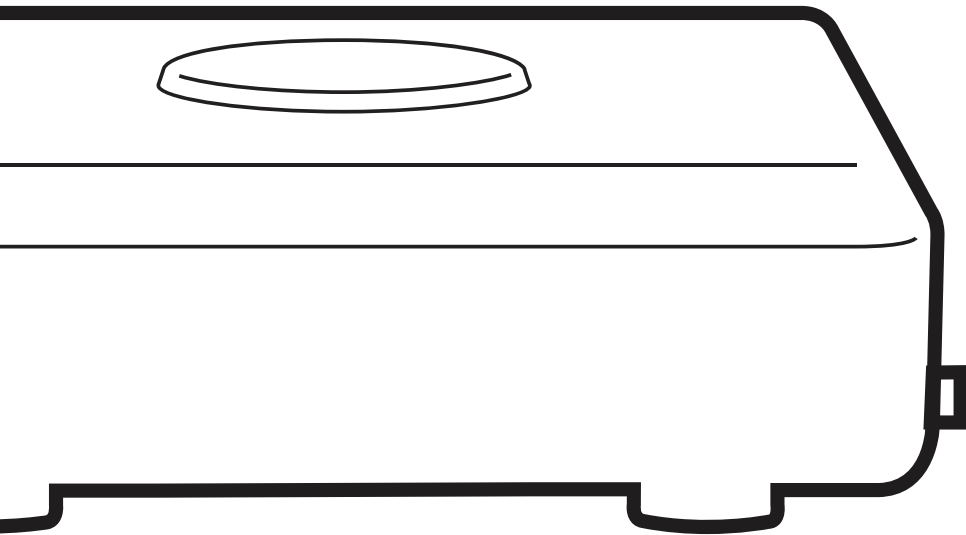




# ARC Series Router

**CBA850**

Spec Sheet



[cradlepoint.com](http://cradlepoint.com)

# INTRODUCTION

## WHAT'S IN THE BOX

- CBA850 with integrated MC400 Multi-Carrier Software-Defined Radio modem
- Universal 3G/4G/LTE antennas with dedicated active GPS antenna port
- 12 V DC / 1.5 A power adapter (1.5 meter cord)
- Ethernet cable
- Quick Start Guide
- Mounting hardware
- Warranty and regulatory information

## KEY FEATURES

### WAN

- LP6: LTE Advanced LTE/DC-HSPA+ (SIM-based Auto-Carrier Selection for all North American carriers and European operators)
- LP5: Cat 6 LTE Advanced for operators in Asia Pacific (SIM-based Auto-Carrier selection)
- LP4: LTE/DC-HSPA+ for AT&T, Verizon, T-Mobile and Canadian carriers (SIM-based Auto-Carrier Selection)
- LPE: 4G LTE/HSPA+/EVDO (multi-carrier, North America)
- LP3: 4G LTE/HSPA+ (Europe, EMEA, and Australia/New Zealand)
- Advanced Modem Failure Check
- IP Passthrough
- Standby
- Ethernet WAN for inline failover

### LAN

- VLAN 802.1Q
- DHCP Server, Client, Relay
- DNS and DNS Proxy
- DynDNS
- UPnP
- DMZ
- MAC Address Filtering

### MANAGEMENT

- Cradlepoint Enterprise Cloud Manager<sup>1</sup>
- Web UI, API, CLI, SSH
- Data Usage Alerts (router and per client)
- Advanced Troubleshooting (support)
- Device Alerts
- SNMP
- SMS control

### ROUTING

- Routing Rules
- NAT-less Routing
- Virtual Server/Port Forwarding
- IPv6

## SECURITY

- RADIUS and TACACS+ support\*
- 802.1x authentication for Ethernet
- ALGs
- MAC Address Filtering
- Advanced Security Mode (local user management only)
- Per-Client Web Filtering
- IP Filtering
- Content Filtering (basic)
- Website Filtering

\*-Native support for authentication. Authorization and accounting support through hotspot/captive portal services.

1 – **Enterprise Cloud Manager** requires a subscription

## SPECIFICATIONS

**WAN:** Integrated LP6 Category 6 LTE Advanced LTE modem (with DC-HSPA+ failover), LP5 Category 6 LTE Advanced LTE modem (with DC-HSPA+ failover), LP4 Category 4 LTE modem (with DC-HSPA+ failover), LPE 4G LTE modem (with HSPA+/EVDO/3G and 2G failover) or LP3 4G LTE modem (with HSPA+ and 2G failover)

### LAN:

- Two LAN 10/100/1000 Ethernet ports (default one NAT, one IP Passthrough)
- RJ45 Serial Port for console access or out-of-band management

### TEMPERATURE:

- 0 °C to 50 °C (32 °F to 122 °F) operating
- -20 °C to 70 °C (-4 °F to 158 °F) storage

### HUMIDITY (non-condensing):

- 10% to 85% operating
- 5% to 90% storage

### POWER:

- 12 V DC / 1.5 A adapter
- 802.3af (15 W) or 802.3at (30 W) PoE capable

### POWER CONSUMPTION (Typical)

- Idle: 4.0 W
- Single Modem: 6.0 W

**SIZE:** 4.8 × 4.8 × 1.7 in (122 × 122 × 42 mm)

### HOUSING:

- White plastic, locking compatible
- Wall, desk, or DIN Rail mounting

### CERTIFICATIONS:

- FCC, CE, IC
- Safety: UL/CUL/CB Scheme
- Materials: WEEE, RoHS, RoHS-2, California Prop 65

## ACCESSORIES

- 700 MHz – 2700 MHz Wide Band Directional Antenna (Yagi/Log- Periodic) (Part #: 170588-000)
- 12" Mag-Mount Antenna with SMA Male Connector (Part #: 170605-000)

- 4" Mini Mag-Mount Antenna with SMA Male Connector (Part #: 170606-000)
- Universal 3G/4G/LTE Modem Antenna (Part #: 170649-000)
- GPS Screw-Mount Antenna (Part #: 170651-000)
- GPS Mag-Mount Antenna (Part #: 170652-000)
- Universal 3G/4G multi-band cellular modem antenna (white) – 2 dBi / 3 dBi (Part # 170659-000)
- Multi-Band Omni-Directional Antenna (Part #: 170668-000)
- Indoor/Outdoor Panel Patch (Part #: 170669-000)
- DIN Rail Mounting Bracket (Part # 170656-000)
- Wall/Ceiling Mounting Bracket (Part # 170666-000)
- Rollover Adapter for RJ45 Ethernet cable M/F (Part # 170662-000)
- RJ45 Rollover serial console cable 7 ft (Part # 170663-000)
- RJ45 Rollover serial console cable 14 ft (Part # 170663-001)

See the Cradlepoint [antenna accessories page](#) for more information about antennas. Also see the Antenna Ordering and Installation Guide, available as a PDF in the Resources section of antenna and router product pages.

## BUSINESS-GRADE MODEM SPECIFICATIONS

**ARC CBA850 LP6 models** include an integrated LTE Advanced Category 6 4G LTE modem. The LP6 modems support SIM-Based Auto-Carrier selection so there is only one model for all of North America. Simply insert the SIM and wait for the router to automatically detect the SIM and establish a connection.

The LTE bands certified for each carrier are listed below.

### ARC CBA850LP6-NA, CBA850LP6-EU

- **Technology:** LTE Advanced, DC-HSPA+
- **Downlink Rates:** LTE 300 Mbps, DC-HSPA+ 42.2 Mbps
- **Uplink Rates:** LTE 50 Mbps, DC-HSPA+ 5.76 Mbps
- **Frequency Bands:**
  - **LTE Bands 1–5, 7, 8, 12, 13, 17, 20, 25, 26, 29, 30, 41**
    - **Verizon:** 2, 4, 5, 13 (XLTE support w/carrier aggregation)
    - **AT&T:** 2, 4, 5, 12/17, 29, 30
    - **Sprint:** 25, 26, 41 (LTE Plus Support)
    - **T-Mobile:** 2, 4, 12 (T-Mobile Wideband LTE Support)
    - **Generic:** all
- **Carrier Aggregation:**
  - 1+ 8
  - 2+ 2/5/12 (17 w/MFBI)/13/29
  - 3+ 7/20
  - 4+ 4/5/12 (17 w/MFBI)/13/29
  - 5+ 2/4/30
  - 7+ 3/7/20
  - 8+ 1
  - 12 (17 w/MFBI) + 2/4/30
  - 13+ 2/4
  - 20+ 3/7
  - 30+ 5/12 (17 w/MFBI)
  - 41+ 41
- **Fallback:** WCDMA/DC-HSPA+ (42/5.76 Mbps): Bands 1–5, 8
- **Power:** LTE: 23 dBm ± 1; DC-HSPA+: 23 dBm ± 1
- **Antennas:** two SMA male (plug), finger tighten only (maximum torque spec is 7 kgf/cm<sup>2</sup>)
- **GPS:** active GPS support

- **SMS:** SMS support
- **Industry Standards & Certs:** CE, FCC, GCF-CC, IC, PTCRB, AT&T, Sprint, Verizon
- **Modem Part Number:** MC400LP6

**ARC CBA850 LP5 models** include an integrated LTE Advanced Category 6 4G LTE modem, and support Asia Pacific. The LP5 modems support SIM-Based Auto-Carrier selection. Simply insert the SIM and wait for the router to automatically detect the SIM and establish a connection.

#### **CBA850LP5-AP**

- **Technology:** FDD/TDD (Category 6) LTE Advanced, DC-HSPA+
- **Downlink Rates:** LTE 300 Mbps, DC-HSPA+ 42.2 Mbps
- **Uplink Rates:** LTE 50 Mbps, DC-HSPA+ 5.76 Mbps
- **Frequency Bands:**
  - LTE Bands: 1, 3, 5, 7, 8, 11, 18, 19, 21, 28, 38, 39, 40, 41
  - TD-SCDMA 39
- **Carrier Aggregation:**
  - 1+ (8, 18, 19, 21)
  - 3+ (5, 7, 19, 28)
  - 7+ (5, 7, 28)
  - 19+ 21
  - 38+ 38
  - 39+ 39
  - 40+ 40
  - 41+ 41
- **Fallback:** WCDMA/DC-HSPA+ (42/5.76 Mbps): Bands 1, 5, 6, 8, 9, 19
- **Power:** LTE: 23 dBm  $\pm$  1; DC-HSPA+: 23 dBm  $\pm$  1
- **Antennas:** two SMA male (plug), finger tighten only (maximum torque spec is 7 kgf/cm<sup>2</sup>)
- **GPS:** active GPS support
- **SMS:** SMS support
- **Industry Standards & Certs:** CE, GCF-CC, RC Australia, others pending
- **Modem Part Number:** MC400LP5

**ARC CBA850 LP4 models** include an embedded LTE Advanced Category 4 4G LTE modem. The LP4 modems support SIM-Based Auto-Carrier selection so there is only one model for North America. Simply insert the SIM and wait for the router to automatically detect the SIM and establish a connection.

#### **CBA850LP4**

- **Technology:** Category 4 LTE, DC-HSPA+
- **Downlink Rates:** LTE 150 Mbps, DC-HSPA+ 42.2 Mbps
- **Uplink Rates:** LTE 50 Mbps, DC-HSPA+ 5.76 Mbps
- **Frequency Bands:**
  - LTE: Band 2 (1900 MHz), Band 4 – AWS (1700/2100 MHz), Band 5 (850 MHz), Band 13 (700 MHz), Band 17 (700 MHz)
  - DC-HSPA+/UMTS Rel. 9, Cat 24: Bands 5 and 2 (850/1900 MHz)
- **Power:** LTE: 23 dBm  $\pm$  1; DC-HSPA+: 23 dBm  $\pm$  1
- **Antennas:** two SMA male (plug), finger tighten only (maximum torque spec is 7 kgf/cm<sup>2</sup>)
- **Industry Standards & Certs:** FCC, Verizon, AT&T, PTCRB, carrier Private Networks, IC
- **SIM:** two 2FF slots (secured)
- **Modem Part Number:** MC400LP4

**ARC CBA850LPE models** include an integrated 4G LTE modem – specific model names include a specific modem (e.g., the ARC CBA850LPE-VZ includes a Verizon LTE modem).

Please note that LPE models are flexible and support bands for multiple cellular providers; however, only the frequency bands in **bold** below are supported by the listed provider.

#### **ARC CBA850LPE-VZ – 4G LTE/EVDO for Verizon**

- **Technology:** LTE, EVDO Rev A
- **Downlink Rates:** LTE 100 Mbps, EVDO 3.1 Mbps (theoretical)
- **Uplink Rates:** LTE 50 Mbps, EVDO 1.8 Mbps (theoretical)
- **Frequency Bands:**
  - **LTE:** Band 2 (1900 MHz), **Band 4 – AWS (1700/2100 MHz)**, Band 5 (850 MHz), **Band 13 (700 MHz)**, Band 17 (700 MHz), Band 25 (1900 MHz)
  - **GSM/GPRS/EDGE:** (850/900/1800/1900 MHz)
  - **CDMA: EVDO Rev A/1xRTT (800/1900 MHz)**
- **Power:** LTE: 23 dBm ± 1; EVDO: 24 dBm +0.5/-1 (typical conducted)
- **Antennas:** two SMA male (plug), 1 dBi (LTE), 2 dBi (Cellular/PCS) gain; finger tighten only (maximum torque spec is 7 kgf/cm<sup>2</sup>)
- **GPS:** active GPS support
- **Industry Standards & Certs:** FCC, Verizon
- **Modem Part Number:** MC400LPE-VZ
- **SIM:** two 2FF SIM slots

#### **ARC CBA850LPE-AT – 4G LTE/HSPA+/EVDO for AT&T**

- **Technology:** LTE, HSPA+, EVDO Rev A
- **Downlink Rates:** LTE 100 Mbps, HSPA+ 21.1 Mbps, EVDO 3.1 Mbps (theoretical)
- **Uplink Rates:** LTE 50 Mbps, HSPA+ 5.76 Mbps, EVDO 1.8 Mbps (theoretical)
- **Frequency Bands:**
  - **LTE: Band 2 (1900 MHz), Band 4 – AWS (1700/2100 MHz), Band 5 (850 MHz), Band 13 (700 MHz), Band 17 (700 MHz), Band 25 (1900 MHz)**
  - **HSPA+/UMTS: (850/900/1900/2100 MHz, AWS)**
  - **GSM/GPRS/EDGE: (850/900/1800/1900 MHz)**
  - **CDMA: EVDO Rev A/1xRTT (800/1900 MHz)**
- **Power:** LTE: 23 dBm ± 1; HSPA+: 23 dBm ± 1; EVDO: 24 dBm +0.5/-1 (typical conducted)
- **Antennas:** two SMA male (plug), 1 dBi (LTE), 2 dBi (Cellular/PCS) gain; finger tighten only (maximum torque spec is 7 kgf/cm<sup>2</sup>)
- **GPS:** active GPS support
- **Industry Standards & Certs:** FCC, PTCRB, AT&T
- **Modem Part Number:** MC400LPE-AT
- **SIM:** two 2FF SIM slots

#### **ARC CBA850LPE-SP – 4G LTE/HSPA+/EVDO for Sprint**

- **Technology:** LTE, HSPA+, EVDO Rev A
- **Downlink Rates:** LTE 100 Mbps, HSPA+ 21.1 Mbps, EVDO 3.1 Mbps (theoretical)
- **Uplink Rates:** LTE 50 Mbps, HSPA+ 5.76 Mbps, EVDO 1.8 Mbps (theoretical)
- **Frequency Bands:**
  - **LTE:** Band 2 (1900 MHz), Band 4 – AWS (1700/2100 MHz), Band 5 (850 MHz), Band 13 (700 MHz), Band 17 (700 MHz), **Band 25 (1900 MHz)**
  - **HSPA+/UMTS: (850/900/1900/2100 MHz, AWS)**
  - **GSM/GPRS/EDGE: (850/900/1800/1900 MHz)**
  - **CDMA: EVDO Rev A/1xRTT (800/1900 MHz)**
- **Power:** LTE: 23 dBm ± 1; HSPA+: 23 dBm ± 1; EVDO: 24 dBm +0.5/-1 (typical conducted)

- **Antennas:** two SMA male (plug), 1 dBi (LTE), 2 dBi (Cellular/PCS) gain; finger tighten only (maximum torque spec is 7 kgf/cm<sup>2</sup>)
- **GPS:** active GPS support
- **Industry Standards & Certs:** FCC, Sprint
- **Modem Part Number:** MC400LPE-SP
- **SIM:** two 2FF SIM slots

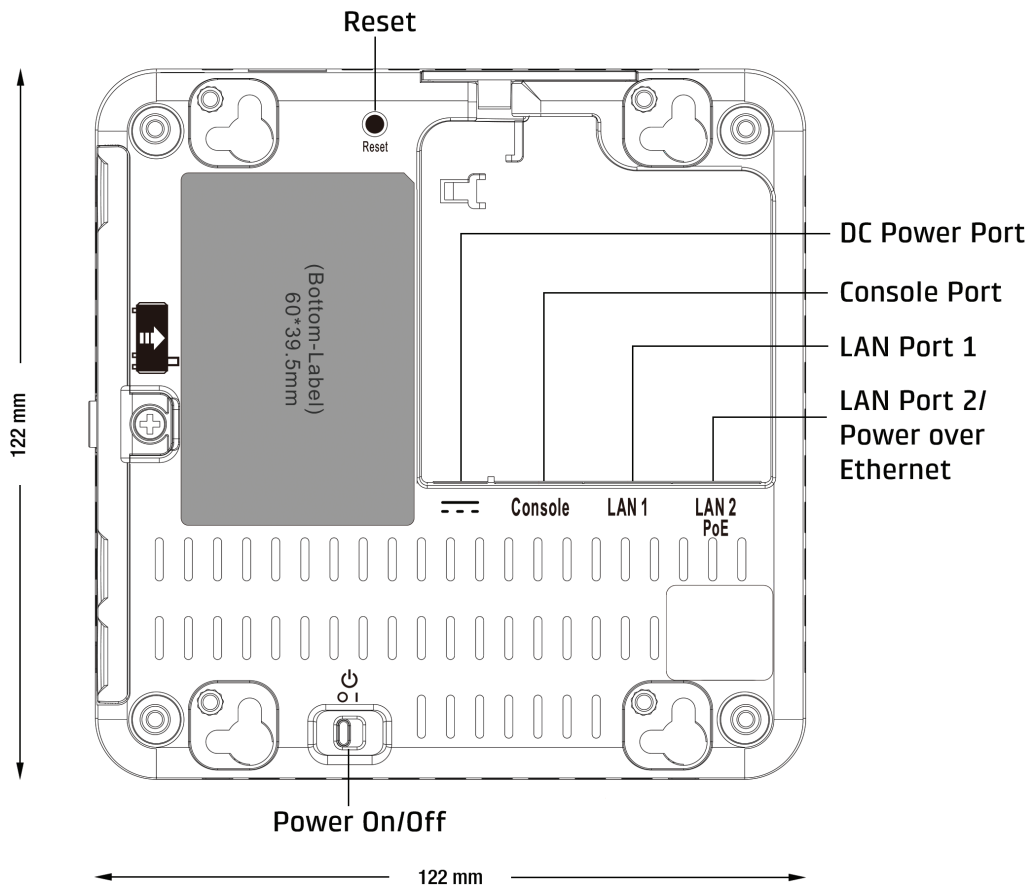
#### **ARC CBA850LP3-EU – 4G LTE/HSPA+ for Europe**

- **Technology:** LTE, HSPA+
- **Downlink Rates:** LTE 100 Mbps, HSPA+ 21.1 Mbps (theoretical)
- **Uplink Rates:** LTE 50 Mbps, HSPA+ 5.76 Mbps (theoretical)
- **Frequency Bands:**
  - **LTE: Band 1 (2100 MHz), Band 3 (1800 MHz), Band 7 (2600 MHz), Band 8 (900 MHz), Band 20 (800 MHz)**
  - **HSPA+/UMTS: (800/850/900/1900/2100 MHz)**
  - **GSM/GPRS/EDGE: Quad-Band (850/900/1800/1900 MHz)**
- **Power:** LTE Band 1/3/8/20: 23 dBm ± 1; LTE Band 7–22: dBm ± 1; HSPA+: 23 dBm ± 1 (typical conducted)
- **Antennas:** two SMA male (plug), 1 dBi (LTE), 2 dBi (Cellular/PCS) gain; finger tighten only (maximum torque spec is 7 kgf/cm<sup>2</sup>)
- **GPS:** active GPS support
- **Industry Standards & Certs:** CE, GCF-CC
- **Modem Part Number:** MC400LP3-EU
- **SIM:** two 2FF SIM slots

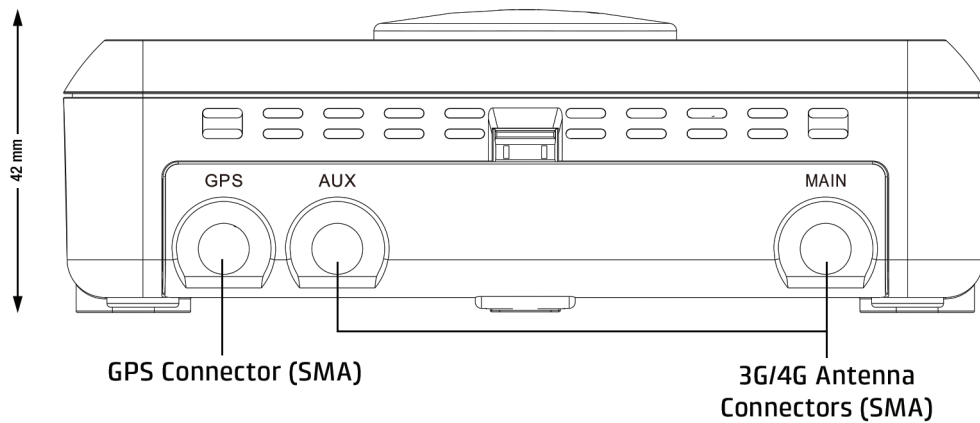
#### **ARC CBA850LPE-GN – 4G LTE/HSPA+/EVDO for Canada and T-Mobile and US Cellular in the U.S.**

- **Technology:** LTE, HSPA+, EVDO Rev A
- **Downlink Rates:** LTE 100 Mbps, HSPA+ 21.1 Mbps, EVDO 3.1 Mbps (theoretical)
- **Uplink Rates:** LTE 50 Mbps, HSPA+ 5.76 Mbps, EVDO 1.8 Mbps (theoretical)
- **Frequency Bands:**
  - **LTE: Band 2 (1900 MHz), Band 4 (AWS), Band 5 (850 MHz), Band 13 (700 MHz), Band 17 (700 MHz), Band 25 (1900 MHz)**
  - **HSPA+/UMTS: (850/900/1900/2100 MHz, AWS)**
  - **GSM/GPRS/EDGE: (850/900/1800/1900 MHz)**
  - **CDMA: EVDO Rev A/1xRTT (800/1900 MHz)**
- **Power:** LTE: 23 dBm ± 1; HSPA+: 23 dBm ± 1; EVDO: 24 dBm +0.5/-1 (typical conducted)
- **Antennas:** two SMA male (plug), 1 dBi (LTE), 2 dBi (Cellular/PCS) gain; finger tighten only (maximum torque spec is 7 kgf/cm<sup>2</sup>)
- **GPS:** active GPS support
- **Industry Standards & Certs:** FCC, IC, PTCRB
- **Modem Part Number:** MC400LPE-GN
- **SIM:** two 2FF SIM slots

## HARDWARE

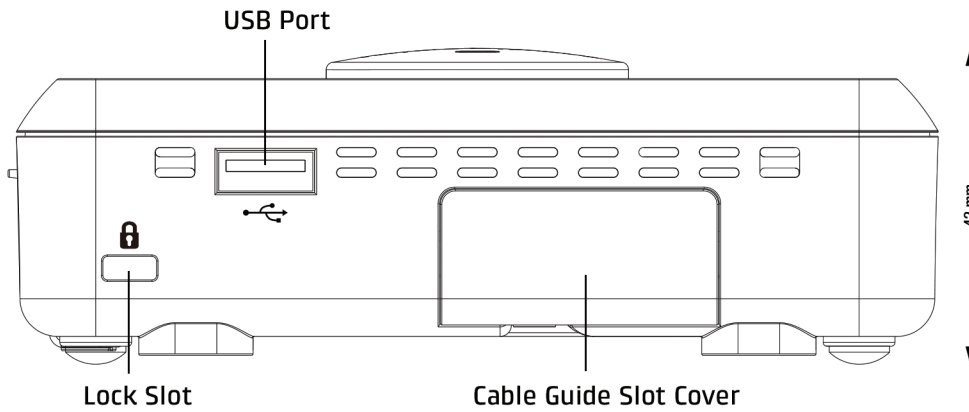


### BOTTOM VIEW



### RIGHT VIEW





**REAR VIEW**

## SUPPORT AND WARRANTY

CradleCare Support available with technical support, software upgrades, and advanced hardware exchange – 1-, 3-, and 5-year options.

One-year limited hardware warranty available in the US and Canada; two-year limited hardware warranty for integrated EU products when purchased from an authorized EU distributor – extend warranty to 2, 3, or 5 years.