

# 7880DM-FM Series

## FM/FM-HD/ Demodulators

The 7880DM-FM series is a complete hardware based solution for demodulating analog and digital FM//FM-HD signals. With a modular form-factor, the 7880DM-FM represents one of the highest density and most flexible solutions in the industry providing 8 demodulators in a single slot card.

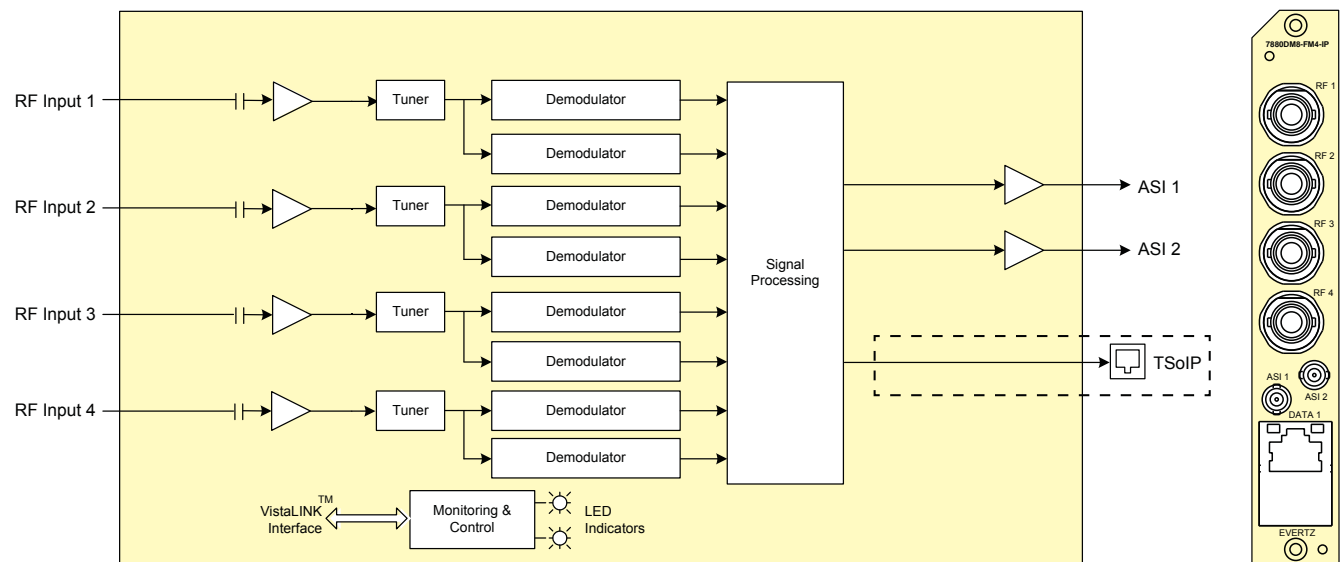
Applications include signal reception for cable, DTH and IPTV providers, or any other small to large head-end operators who need to receive and distribute local content. The 7880DM-FM has IP output, ideal for turnaround, transcoding, transporting, monitoring or other applications where the received signal remains in the compressed domain.

Advanced RDS (Radio Data System) and RBDS (Radio Broadcast Data System) decoder and processor for demodulation, symbol decoding, block synchronization, error detection, and error correction. The RDS decoder provides several significant benefits including very fast and robust RDS synchronization in noisy signal levels with very high block error rates (BLER), industry-leading sensitivity, and improved data reliability in all signal environments.

Monitoring parameters such as RSSI, SNR and channel stability presents a convenient solution for broadcasters and cable companies who wish to not only receive, but also remotely monitor signal quality. These parameters as well as full control of the demodulator are relayed over SNMP, for convenient remote access using Evertz' own VistaLINK® PRO SNMP monitoring and control package.

### Features & Benefits

- Modular design, allowing flexible configurations along with easy system reconfiguration and service
- 8 FM Tuner modules with digital output for MPEG encoding, streaming
- Supports WorldDMB Receiver Profiles 1 and 2
- Advanced audio DSP processing
- Programmable FM tuner parameters (FM stereo-mono blend, dynamic FM channel bandwidth, AM/FM hi-cut filters)
- Incorporate a preemphasis filter to improve the signal-to-noise ratio of FM receivers
- Monitoring of FM quality parameters and RDS signal parameters (PI, PS)
- Comprehensive signal quality metrics: RSSI, SNR, frequency offset, and channel stability
- Up to four units may be mounted in the 7801FR 1RU chassis, capable of receiving 32 FM signals in 1RU
- Up to fourteen units may be mounted in the 7800FR 3RU chassis, capable of receiving 112 signals in 3RU
- Local control panel option available in 1RU frame
- Remote control panel option available in 3RU frame
- Control through web-browser or SNMP using third-party application or Evertz' own SNMP control and monitoring software
- SMPTE 302 compliant TSolP outputs per demod
- 8 channels (MPTS/SPTS) via IP (RTP, optional: UDP Unicast/Multicast)
- Optional IP FEC encoding in output stream
- Advanced RDS (Radio Data System) and RBDS (Radio Broadcast Data System) decoder and processor



\*Note: ASI 1 & 2 ports are not usable

### Specifications

<p><b>RF Inputs:</b></p> <p>Tuner: 8 FM tuner</p> <p>Connector: 4x F-Connector</p> <p>Impedance: 75 Ω</p> <p>Frequency Range: Worldwide FM band :76-108 MHz Worldwide FM-HD band: 87.5-108 MHz</p> <p>Frequency Step: 10 KHz minimum</p> <p>Tune Time: FM Mode: 1.5 ms Typical AM band 15 ms Typical</p> <p>Seek/Tune Time: FM Mode: maximum 60 ms/ch FM-HD : maximum 120 ms/ch</p> <p>Maximum Signal Power: FM mode: 25-112 dBuV typical FM-HD mode: 25-93 dBuV typical</p> <p>Return Loss: &gt;15dB</p> <p>IP3: FM mode: 96 dBuV typical, 90 dBuV minimum FM-HD Mode: 91 dBuV typical</p>	<p><b>Audio Sensitivity:</b></p> <p>FM mode: 0.7 dBuV typical, 1 dBuV maximum</p> <p>FM-HD mode: 6 dBuV typical, 17 dBuV maximum</p> <p><b>RDS Sensitivity:</b></p> <p>FM mode: 4 dBuV typical</p> <p>FM-HD mode: 6 dBuV typical</p> <p>L/R Imbalance: from -1 to 1 dB at 75 KHz deviation</p> <p><b>Adjacent Channel selectivity (+/-200KHz):</b></p> <p>FM mode: 50 dB typical, 35 dB minimum</p> <p>FM-HD mode: 37 dB typical</p> <p><b>ASI Outputs:</b></p> <p>Connector: Mini DIN 1.0/2.3</p> <p>Number of Connector:2</p> <p><b>TSolP Output:</b></p> <p>Connector: RJ45, 10/100/1000Mbps</p> <p>Type: SMPTE 302 over IP</p> <p><b>Control:</b></p> <ul style="list-style-type: none"> <li>• SNMP over Ethernet via FC</li> <li>• Web browser via FC</li> </ul>	<p><b>Monitored parameters:</b></p> <ul style="list-style-type: none"> <li>• Channel stability</li> <li>• Frequency offset</li> <li>• RSSI</li> <li>• SNR</li> <li>• RDS and service text</li> </ul> <p><b>Electrical:</b></p> <p>Voltage: +12V DC</p> <p>Power: &lt;24W</p> <p>EMI/RFI: Complies with FCC Part 15 Class A EU EMC Directive</p> <p><b>Optional SMPE2022-1 FEC encoding with L&amp;D following the following range:</b></p> <ul style="list-style-type: none"> <li>• L'D ≤100</li> <li>• 1 ≤L ≤20</li> <li>• 4 ≤D ≤20</li> <li>• if L &lt; 4, then D = 4 lways</li> </ul>
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► **Ordering Information**

**7880DM8-FM4-IP:** Eight Channel FM/FM-HD demodulator with Four RF inputs, ASI and IP output

**Ordering Options:** Rear plate must be specified at time of order (Eg. [model]+3RU)

**+B75** 75Ω, BNC connector for RF input

**+FEC** Forward Error Correction Capability for IP output (for -IP and -IPASI models)

**Rear Plate Suffix:**

**+3RU** 3RU rear plate for use with 350FR, 7800FR, 7800FR-QT, 7801FR or 7801FR+IRDCCP Multiframe

**Enclosures:**

**350FR** Portable Multiframe which holds 7 single slot modules

**7800FR** 3RU Multiframe which holds 15 single slot modules

**7800FR-QT** 3RU Quiet Multiframe which holds 15 single slot modules

**7801FR** 1RU Multiframe which holds 4 single slot modules

**7801FR+IRDCCP** 1RU Multiframe with front control panel installed

**Accessories:**

**+781PS** Redundant power supply (optional)

**7801FC** Frame controller module for use with 7801FRs