



SETTING THE NEW  
STANDARD FOR THE  
NEXTGEN NETWORK



## Product Highlights

- Compact Footprint
- Offers ITU Stratum over IP
- PTP/IEEE-1588 V2 Slave Clock
- Hardware based, 100 Mbps wirespeed NTP processing
- Nanosecond timestamp accuracy
- NTP/PTP Time Client
- Integrated Web Server
- External Reference Inputs:  
GPS (Optional), NTP/PTP
- Outputs:
  - (2) T1 or E1 outputs, framed or unframed, with or without Synchronization Status Messaging, AMI/B8ZS (T1) G.704, with or without CRC-4 (E1)
  - (1) PPS, PPM, PP2S output, TTL format
  - (1) 10/5/1 MHz Sine Wave
- NTP/PTP Based Bridging/Holdover
- Embedded web server GUI
- Local or remote management through telnet/SSH
- Local indicators for operational verification
- -48 VDC Nominal, (-18 to -72 VDC wide voltage range), or optional AC powering via adapter
- 19-inch (48.3cm) Rack mount, or desktop
- Outdoor Temperature Hardened
- Several OCXO options available

# StarSync Edge 6800

Stratum 1 NTP/PTP  
Edge Client/Edge BITS



Powered by brilliant

The StarSync Edge 6800 from CXR Larus is a 19-inch rack-mountable or desktop NTP/PTP IEEE-1588 V2 Slave clock or local edge BITS that delivers multiple synchronous outputs in a very cost efficient and flexible platform. The footprint is extremely small, in fact two Starsync 6800 Edge clocks will consume only 1 RU of valuable rack space.

The StarSync Edge 6800 provides ITU Stratum level timing over IP or MPLS networks by utilizing Stratum 1 reference sources, such as GPS, or NTP/PTP packets provided from a precise NTP/PTP time server or Grandmaster clock, such as the CXR Larus StarSync 6850.

Four outputs are available from the StarSync 6800, (2) T1 or E1, software selectable, (1) 1 Pulse per Second, 1 Pulse per Minute, or 2 Pulses per Second, also software selectable, and (1) 1 MHz, 5 MHz or 10 MHz sine wave, also software selectable. The extremely small footprint, combined with temperature hardening makes this the perfect solution for harsh outdoor pedestal or hut environments.

The StarSync Edge 6800 can also be used to manage key performance indicators such as a highly accurate (low single digit microsecond accuracy), latency and jitter measurements on a one-way or roundtrip basis.

*The StarSync Edge 6800's extremely small footprint and temperature hardened engineering makes it ideal for outdoor pedestal or hut environments*



# CXR Larus StarSync Edge 6800

## Specifications:

### PHYSICAL

Nominal Input Voltage: -48 VDC  
 Input Voltage Limits : -18 VDC to -72 VDC

Optional: AC powering via adapter

Dimensions (W x D x H): 8.5 in (21.59 cm) X 12-in (30.5 cm) X 1.75-in (4.4 cm)  
 Rack mountable with optional tray

Weight: 2.25 lbs (1.02 kg)

### ENVIRONMENTAL

Operating Temperature: -40°F to 144°F (-40C to 65°C)

Relative Humidity: 0% to 85%, noncondensing

### REFERENCE INPUTS

NAVSTAR GPS standard, GLONASS, Galileo, future options

NTP from precise NTP Server, such as **CXR Larus StarSync 6850**

### OUTPUTS

**(2) T1/E1** (See ordering information)  
 RJ-48C connector

#### T1 port format

Transmit/receive bit rate—1.544 Mbps  
 Line encoding—AMI, B8ZS  
 Framing—Superframe (D4/SF), Extended Superframe (ESF) with or without SSM support

#### E1 port format

Transmit/receive bit rate—2.048 Mbps  
 Line encoding—HDB3  
 Framing—G704, G704 without CRC4, unframed with or without SSM support

### (1) PPS, PPM or 2PPS Output

Software selectable  
 5 ns rise, 30 ms duration square wave, 3.3V nominal level  
 BNC connector

### (1) 10/5/1 MHz Output

Software selectable  
 3.3 V peak-to-peak nominal into 50 ohms, sine wave  
 BNC Connector

### TIMING ACCURACY

**Timing- Locked to GPS**  
**Frequency- 1 X 10<sup>-12</sup>**  
**Accuracy- 100 ns to UTC**

**Locked to eNTP Peer-**  
**Frequency- 50 ppb**  
**Timing- < 3 usec to UTC**

### HOLDOVER ACCURACY

**OCXO- Stratum 3-** 2 X 10<sup>-9</sup> or 173 usec to UTC for 24 hrs  
**OCXO- Stratum 3E-** 1X 10<sup>-9</sup> or 86 usec to UTC for 24 hrs

### APPLICABLE PROTOCOLS / STANDARDS

ANSI T1.101  
 DiffServ/DSCP (RFC 2474)  
 FTP (RFC 959)  
 HTTP/HTTPS (RFC 2616)  
 IEEE 1588 v2 (PTP)  
 IPv4  
 ITU G.811, G.812, G.813, G.823, G.824, G.703, G.704  
 NTP v2 (RFC 1119), v3 (RFC 1305), v4 enhanced  
 SMTP forwarding  
 SNMP v1 (RFC 1157), v2 (RFC 1448), v3 (RFC 2271), MIB II (RFC 1213)  
 SSH (RFC 4250-4254) SSL v1, v2, v3  
 Telnet (RFC 854)  
 802.1q, 802.1p, 802.3, 802.3af  
 UL/CSA, CE, RoHS, WEEE

## Ordering Information:

**Note:** Add an “E” after the model number for E1 operation, ie: **6800-11E**, otherwise the unit will be delivered with T1 capability (Default)

| Model   | Description   |
|---------|---|
| 6800-31 | StarSync Edge NTP/PTP Client, (OCXO- Stratum 3), No GPS, NTP Enabled    |
| 6800-32 | StarSync Edge NTP/PTP Client, (OCXO- Stratum 3), No GPS, PTP Enabled    |
| 6800-41 | StarSync Edge NTP/PTP Client, (OCXO- Stratum 3), With GPS, NTP Enabled  |
| 6800-42 | StarSync Edge NTP/PTP Client, (OCXO- Stratum 3), With GPS, PTP Enabled  |
| 6800-51 | StarSync Edge NTP/PTP Client, (OCXO- Stratum 3E), No GPS, NTP Enabled   |
| 6800-52 | StarSync Edge NTP/PTP Client, (OCXO- Stratum 3E), No GPS, PTP Enabled   |
| 6800-61 | StarSync Edge NTP/PTP Client, (OCXO- Stratum 3E), With GPS, NTP Enabled |
| 6800-62 | StarSync Edge NTP/PTP Client, (OCXO- Stratum 3E), With GPS, PTP Enabled |
|         |   |
|         |   |
|         |   |

## Accessories:

|  |   |
|--|---|
| 007-02319-000, GPS Antenna Kit, w/50 ft RG58 coax          | 007-02319-004 Down/Up Converter Antenna kit, up to 1500 ft coax |
| 007-02534-000, Lightning Protection Kit, w/50 ft RG58 coax | 039-02770-000, Wall mount AC Adapter                            |
| 038-02769-000, 19" Rack Mounting Tray (holds 2 6800s)      | Other accessories available, Contact Factory for information    |