

**BusPON C-series** is the first deployed WDM PON system. With the patent BusPON technology and L3 high capacity switching chipsets, the second generation BusPON C-series is high performance and compact solution for both Metro and Access Networks. BusPON C-series system comprises Optical Central Units (OCU), Optical Network Units (ONU) and Optical Taps/WDM.

**Features:**

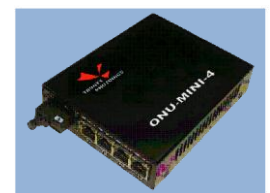
- Bus or Tree topologies
- up to 16 optical nodes (single fiber)
- from 1 Gbps to 160 Gbps (duplex bandwidth per optical node)
- 50 km range (standard)
- no intermediate switches/repeaters required
- concurrent Multi- Service Network (IP based, RoF, HD-SDI etc.)
- compatible with copper network (Telephone, Cat5/6 and Coaxial)
- Centralized network management/bandwidth control
- In service scalability and upgradeability
- Intelligent self-healing/resilience by IBFC (Optional)

**Application:**

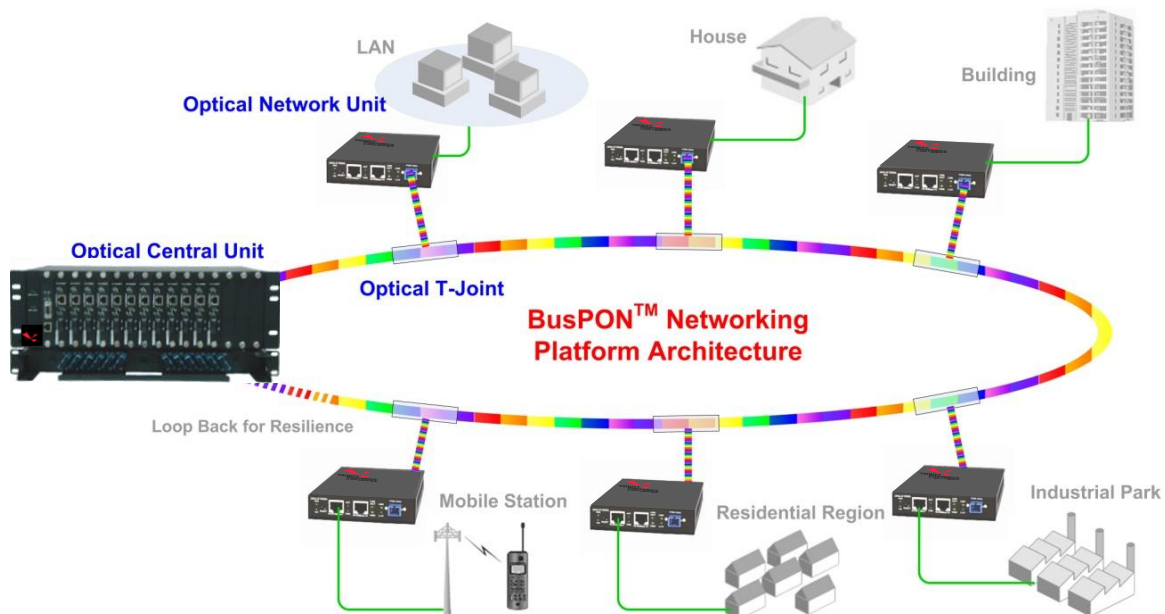
- Wireless backhaul (4G/WiMAX)
- Fiber-to-the-Home / Fiber-to-the Building
- Multi-service access networks
- P2P/xDSL/CATV/EPON/GPON/XGPON upgrade
- Railway networks
- Real-time HD/3D video networks (broadcast and display)
- Cloud application with massive wireless access
- High performance data centers



BusPON C-series Optical Central Unit



BusPON C-series Optical Network Units



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BusPON can be incorporated with IBFC (Intelligent Bi-directional Flow Control) module – a self-healing system which can realize single fiber resilience without in-line active devices. Please contact our technical team for more details: [tech@tphoton.com](mailto:tech@tphoton.com)

## 1. BusPON C-series Optical Central Unit (OCU)



### Network Standards:

- IEEE 802.3ab 1000Base-T
- IEEE 802.3z 1000Base-SX/LX
- IEEE 802.3u 1000Base-FX
- IEEE 802.3ae 10Gb/s Ethernet

### Regulation Compliance:

- FCC Class A, CE-mark Class A, RoHS
- Laser Eye Safety EN60825, IEC6082

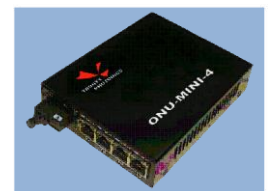
### Specification:

- CWDM wavelength from 1270nm to 1610nm (ITU-T G694.2)
- Control up to 16 nodes per fiber and total 48 nodes per module
- Tx Optical Power > 0.6dBm; Rx Sensitivity: -34 dBm
- Max serviceable distance: 50km single mode fiber
- Delivered Bandwidth Per Fiber:
  - 8 Gbps (OCU-C8)
  - 16 Gbps (OCU-C16)
- Internal Switching Capacity > 96 Gbps (L2) / 192 Gbps (L3)
- Data Rate: Full Duplex 1 Gbps or 10 Gbps
- Optical MUX/DEMUX: 8 channels (OCU-C8) and 16 channels (OCU-C16)
- Operation Condition: 0 to 50°C and 10 to 90% RH
- Dimension: 2U for 24 node, 3U for 48 nodes
  - For L2 switching fabric: 442mm x 316mm x 44mm
  - For L3 switching fabric: 442mm x 374mm x 44mm
- Power: AC220V/AC110V/DC-48V

## 2. BusPON C-series Optical Network Unit (ONU)

### Specification:

- CWDM wavelength from 1270nm to 1610nm (ITU-T G694.2)
- Bi-directional Optical Transceiver
- Optical parameters:
  - Tx Optical Power > 0.6dBm
  - Rx Sensitivity: -34 dBm
- Max serviceable distance: 50km single mode fiber
- Data Rate: 1 Gbps
- Two options for Gigabit ONU:
  - M1 (1 UTP port)
  - M4 (4 UTP ports)
- Operation Condition: 0 to 50°C and 10 to 90% RH
- Dimension:
  - 25mm x 70mm x 95mm (ONU-C8/16-Gx-M1)
  - 30mm x 110mm x 140mm (ONU-C8/16-Gx-M4)
  - Dimensions for 10G ONU varied with no. of nodes and range
- Power: DC5V/2A



BusPON C-series Optical Network Units

### Network Standards:

- IEEE 802.3ab 1000Base-T
- IEEE 802.3z 1000Base-SX/LX
- IEEE 802.3u 1000Base-FX
- IEEE 802.3ae 10Gb/s Ethernet
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### Regulation Compliance:

- FCC Class A, CE-mark Class A, RoHS
- Laser Eye Safety EN60825, IEC6082

## Selection Guide for BusPON C-series System

<b>Optical Central Unit (OCU)</b>	<i>OCU-C-x-G-y</i>	x – no. of wavelength 8 = 8 wavelengths (1470nm to 1610nm) 16 = 16 wavelength (1310nm to 1610nm) y – no. of node (from 8 to 384) * note: no. of output fiber = quotient of y/x
<b>Optical Network Unit (ONU)</b>	<i>ONU-C-xx-M-y</i>	x – wavelength number for Tx 01=1470nm,02=1490nm,03=1510nm,04=1530nm 05=1550nm,06=1570nm,07=1590nm,08=1610nm 09=1310nm,10=1330nm,11=1350nm,12=1370nm 13=1390nm,14=1410nm,15=1430nm,16=1450nm y – no. of UTP port 1 = 10/100/1000M UTP port x 1 4 = 10/100/1000M UTP port x 4

Trinity Photonics can provide customized optical taps and web-based Network Management System for any network requirement. For more information, please contact our project team for details: [project@tphoton.com](mailto:project@tphoton.com)