factor

- SAF4100I: Desktop; Internal PSU AC
  - SAF4101I: 1 RU; 1+1 Redundant PSU AC

- FIPS 140-2 Level 2 compliant

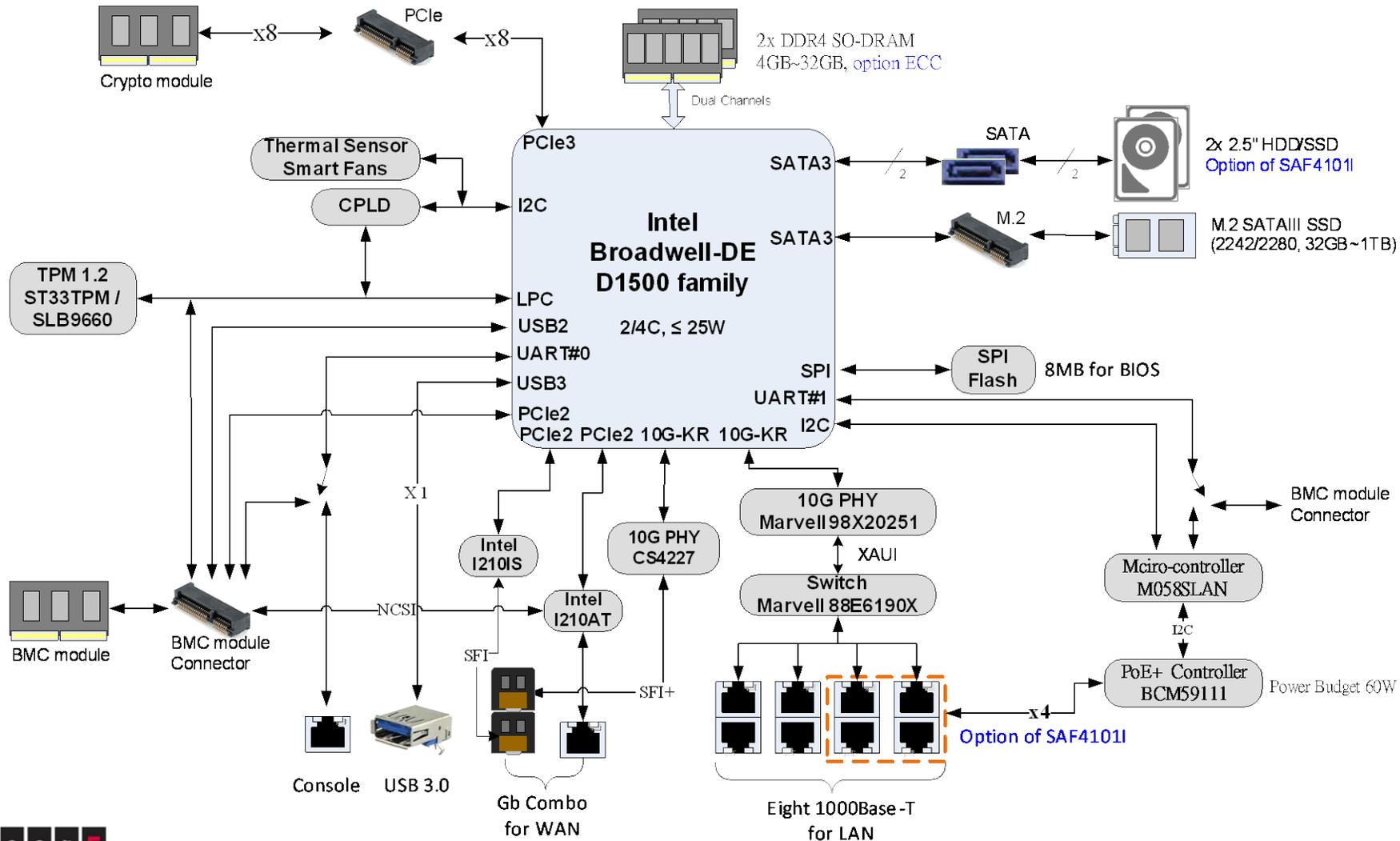
SAF4100I (Desktop)



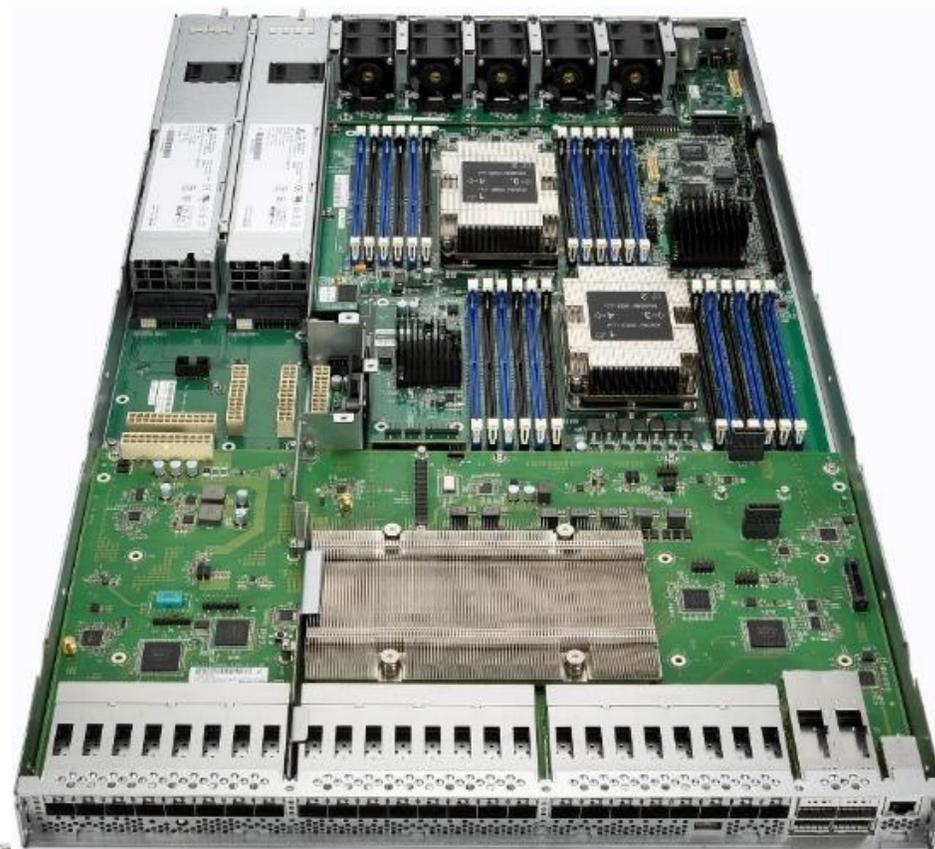
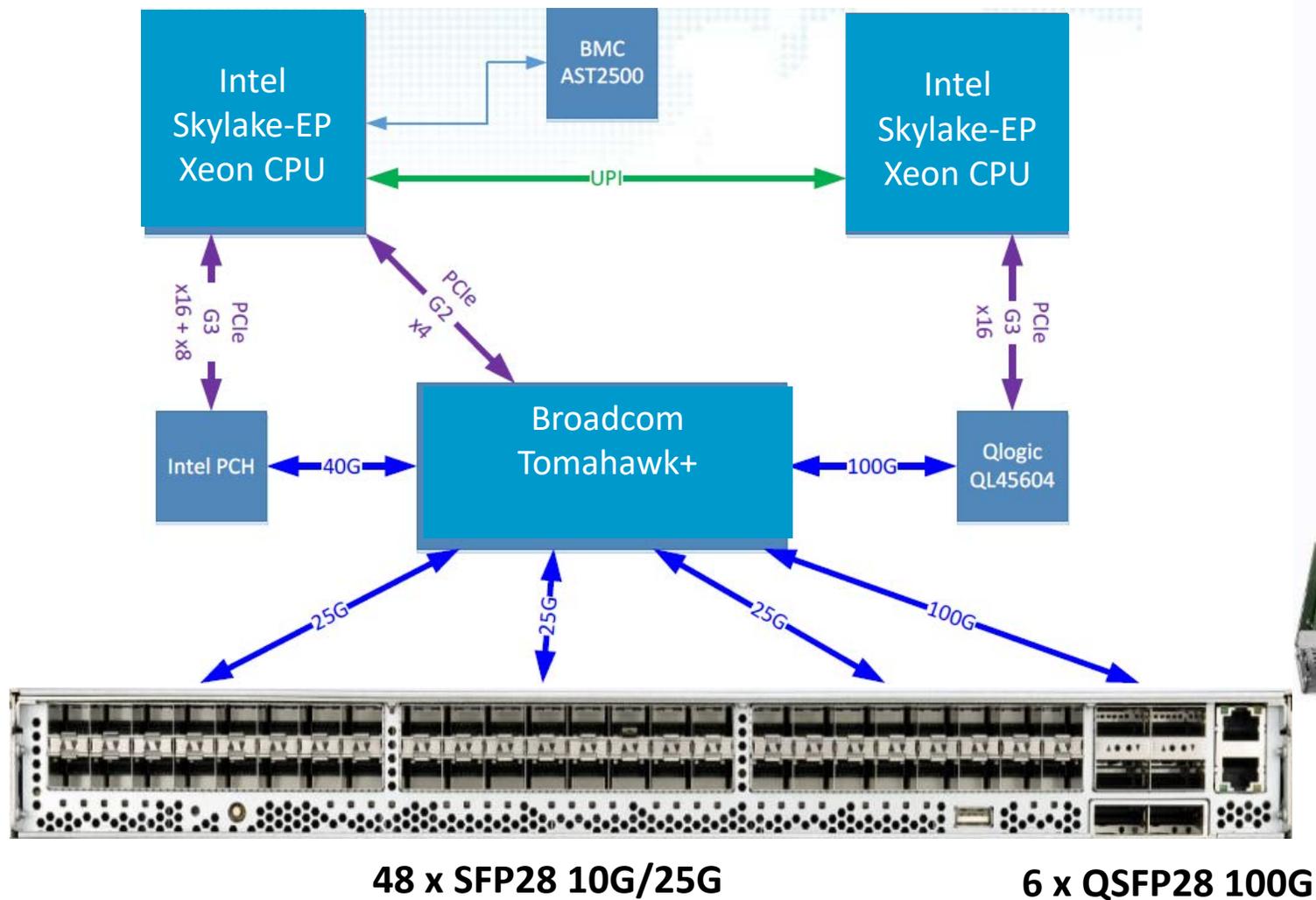
SAF4101I (1RU)



# SAF4101I / SAF4100I Block Diagram



# CSP-9250: Tomahawk+ Switch Server

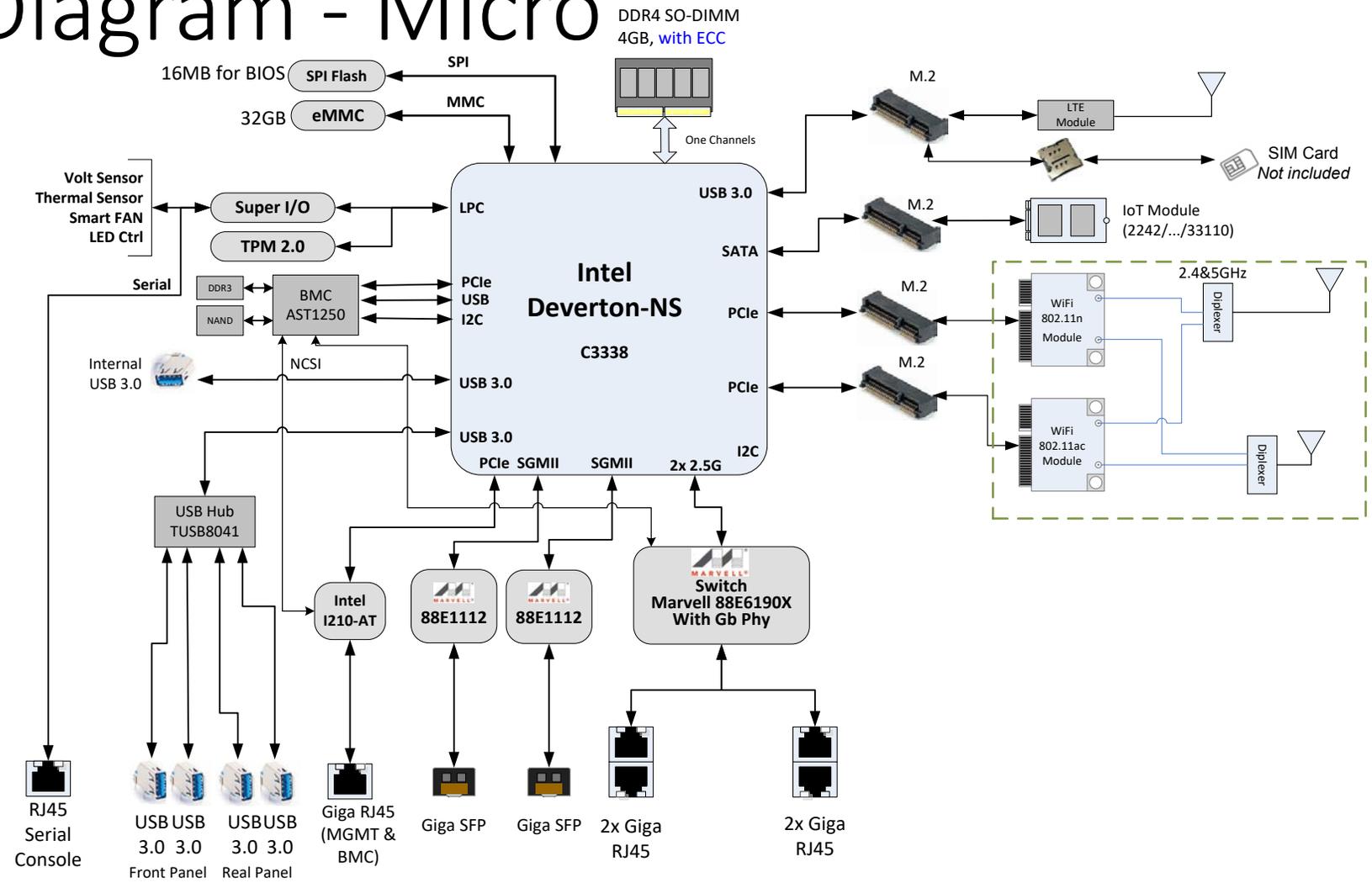


# OCP uCPE Progress

# OCP uCPE Devices

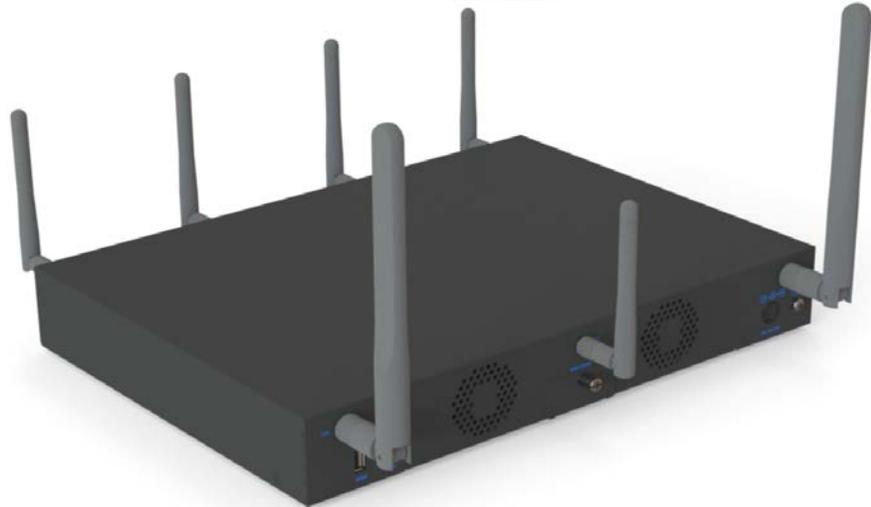
	Micro	Extra Small	Small	Medium	Large
CPU	2C Atom	4C Atom	4C Xeon-D	8C Xeon-D	16C Xeon-D
Memory	4GB	8GB	16GB	32GB	64GB
Storage	32GB SSD	16GB SSD 64GB SSD	32GB SSD 200GB SSD	64GB SSD 400GB SSD	100GB SSD 2x 3TB HDD
Switch Chip	None	Marvell	Broadcom	Broadcom	Broadcom
Internal Switch Ports	None	1x 2.5GE	4x 1GE	2x 10GE 2x 1GE	2x 10GE 2x 1GE
External Switch Ports	None	6x 1GE RJ45 2x SFP	10x 1GE RJ45 4x SFP	10x 1GE RJ45, 2x SFP+ 2x SFP	18x 2.5GE RJ45 8x SFP+
PoE Ports	None	2x 802.1at	4x 802.1at	4x 802.1at	16x 802.1at
Host External NIC's	4x 1GE RJ45 2x SFP	None	None	None	None
Host Mgmt Port	1x 1GE RJ45	1x 1GE RJ45	1x 1GE RJ45	1x 1GE RJ45	1x 1GE RJ45
USB Ports	5x USB 3.0	5x USB 3.0	5x USB 3.0	5x USB 3.0	5x USB 3.0
Serial Console	Yes	Yes	Yes	Yes	Yes
LTE	Optional Module	Optional Module	Optional Module	Optional Module	Optional Module
Wifi	Optional Module	Optional Module	Optional Module	Optional Module	Optional Module
M2 Expansion	Yes	Yes	Yes	Yes	Yes
BMC	Optional	Yes	Yes	Yes	Yes
TPM	Yes	Yes	Yes	Yes	Yes
Power Supply	Single, w/Dying Gasp	Single, w/Dying Gasp	Dual, w/Dying Gasp	Dual, w/Dying Gasp	Dual, w/Dying Gasp

# Block Diagram - Micro

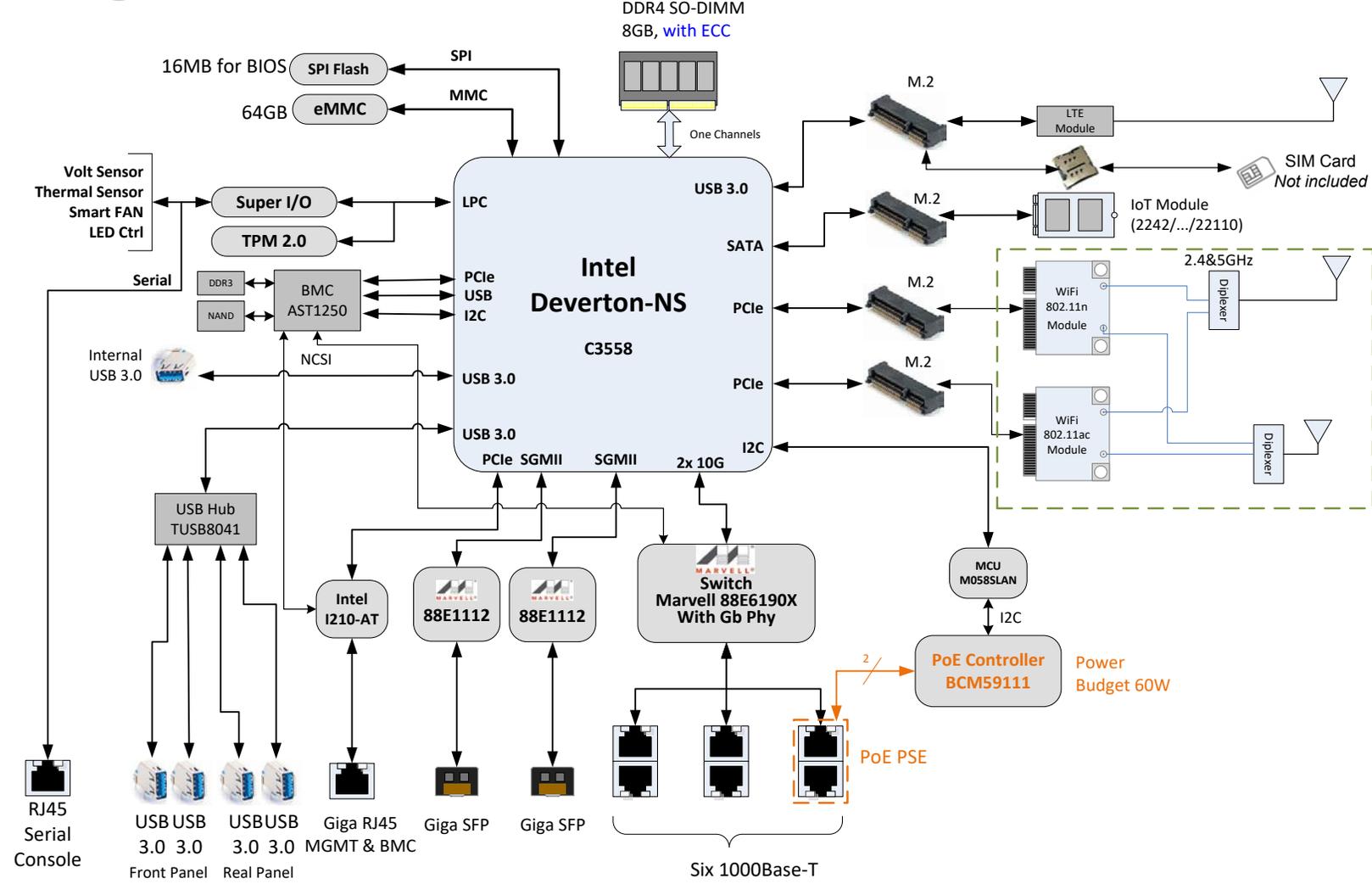


The same PCB for both Micro and Extra Small

# Micro uCPE Concept



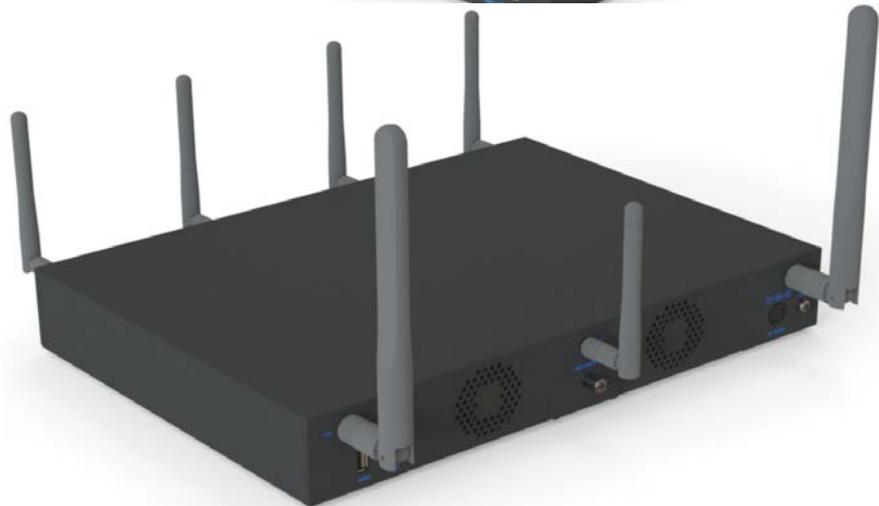
# Block Diagram - Extra Small



# Extra Small uCPE Concept

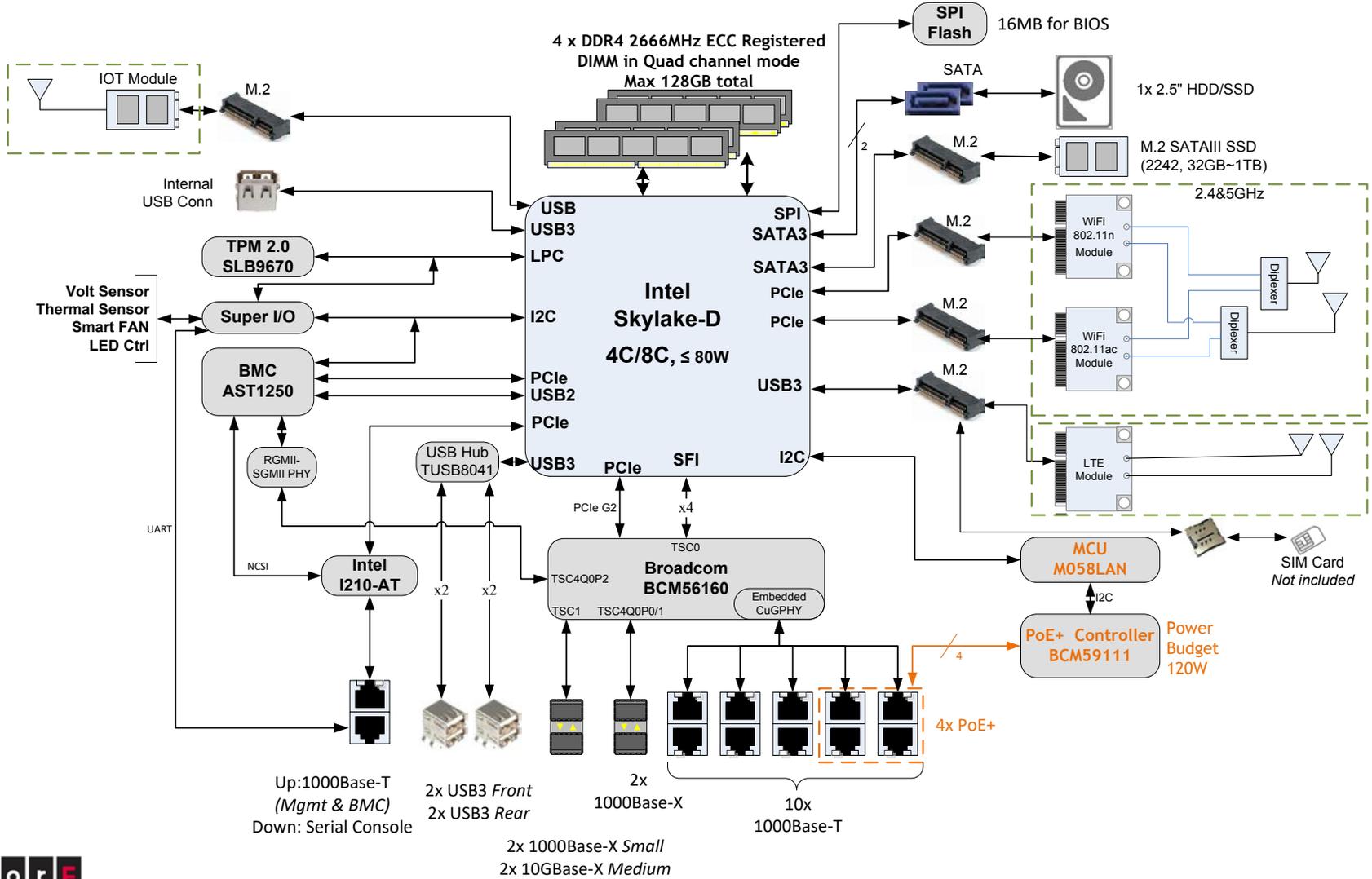


(Front View)



(Rear View)

# Block Diagram - Small / Medium



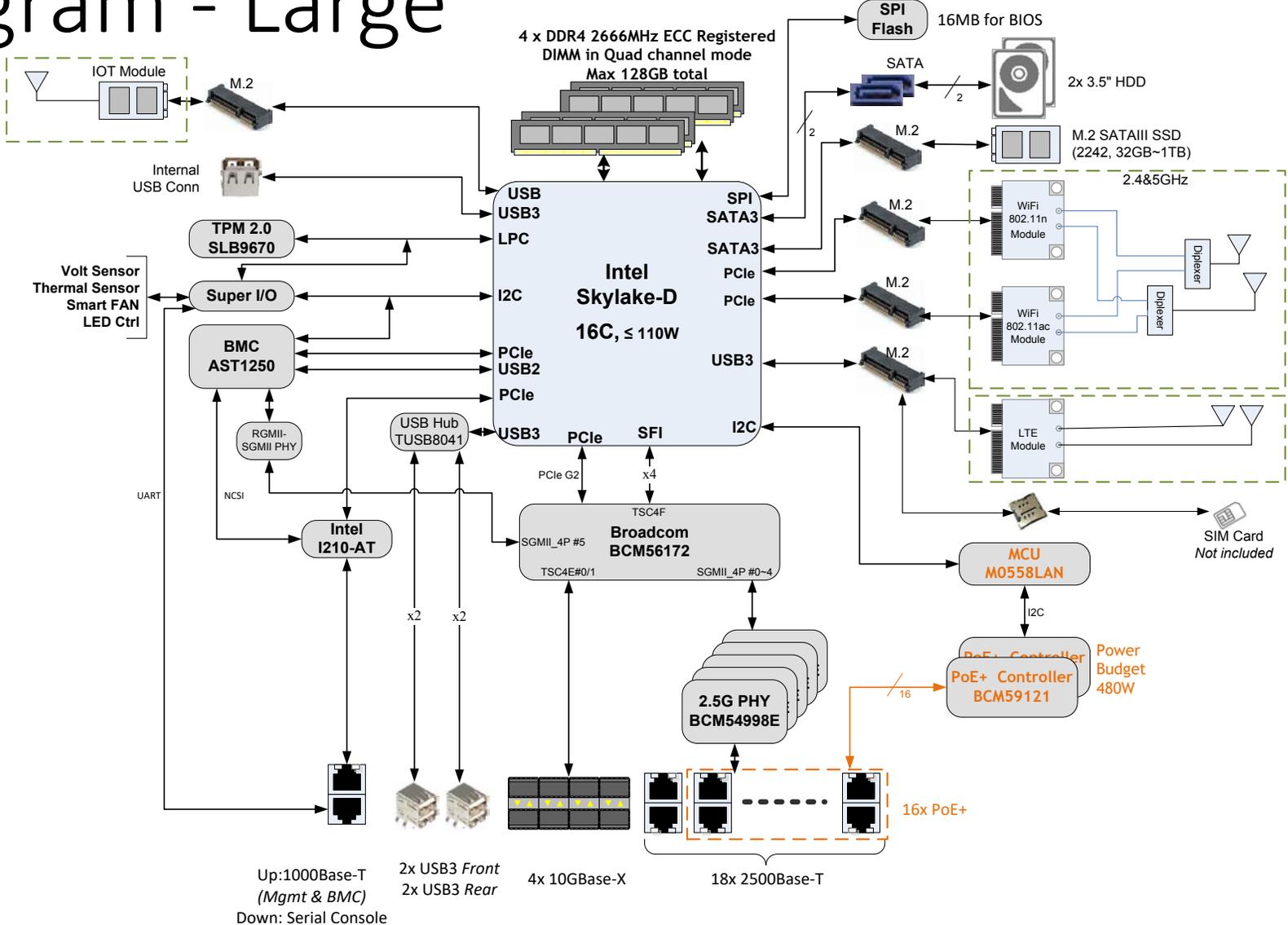
# Small / Medium uCPE Concept



(Front View)



# Block Diagram - Large



# Large uCPE Concept



(Front View)



(Rear View)

Thank You