# C4® CMTS Release 8.1.5

## Specifications

### Installation Environment

<table>
<thead>
<tr>
<th>RF Interfaces</th>
<th>External F connector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network-side Interfaces</td>
<td>10/100/1000 BaseT Ethernet and Gigabit Ethernet over fiber (SFP); 10 Gig Ethernet (XFP)</td>
</tr>
<tr>
<td>Power</td>
<td>Dual DC voltage mains: -48 VDC (-44 to -72 VDC); Optional AC power configuration</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>Nominal – 2500 W   Maximum – 2800 W at -48 VDC</td>
</tr>
</tbody>
</table>

Note 1 – Nominal power consumption for DOCSIS 3.0 Duplex full-fill chassis with 1:1 active U:D ratio.

### RF Downstream

<table>
<thead>
<tr>
<th>Frequency Range</th>
<th>91 to 999 (DOCSIS® 3.0); 112 to 999 (EuroDOCSIS™ 3.0)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modulation Schemes</td>
<td>64 QAM, 256 QAM</td>
</tr>
<tr>
<td>Data Rate (Mbps) (Max.)</td>
<td>Up to 55.62 per channel</td>
</tr>
<tr>
<td>RF Output Level</td>
<td>41 to 60</td>
</tr>
</tbody>
</table>

### RF Upstream

<table>
<thead>
<tr>
<th>Frequency Range</th>
<th>5 to 65 (DOCSIS 3.0), 24U CAM hardware: 5 to 85 MHz (not currently supported in software)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modulation Schemes</td>
<td>QPSK, 16 QAM, 32 QAM, 64 QAM</td>
</tr>
<tr>
<td>Data Rate (Mbps) (Max.)</td>
<td>Up to 30.72</td>
</tr>
<tr>
<td>Receive Input Level</td>
<td>-16 to 29</td>
</tr>
</tbody>
</table>

### Physical

<table>
<thead>
<tr>
<th>Operating Temperature:</th>
<th>+23 to +131 (-5 to +55)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Term °F (°C)</td>
<td>+23 to +131 (-5 to +55)</td>
</tr>
<tr>
<td>Long Term °F (°C)</td>
<td>+41 to +104 (+5 to +40)</td>
</tr>
<tr>
<td>Storage Temperature °F (°C)</td>
<td>-40 to +158 (-40 to +70)</td>
</tr>
<tr>
<td>Operating Humidity</td>
<td>5 to 85% (Non condensing)</td>
</tr>
<tr>
<td>Dimensions (H x W x D)</td>
<td>24.5 x 17.4 x 20.0 (62.2 x 44.2 x 50.8)</td>
</tr>
<tr>
<td>Weight lbs. (kg)</td>
<td>178 (80.9)</td>
</tr>
</tbody>
</table>

### Software Release 8.1.5 Features (Partial List)

- 32D CAM Support for Annex A
- IS-IS Point-to-Point Adjacencies
- DCC Command for Nx1 Bonded Cable Modems
- CM-STATUS Sequence Out of Range Handling
- Show Tech Support Brief
- Store Only Valid BPI Certificates
- CAM Downstream Power Monitoring
- 24 Downstream Channel Bonding – Trial Only
- Piggyback Support for rtPS Flows
- Provisionable Upstream Equalizer Taps
- 5 – 85 MHz Upstream Support (24U CAM – Lab Only)
- System Control Module 3 (SCM 3)
- DOCSIS 3.0 16 Channel Bonding (Downstream)
- DOCSIS 3.0 Four Channel Bonding (Upstream)
- IPv6 Support, Including:
  - IS-IS Multi-Topology Support
  - OSPFv3
  - DHCPv6 Prefix Delegation with Route Injection
  - Cable Source Verify with DHCP Lease Query
  - TFTP Enforce & Dynamic Shared Secret for IPv6 CMs
  - IPv6 Support for PCMM
- DOCSIS 3.0 Multicast IP Video Support (via IGMPv3)
- Dynamic CM Load Balancing, including Cross-MAC Domain
- BSoD L2 VPN

Continued on the next page…
Specifications Continued

Regulatory
Designed to NEBS Level 3 Requirements
Safety: UL® 60950, CSA C22.2 No. 950, IEC60950
EMC: GR-1089-CORE (ESD, Grounding Electrical Safety)
FCC Part 15 Class A, EN300 386-2 (CISPR 22, Class A)
Environmental: GR-63-CORE, ETS 300 019

Ordering Information

Hardware and Software
796880 C4; I-CMTS Simplex New Chassis Kit with SCM II EM(U) - Simplex Control Complex, includes 1 RCM & SCM and associated PIC
789561 C4; I-CMTS Duplex New Chassis Kit with SCM II EM(U) - Duplex Control Complex, includes 2 RCMs & 2 SCMs and associated PICs, 1 RCM Crossover Connector
781210 C4; I-CMTS Simplex New Chassis Kit with SCM 3 - Simplex Control Complex, includes 1 RCM & SCM and associated PIC
802264 C4; I-CMTS Duplex New Chassis Kit with SCM 3 - Duplex Control Complex, includes 2 RCMs & 2 SCMs and associated PICs, 1 RCM Crossover Connector
798990 C4 CMTS System Control Module II Enhanced Memory (U) (SCM II EM(U)) with Rel. 8.x
799087 System Control Module 3 (SCM 3) with Rel. 8.1
708369 Physical Interface Card (PIC) for Slot 19 for Use with SCM with Fan Controller
708963 Physical Interface Card (PIC) for Slot 20 for Use with SCM without Fan Controller
722013 C4 CMTS Router Control Module (RCM)
722891 C4 CMTS Router Control Module - Crossover Connector. One required for each Duplex RCM
794040 C4; Optimized 16D CAM Kit (Active): 1 16D CAM, PIC, and SW, DOCSIS/EuroDOCSIS 3.0
794043 C4; Optimized 16D CAM Kit (Spare): 1 16D CAM, CAM PIC, and SW, DOCSIS/EuroDOCSIS 3.0
794041 C4; Optimized EuroDOCSIS 24D CAM Kit (Active): 1 24D CAM, PIC, and SW, EuroDOCSIS 3.0
794044 C4; Optimized EuroDOCSIS 24D CAM Kit (Spare): 1 24D CAM, CAM PIC, and SW, EuroDOCSIS 3.0
794042 C4; Optimized 32D CAM Kit (Active): 1 32D CAM, PIC, and SW, DOCSIS 3.0
794045 C4; Optimized 32D CAM Kit (Spare): 1 32D CAM, CAM PIC, and SW, DOCSIS 3.0
801153 C4; Optimized EuroDOCSIS 32D CAM Kit (Active): 1 32D CAM, PIC, and SW, EuroDOCSIS 3.0
801154 C4; Optimized EuroDOCSIS 32D CAM Kit (Spare): 1 32D CAM, PIC, and SW, EuroDOCSIS 3.0
790562 C4; 24U CAM Kit (Even) - 1 24U CAM, Even CAM PIC, and 24 Upstream Licenses
790563 C4; 24U CAM Kit (Odd) - 1 24U CAM, Odd CAM PIC, and 24 Upstream Licenses,
790564 C4; 24U CAM Kit (Spare) - 1 24U CAM, Spare CAM PIC, and 24 Upstream Licenses,
799079 C4; 24U CAM Kit (Even) Licensed for 16 upstream - 1 24U CAM, Even CAM PIC, and 16 Upstream
799080 C4; 24U CAM Kit (Odd) Licensed for 16 upstream - 1 24U CAM, Odd CAM PIC, and 16 Upstream
799081 C4; 24U CAM Kit (Spare) Licensed for 16 upstream - 1 24U CAM, Spare CAM PIC, and 16 Upstream
799149 C4; License Upgrades: 8 US Taking 24U CAMs Licenses with 16 Upstreams to 24

XD CAM Field Software Upgrade
793929 C4; UPGRADE 16D to 24D EuroDOCSIS CAM - License Key for Field Upgrade
793930 C4; UPGRADE 16D to 32D DOCSIS CAM - License Key for Field Upgrade
802249 C4; UPGRADE 16D to 32D EuroDOCSIS CAM - License Key for Field Upgrade
801106 C4; UPGRADE 24D to 32D EuroDOCSIS CAM

Ethernet Network Interface Options
722872 C4 CMTS SFP Electrical Interface, 1000Base-TX 722873 C4 CMTS XFP Optical Interface, 10GBase-SR
722093 C4 CMTS SFP Optical Interface, 1000Base-SX 728887 C4 CMTS XFP Optical Interface, 10GBase-LR/LW
728965 C4 CMTS SFP Optical Interface, 1000Base-LX10 780243 C4 CMTS XFP Optical Interface, 10GBase-ER
780180 C4 CMTS SFP Optical Interface, 1000Base-ZX 780244 C4 CMTS XFP Optical Interface, 10GBase-ZR

Maintenance Plan (Required)
708387 Software Maintenance - Phone Plus Gold - SVC CTRCT; Gold C4 CMTS, C4c I-CMTS

Specifications are subject to change without notice.