



### Technical Data

#### Frequency range:

Band III: 174 – 240 MHz  
L Band: 1452 – 1492 MHz

#### Sensitivity:

Band III: -3 dBm to -98 dBm typ.  
L Band: -5 dBm to -93 dBm typ.

#### Ratings:

3.3V to 5V DC, typ. 4.8V, 170mA  
Power saving algorithms enabled:  
3.3V to 5V DC, typ. 4.8V, 100mA

Operating temperature range:  
-10°C to +65°C

#### Output:

RS-232, up to 115.200 bps,  
USB (on CDR30 board)

#### Status information:

Via status LEDs and host readout

#### Command set:

Extended HLCI

#### Integrated battery charger:

Fast charges NiMH battery 4.8V, 2000mAh

#### Dimensions:

Approx. 120 x 64 x 10 mm

### Features

- Receives DAB data services and performs onboard data service decoding.
- Capable of decoding and outputting multiple data services simultaneously.
- Supports any possible DAB transmission channel: Packet Mode, PAD, FIC / FIDC.
- Failsafe operation by performing data service monitoring and system self-monitoring. Thus perfectly suited for industrial applications.
- Supports IP datagram tunnelling (3 individual addresses + 3 group addresses).
- Can be battery powered (charger included on board).
- No DAB knowledge required for implementation.
- Powered by Frontier Silicon's 'Diablo'<sup>™</sup> DAB module / 'Chorus'<sup>™</sup> CPU.
- Fully software-based technology, allowing maximum flexibility.

### Applications

- Differential GPS
- Electronic displays / billboards
- Traffic telematics (TMC / TPEG)
- Public transportation:
  - Passenger information in vehicles or at stops,
  - Multimedia infotainment,
  - Announcements, security.
- Remote control via DAB networks:
  - Dynamic traffic signs,
  - Parking information,
  - Alerting,
  - Lighting.
- DAB networking:
  - In-house data decoding,
  - Equipment remote control,
  - Data service monitoring and analysis.
- Upgrading data service applications from RDS or DARC to DAB

CDR20 is a compact, standalone, highly reliable data receiver board, primarily designed for industrial DAB applications. The receiver performs the entire DAB data service decoding. No further processing of received data is required on the target system. This enables the target system to handle the DAB transmission chain transparently, just like a cable or a modem interconnection.

Onboard monitoring within the receiver ensures failsafe operation by permanently watching the system and the data service, and by applying auto-recovery measures when necessary.

The receiver is built around Frontier Silicon's 'Diablo'<sup>™</sup> DAB module, thus combining excellent reception characteristics with low power consumption. Data service decoding is performed by specifically developed code which runs on the DAB module's CPU. There is sufficient CPU power left to implement new or application-specific code without changing the hardware. Firmware upgrade is possible via the receiver's interfaces or even via the DAB data service.

A Windows application is available for receiver setup, firmware upgrade and data service monitoring.

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