# UHF eRadio HX-DU8616D

**Harxon**
a *BDStar* company



## SMART AND HIGH EFFICIENT RADIO MODEM FOR FAST DATA TRANSMISSION

### HIGH PERFORMANCE WIRELESS DATA LINKS

HX-DU8616D  is an advanced, high speed, high power wireless data link built to withstand the demanding conditions of GNSS/RTK surveying and precise positioning. Due to the 35W high transmitting power, connection distances up to 20 kilometers can be covered in favorable conditions.  It is designed with a ruggedized IP67 weatherproof enclosure to withstand extreme environments.

### INTELLIGENT SERIAL BAUD RATE IDENTIFICATION

HX-DU8616D supports intelligent serial baud rate identification function for different RTK devices. It can automatically identify RTK serial baud rate with radio data cable and provide a plug and play form for easy connection between eRadio and RTK.

### MULTIPLE OPERATING MODES

HX-DU8616D is an easy-to-use radio modem that provides dependable performance as either a base, or radio repeater working with other Harxon radio modems in challenging environments. In the store and forward operating mode, eRadio receives messages, buffers the received data, and transmits further to another substation.

### CONVENIENT MOBILE APP OPERATIONS

The user programmable eRadio also supports the Bluetooth of APP to configure data and updates radio status. Its diagnostic reporting software can realize the built-in reliability monitoring, such as internal temperature, environment status, battery level and channel inspection etc., these features allow users to both anticipate and deal with potential issues efficiently.

### MULTIPLE COMMUNICATION PROTOCOLS

HX-DU8616D is a highly versatile device that is capable of supporting multiple communication protocols, including ETALK, TRIMTALK™, TRIMMARK™3, Transparent-EOT, SATEL®, and the unique ETALK communication protocol developed by Harxon. With this wide range of communication protocols, HX-DU8616D is able to connect and communicate with a variety of different devices and systems.

## KEY FEATURES

• Supports H/M/L three level transmission power(customized)

• Supports serial baud rate identify between 115200bps、57600bps、38400bps、19200bps、9600bps

• Compatible communication protocols of ETALK, TRIMTALK™, TRIMMARK™3, Transparent-EOT, SATEL®

• Supports mobile APP data configuration[1]

• User friendly OLED screen display

• IP67 rugged protection

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## GENERAL

| | |
|---|---|
| **Frequency** | 410MHz~470MHz |
| **Operating Mode** | Transceiver |
| | Transmitter |
| | Radio Repeater |
| **Channel Width** | 12.5KHz/25KHz |
| **Channels** | Up to 32 programmable channels (user selectable) |
| **Operating Voltage** | 9V~16V |

**Power Consumption（Typical）**

| | |
|---|---|
| Transmit Output Power H:(35W) | 85W@12V DC |
| Transmit Output Power M:(22W) | 60W@12V DC |
| Transmit Output Power L: (5W) | 35W@12V DC |
| Sleep State | 2W@12V DC |
| **Frequency Stability** | <±1ppm |
| **Ingress Protection Rating** | IP67 |
| **Dimension** | 175(H)×130(W)×86.5(D)mm |
| **Weight** | 2kg |
| **Operating Temperature** | -40℃ to +65℃ |
| **Storage Temperature** | -50℃ to +85℃ |
| **Connector** | TNC female |
| **Data Connector** | LEMO 5pin |

## TRANSMITTER

| **RF Output Power** | |
|---|---|
| H:35W | 45.4±0.5dBm @DC 12V |
| M:22W | 43.4±0.5dBm @DC 12V |
| L:5W | 37±1dBm @DC12V |
| **RF Power Stability** | ±1dB |

## RECEIVER

| | |
|---|---|
| **Sensitivity** | <-114dBm@BER $10^{-5}$, 9600bps |

## DATA MODEM

| | |
|---|---|
| **Data Rate** | 4800bps/9600bps/19200bps |

**Data Speed of Serial Interface**

9600、19200、38400、57600、115200bps

| **Modulation** | GMSK/4FSK |
|---|---|

## BLUETOOTH

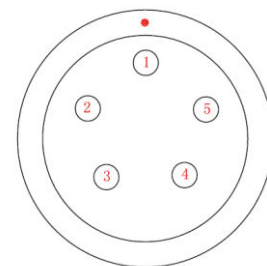| | |
|---|---|
| **Bluetooth Version** | 2.0/4.0 |
| **Bluetooth Antenna** | Built-in |

1: the Bluetooth version supports mobile APP data configuration

## Structure Diagram(mm)
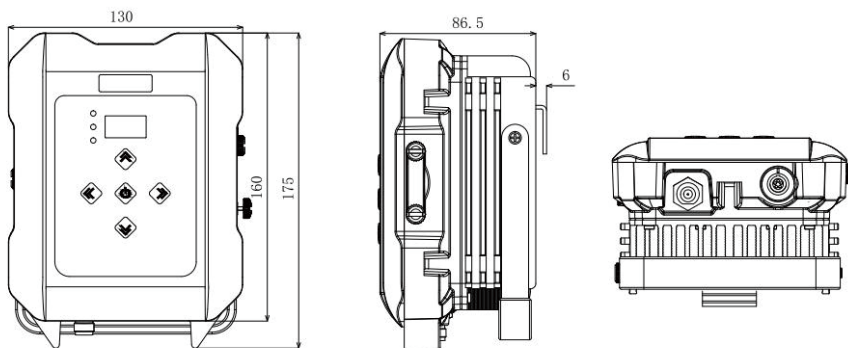


Undeclared Tolerance:±0.3mm

## Interface Pin Definition



Interface Type:
Asynchronous Serial Communication RS232

Pin 1—POWER SUPPLY, 9~16V DC
Pin 2—POWER GND
Pin 3—RXD
Pin 4—SERIAL PORT SIGNAL GND
Pin 5—TXD