



COR IBR1700 Spec Sheet





Shown: COR IBR1700-1200M





Cradlepoint COR IBR1700 mobile routers is sold as part of an all-inclusive mobile networking package.

NetCloud Packages for Mobile Include:

- Ruggedized routers, purpose built for mobile applications
- A NetCloud Service Plan tailored for branch networking and set for a specific term
- 24x7 support and limited lifetime warranty

What to Buy

Description	Part Numbers
North America (U.S., Canada)	
 NetCloud Essentials for Mobile Routers with IBR1700-1200M 	MAx-17001200-NNA
 NetCloud Essentials for Mobile Routers with IBR1700-600M 	MAx-1700600M-NNA
Europe (EU)	
 NetCloud Essentials for Mobile Routers with IBR1700-600M-EU 	MAx-1700600M-EWA
Asia-Pacific (Australia, New Zealand, Singapore)	
 NetCloud Essentials for Mobile Routers with IBR1700-600M-AP 	MAx-1700600M-PWA
All Regions	
NetCloud Advanced for Mobile Routers	MAx-N

x = 1, 3, or 5 years

NetCloud Essentials packages and plans contain all the features and capabilities required for a broad range of mobile or in-vehicle applications. Essentials packages include 24x7 support (phone support: 24 hour weekdays with emergency response on weekends, web: 24x7, chat: 24x5) and a limited lifetime warranty.

For additional capabilities, a NetCloud Advanced upgrade can be added to the NetCloud Essentials Package at any time.

See additional details of what is included in the Essential and Advanced NetCloud software: cradlepoint.com/netcloud-manager

For more details on the COR IBR1700 mobile router, included with the NetCloud Packages for mobile, see below.

What's in the Box

- Ruggedized high-performance router with embedded business-class LTE modem; includes integrated mounting plate.
- Warranty, Regulatory, and Safety Guide
- 4-Wire Power/GPIO Cable (3-meters)





Required Accessories

- 3G/4G universal cellular antennas (qty. 2 or 4)
- 2.4/5GHz Dual-Band WiFi antennas (qty. 6)
- An Active-power GPS antenna

Key Features

Models

- COR IBR1700-1200M: LTE Advanced Pro 1.2 Gbps LTE/HSPA+ (SIM-based, Auto-carrier Selection for all North American, European, and Asia Pacific carriers)—Pending
 - The IBR1700-1200M is FirstNet Ready™; includes support for Band 14
- COR IBR1700-600M: LTE Advanced 600 Mbps LTE/HSPA+ (SIM-based, Auto-carrier Selection for all North American, European, and Asia Pacific carriers; includes support for 700 MHz Band 28 in Asia Pacific)

WAN

- Dual-modem capable with MC400 modem slot for 2nd modem
- WiFi-as-WAN, with WPA2 Enterprise Authentication for WiFi-as-WAN
- 3rd radio for dedicated back haul
- WiFi client mode
- Failover/Failback
- Load Balancing
- Advanced Modem Failure Check
- WAN Port Speed Control
- WAN/LAN Traffic Steering
- IP Passthrough
- Standby
- Multi-PDN
- Smart WAN Selection
- Serial PAD mode
- DynDNS
- AutoQoS
- QoS (DSCP and Priority Queuing)

LAN

- VLAN 802.1Q
- DHCP Server, Client, Relay
- DNS and DNS Proxy





- DMZ
- Multicast/Multicast Proxy
- MAC Address Filtering
- STP²
- GPS broadcast to LAN

WiFi

- Dual-Band, Simultaneous Tri Band 2x2 2.4GHz + 2x2 5GHz + 4x4 5GHz WiFi
- 802.11 a/b/g/n/ac wave 2 MU-MIMO and 256 QAM support
- Up to 192 connected devices (64 per radio one @ 2.4 GHz and two @ 5 GHz)
- Multiple SSIDs: 2 per radio (6 total)
- WPA2 Enterprise (WiFi)
- Hotspot/Captive Portal
- SSID-based Priority
- Client Mode for faster data offload

Management

- Cradlepoint NetCloud Manager
 - Secure remote cloud configuration
 - Real-time diagnostics/troubleshooting
 - Remote connect / Out-of-Band Management
 - Geoview location services
 - Pool data alerts
- Client and Traffic Visibility and Control
- Web UI, API, CLI
- Active GPS support
- Data usage alerts
- Advanced troubleshooting (support)
- Device alerts
- SDK support
- SNMP
- SMS control
- Serial redirector
- Auto APN Recovery
- Syslog





VPN & Routing

- IPsec Tunnel up to ten concurrent sessions
- IKEv2 support (includes MOBIKE)
- _ L2TP
- GRE Tunnel
- OSPF/BGP/RIP
- Route Filters (Access Control Lists, Prefix Filters, Route Maps, Communities for BGP)
- Per-Interface Routing
- Policy-based Routing
- NAT
- NAT-less Routing
- Traffic Steering
- Virtual Server/Port Forwarding
- NEMO/DMNR
- IPv6
- VRRP
- NHRP
- VTI Tunnel support
- OpenVPN support

Security

- NetCloud Perimeter compatible
- RADIUS and TACACS+ support*
- 802.1x authentication for Ethernet**
- Zscaler Internet Security Compatible
- Certificate support
- Application-level gateways
- MAC Address Filtering
- Advanced Security Mode (local user management only)
- FIPS 140-2 Inside version available
- Application-aware firewall
- IP Filtering
- Content Filtering
- Zone-Based Object Firewall with host address (IP or FQDN), port, and MAC address
- * Native support for authentication. Authorization and accounting support through hotspot/captive portal services.
- ** 802.1x Authentication for Ethernet not available for FIPS SKUs.





Specifications

The following features are delivered through the NetCloud Service.

WAN:

- Dual-modem capable with MC400 slot
- Integrated 1200M LTE Advanced Pro 1.2 Gbps modem (with DC-HSPA+ failover)
- Integrated 600M LTE Advanced 600 Mbps modem (with DC-HSPA+ failover)
- Five LAN/WAN switchable 10/100/1000 Ethernet ports one default WAN (cable/DSL/T1/satellite/Metro Ethernet)
- WiFi as WAN, Metro WiFi; 2×2 MIMO "N" 2.4 GHz or 4×4 5 GHz; 802.11 a/b/g/n/ac wave 2

LAN:

- Simultaneous Tri-Band WiFi; 802.11 a/b/g/n/ac wave 2
- Five LAN/WAN switchable 10/100/1000 Ethernet ports four default LAN
- Serial console support for out-of-band management of a connected device

Ports:

- Power + GPIO (1 input / ignition sense input, 1 output)
- 20-pin power + GPIO port:
 - Alternate DC power input
 - Two analog inputs
 - One input / ignition sense input
 - Four configurable input/output
 - One low current 5V output (50mA max)
- USB 2.0
- Five Ethernet LAN/WAN
- Two cellular antenna connectors (SMA)
- One active GPS antenna connector (SMA)
- Six WiFi antenna connectors (R-SMA)
- Serial DE-9 (commonly called "DB-9") connector—RS-232 (out-of-band management of an external device requires a null modem adapter/cable)

Temperature:

-30 °C to 70 °C (-22 °F to 158 °F) operating

Humidity (non-condensing):

- 5% to 95% operating
- 5% to 95% storage

Power

- DC input steady state voltage range: 9–36VDC (requires 5.0A inline fuse for vehicle installations)
- Reverse polarity and transient voltage protection per ISO 7637-2



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- Ignition sensing (automatic ON and time-delay OFF)
- Power consumption:

- Conditions: 12V input, room temperature

- Sleep: 10 mW

- Idle: 8 W

- Typical: 14 W

- Heavy Usage: 24 W

- Analog to Digital Converter:
 - Port 1: Selectable 0.5-36 V or 0.1-5 V ranges
 - Port 2: 0.5–36 V range
 - Accuracy: Typical ± 0.5%, Maximum ± 1%
 - Configurable low and high voltage alerts
 - Low voltage router shutoff

WiFi Power (FCC):

- 2402–2483.5 MHz (2.4 GHz band): 29.2 dBm conducted
- 5150–5250 MHz (5 GHz band 1): 29.0 dBm conducted
- 5725–5850 MHz (5 GHz band 3): 30.0 dBm conducted

WiFi Power (Europe/Rest of World):

- 2.4 GHz band: 19.81 dBm EIRP
- 5150-5250 MHz: 22.80 dBm EIRP

Size: $8.8 \times 7.5 \times 1.7$ in (224.3 × 190 × 44 mm)

Weight: 3 lb 7 oz (1.7 kg)

Material: metal

Certifications:

- WiFi Alliance 802.11a/b/g/n/ac wave 2 certified
- Safety: UL/CUL, CB Scheme, EN60950-1
- Shock/Vibration/Humidity: compliant with MIL STD 810G and SAEJ1455
- Ingress Protection: compliant with IP64 (includes protection from dust and splashing water)
- Materials: WEEE, RoHS, RoHS-2, California Prop 65
- Telecom: PTCRB/CTIA, GCF-CC
- Regulatory Models: S5A803A, S5A804A, S5A808A, S5A809A, S5A844A
- FIPS 140-2 Inside

GPS:

- GPS Protocols: NMEA 0183 V3.1
- Satellite channels: Maximum 48 channels, simultaneous tracking







- Concurrent standalone GPS, GLONASS, BeiDou, and Galileo
- 1 Hz refresh rate
- Accuracy:
 - Horizontal: < 1.7 m (50%)
 - Velocity: < 0.1 m/s</p>
- Acquisition (measured with signal strength = -130 dBm):
 - Hot start: < 1.3 seconds
 - Warm start: < 31 seconds
 - Cold start: < 32 seconds
- Sensitivity
 - Tracking: -163 dBm (tracking sensitivity is the lowest GNSS signal level for which the device can still detect an in-view satellite 50% of the time when in sequential tracking mode)
 - Acquisition (standalone): -147 dBm (acquisition sensitivity is the lowest GNSS signal level for which the device can still detect an in-view satellite 50% of the time)
- Operational limits: altitude <18000 m and velocity <515 m/s

Performance

- Max Throughout (Default Configuration*): 950 Mbps
- Max Concurrent TCP Sessions: 32,000
- Recommended Max Client Count: 30*
- Performance testing was conducted based off requirements as defined in RFC2544 using a mix of 64, 256, and 1500-byte packet sizes. Throughput is shown as bi-directional TCP traffic with less than a 1% packet loss using four wired clients.
- Specifications and information in this datasheet are subject to change without notice.
- * Cradlepoint defines client as any network connected device utilizing resources, such as bandwidth, on the local network.
- ** Default configuration shipped with hardware including NAT and basic stateful/zone firewall configuration.

Accessories

Cradlepoint offers several accessory options for extensibility, power, and antennas:

Second Integrated LTE Modem with MC400:

- MC400-1200M (worldwide)
- MC400LP6 (North America or EU)
- MC400LP5 (Asia Pacific or Saudi Arabia)
- MC400LP4 (AT&T, Verizon, T-Mobile and Canada)





Power & Mounting:

- Two meter locking power and GPIO cable (direct wire) (Part # 170585-000)
- COR extended temperature (-30C to 70C) power supply (line cord not included) Part #: 170648-001
- US line cord Part #: 170623-001
- EU line cord Part #: 170623-002
- UK line cord Part #: 170623-003
- AU line cord Part #: 170623-004
- IBR1700 Rack-Mount Brackets Part #: 170750-000

Adapters:

- 2x10 GPIO (Part #: 170712-000)
- OBD-II Adapter Kit (Part #: 170758-000)

Antennas - 3G/4G Modem, WiFi & GPS:

- 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
- 2.4/5 GHz Dual-band, Dual-concurrent WiFi Antenna Part #: 170628-000 (WiFi models only)
- Universal 3G/4G/LTE Modem Antenna Part #: 170649-000
- GPS Screw-Mount Antenna Part #: 170651-000
- GPS Mag-Mount Antenna Part #: 170652-000
- Multi-Band Omni-Directional Antenna Part #: 170668-000
- Indoor/Outdoor Panel Patch Part #: 170669-000
- Universal LTE/4G/3G / 2dBi/3dBi antenna with SMA connector for all AER, ARC, COR, and MC400 products (Part # 170704-001)

Vehicle Antennas:

- 3-in-1 GPS & Modem Screw-Mount Part #: 170653-000
- 3-in-1 Adhesive-Mount Antenna Part #: 170653-001
- 5-in-1 GPS, Modem & WiFi Screw-mount Part #: 170654-000
- Low Profile 5-in-1 MIMO LTE, MIMO WiFi (2.4/5 GHz), & GPS Screw Mount Antenna with 5M Cables Part #: 170654-001
- 9-in-1 Dome GPS, Modem & WiFi Screw-mount Part #: CP-1019-1-PAN Black, CP-1020-1-PAN, White
- Cradlepoint Certified Antennas for Mobile

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.





Enterprise-Class Modem Specifications

COR IBR1700-1200M

COR IBR1700-1200M models include an embedded LTE Advanced Pro 1.2 Gbps 4G LTE modem. The 1200M modems support worldwide, SIM-based, Auto-carrier selection. Simply insert the SIM and wait for the router to automatically detect the SIM and establish a connection.

- Technology: Category 18 LTE Advanced Pro, DC-HSPA+
- Downlink Rates: LTE 1.2 Gbps, DC-HSPA+ 42.2 Mbps*
- Uplink Rates: LTE 150 Mbps, DC-HSPA+ 5.76 Mbps*
- MIMO: 2x2 or 4x4 MIMO
- 256 QAM support
- Frequency Bands:
 - LTE Bands
 - LTE FDD 1, 2(25), 3, 4(66), 5(26/18/19), 7, 8, 12(17), 13, 14, 20, 28, 29, 30, 32, 71
 - LTE TDD 38, 39, 40, 41, 42, 43, 46(LAA 5GHz), 48**(CBR5 3.5GHz)
- Carrier Aggregation: Up to 5CA. [] indicates 4x4 MIMO
 - AT&T: 2,4,5,12,14,29,30,66,46; 3G 2, 5
 - 2CA DL carrier aggregation combinations:
 CA_[2A]-[2A], CA_[2A]-[4A], CA_2A-5A, CA_2A-12A, CA_2A-14A, CA_2A29A, CA_2A-30A, CA_[2A]-46A, CA_[2A]-[66A],
 CA_2C, CA_[4A]-[4A], CA_4A-5A, CA_4A-12A, CA_4A-29A, CA_4A-30A, CA_[4A]-46A, CA_5A30A, CA_5A-66A, CA_5B,
 CA_12A-30A, CA_12A-66A, CA_12B, CA_14A30A, CA_14A-66A, CA_29A-30A, CA_29A-66A, CA_30A-66A, CA_[66A]
 [66A], CA_66B, CA_66C
 - 3CA DL carrier aggregation combinations:
 CA_2A-2A-5A, CA_[2A]-2A-12A, CA_2A-2A-14A, CA_2A-2A-30A, CA_2A2A-66A, CA_[2A]-4A-4A, CA_2A-[4A]-[4A],
 CA_[2A]-4A-5A, CA_2A-[4A]-5A, CA_[2A]-4A-12A, CA_2A-[4A]-12A, CA_2A-4A-30A, CA_2A-5A-30A, CA_[2A]-5A-66A,
 CA_2A-5A-[66A], CA_2A-12A-30A, CA_[2A]-12A-66A, CA_2A-12A-[66A], CA_2A-14A-30A, CA_2A-14A-66A, CA_2A-29A-30A, CA_2A-30A-66A, CA_2A-46C, CA_2A-66A-66A, CA_[4A]-4A-5A, CA_[4A]-4A-12A, CA_4A-4A-30A, CA_4A-5A-30A, CA_4A-12B, CA_4A-29A-30A, CA_5A-30A-66A, CA_5A-66A-66A, CA_5A-66A, CA_5A-66A, CA_12A-[66A]-66A, CA_14A-30A-66A, CA_14A-66A-66A, CA_29A-30A-66A, CA_29A-66A-66A, CA_30A-66A-66A

 - 5CA DL carrier aggregation combinations:
 CA_2A-2A-46D, CA_2A-5B-30A-66A, CA_2A-5B-66A-66A, CA_2A-46D66A, CA_5B-30A-66A-66A, CA_46D-66A-66A
 - 2CA UL carrier aggregation combinations:
 CA_2A-12A, CA_2A-5A, CA_4A-12A, CA_5A-66A, CA_5B, CA_12A-66A
 - Verizon (Pending): 2,4,5,13,66,48
 - Sprint (Pending): 2,4,5,12,25,26,41





- T-Mobile, Canada, International, Generic (Pending):
 - LTE FDD 1, 2(25), 3, 4(66), 5(26/18/19), 7, 8, 12(17), 13, 14, 20, 28, 29, 30, 32, 71
 - LTE TDD 38, 39, 40, 41, 42, 46, 48
- Fallback: WCDMA/DC-HSPA+ (42/5.76 Mbps): Bands 1, 2, 4, 5(19), 8
- Power: LTE 23 dBm ± 1, DC-HSPA+ 23 dBm ± 1
- Antennas: SMA & RSMA male plugs, torque not to exceed 4 in-lbs
- GPS: active GPS support
- SMS: SMS support
- Industry Standards & Certs: FCC, PTCRB, AT&T, FirstNet. PENDING: CE, GCF-CC, IC, Sprint, Verizon, Verizon NEMO/DMNR for Primary Wireless Access, AS, NZS, SGP

COR IBR1700-600M

COR IBR1700-600M models include an embedded LTE Advanced 600 Mbps 4G LTE modem. The 600M modems support worldwide, SIM-based, Auto-carrier selection. 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.

- Technology: Category 11 LTE Advanced, HSPA+
- Downlink Rates: LTE 600 Mbps, HSPA+ 42.2 Mbps*
- Uplink Rates: LTE 75 Mbps, HSPA+ 5.76 Mbps*
- Frequency Bands:
 - LTE Bands
 - LTE FDD: 1-5, 7-8, 12-13, 17, 20, 25-26, 28-30, 66
 - LTE TDD: 38, 40–41
 - HSPA+: 1-2, 4-5, 8
- LTE 2DL Carrier Aggregation Combinations:
 - B2+B2, B2+B4, B2+B5, B2+B12, B2+B13, B2+B17, B2+B29, B2+B30, B4+B4, B4+B5, B4+B7, B4+B12, B4+B13, B4+B17, B4+B29, B4+B30, B5+B30, B12+B12, B12+B30, B25+B25, B25+B26, B25+B41, B26+B41, B29+B30, B41+B41, B1+B20, B3+B3, B3+B7, B3+B20, B3+B38, B7+B7, B7+B8, B7+B20, B38+B38, B1+B3, B1+B7, B1+B28, B3+B8, B3+B28, B5+B7, B5+B40, B7+B8, B7+B20
- LTE 3DL Carrier Aggregation Combinations:
 - B2+B2+B12/17, B2+B2+B13, B2+B2+B4, B2+B4+B5, B2+B4+B12, B2+B4+B13, B2+B4+B29,B2+B5+B30, B2+B12+B12, B2+B12+B30, B2+B29+B30, B4+B4+B5, B4+B4+B7, B4+B4+B12, B4+B4+B13, B4+B5+B30, B4+B12+B12, B4+B12+B30, B4+B29+B30, B25+B26+B41, B25+B41+B41, B26+B41+B41, B41+B41+B41, B1+B3+B20, B1+B7+B20, B3+B3+B3+B7, B3+B3+B20, B3+B7+B20, B3+B7+B7, B3+B20+B38, B3+B3+B3, B3+B3+B5, B3+B3+B8, B3+B7+B7, B3+B7+B28, B7+B7+B28, B28+B40+B40, B40+B40+B40
 - Fallback: WCDMA/DC-HSPA+ (42/5.76 Mbps): Bands 1, 2, 4, 5, 8
 - Power: LTE 23 dBm ± 1, HSPA+ 23 dBm ± 1
 - Antennas: SMA & RSMA male plugs, torque not to exceed 4 in-lbs





- GPS: active GPS support
- SMS: SMS support
- Industry Standards & Certs: CE, FCC, GCF-CC, IC, PTCRB, AT&T, Sprint, Verizon, Verizon NEMO/DMNR for Primary Wireless
 Access

FirstNet and FirstNet Ready are registered trademarks and service marks of the First Responder Network Authority, an independent authority within the U.S. Department of Commerce.

Support & Warranty

The COR IBR1700 is only sold as a component of NetCloud Packages.

- NetCloud Packages include support for the full subscription term.
- All Cradlepoint hardware products are covered by a limited lifetime warranty for as long as they are under a NetCloud Service Plan.



^{*} Theoretical

^{**} To be enabled with a future modem software update.

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Hardware

Тор

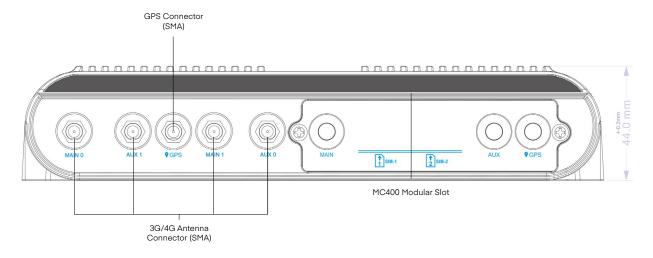




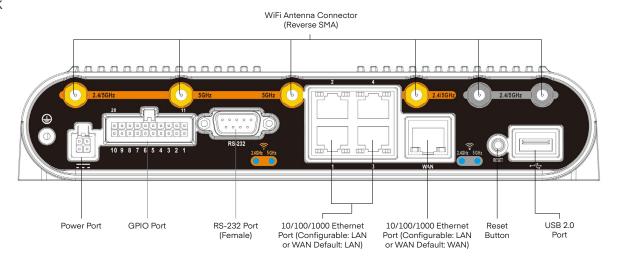
Front

(COR IBR1700-1200M shown)

1200M model = 2 MAIN, 2 AUX 600M model = 1 MAIN, 1 AUX



Back



IBR1700 2x10 Connector			
PIN	Bottom Row	6	GPIO1
1	Router Voltage Input	7	GPIO2
2	Router Voltage Input	8	GPIO3
3	ADC Channel 1	9	GPIO4
4	ADC Channel 2	10	Low Current 5V Output (50mA max)
5	GPI / Ignition Sense	11-20	GND Top Row





LEDs

Indicator	Behavior
O	Power: The Cradlepoint IBR1700 must be powered using an approved 9–36 V DC power source. — Green = Powered ON. — Yellow = Attention is required. — No Light = Not receiving power. Check the power source connection.
•	 GPS: Indicates the status of GPS connection. Blue = GPS locked. Blinking Blue = Obtaining lock. No Light = Off/no lock.
Ð	 MC400 Modem: Indicates information about the optional MC400 modem. Green = Modem has established an active connection. Blinking Green = Modem is connecting. Amber = Modem is not active. Blinking Amber = Data connection error. No modem connection possible. Blinking Red = Modem is in the process of resetting. No Light = Modem not connected.
Y	Integrated Modem: Indicates information about the integrated modem. — Green = Modem has established an active connection. — Blinking Green = Modem is connecting. — Amber = Modem is not active. — Blinking Amber = Data connection error. No modem connection possible. — Blinking Red = Modem is in the process of resetting. — Blinking Red with Signal Strength LEDs = SIM door is not installed, modem is off. — No Light = Modem not connected.
Yull	Signal Strength: Blue LED bars indicate the active modem's signal strength. — 4 Solid Bars = Strongest signal. — 1 Blinking Bar = Weakest signal. (A blinking bar indicates half of a bar.) — 4 Blinking Bars = SIM door is not installed, modem is off
2.4GHz 5GHz	 WiFi Status Indicates information about WiFi channels. 2.4 GHz Green = Activity on 2.4 GHz WiFi band. 5 GHz Blue = Activity on 5 GHz WiFi band.
*	WiFi as WAN: Indicates WiFi as WAN status.White = WiFi as WAN active.
Other	 Additional LED Indications: Several different LEDs blink when the factory reset button is detected. Two of the modem LEDs blink red in unison for 10 seconds when there is an error during NCOS upgrade. When an external USB modem is plugged in, only the Signal Strength LEDs will light up.

