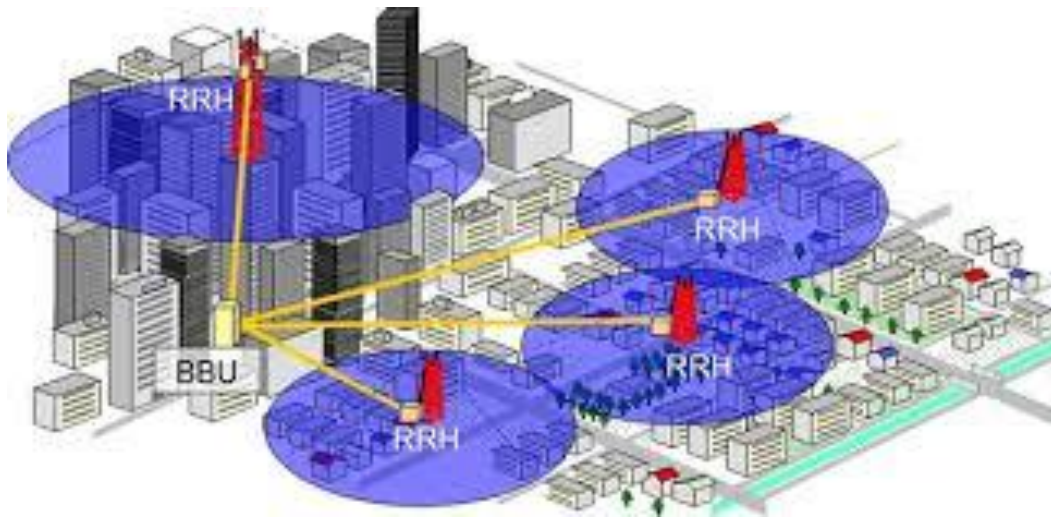


## Orion IPL8001MX - CPRI over OTN Processor Core

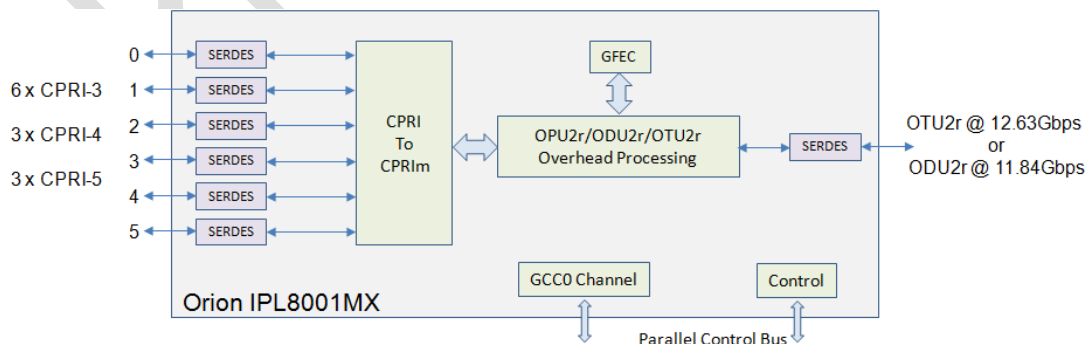
The first IP Core OTN processor optimized for Cloud-RAN (C-RAN) Mobile Front-Haul (MFH) applications.

### C-RAN Architecture:



The CPRI over OTN processor incorporates a multiplexing and mapping scheme for CPRI signals which optimizes the transport of CPRI (Common Public Radio Interface) signals between RRH (Remote Radio Head) antennas and centralized BBU (Base Band Unit) sites. It includes optional Forward Error Correction (FEC) and supports CPRI signals Option 3, Option 4 and Option 5.

### IPL8001MX CPRI over OTN Processor IP Core Block Diagram

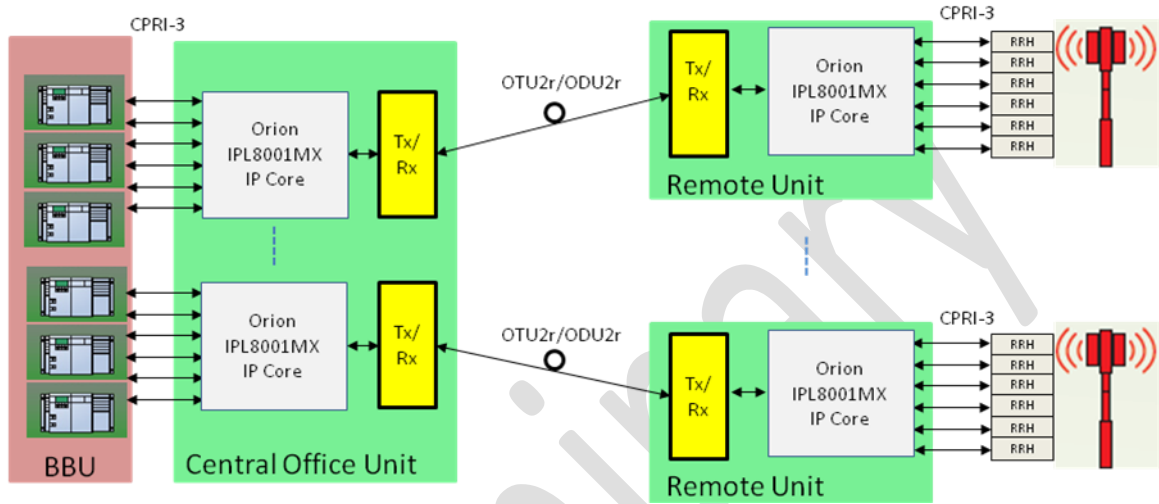


IP Light's Orion CPRI over OTN Processors have been optimized for the effective transport of CPRI signals over fiber networks between RRH and BBU sites. The CPRI over OTN Processor combines multiple CPRI signals into a single CPRI<sub>m</sub> aggregate

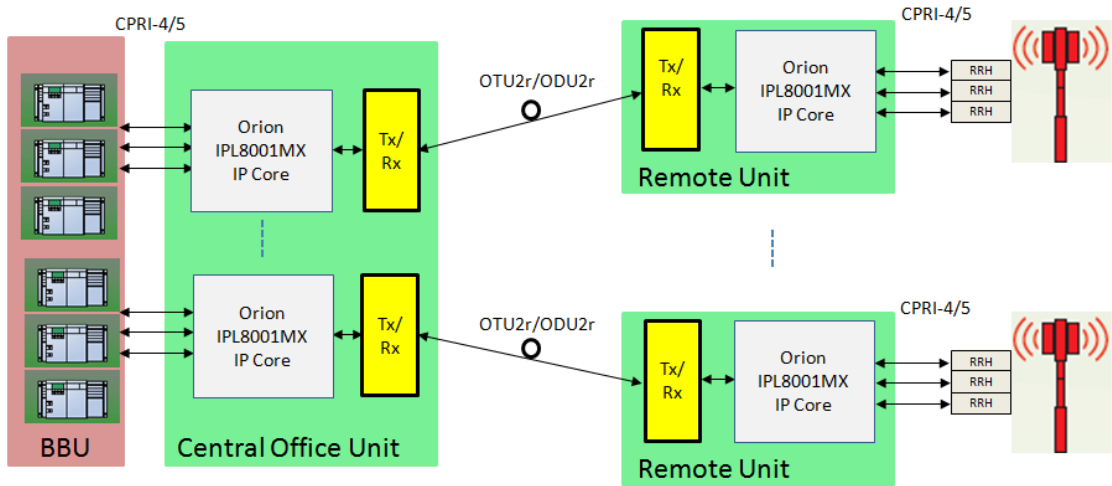
that is then synchronously mapped into an OPU2r container and is presented to the line port as 12.6Gbps OTU2r signal or 11.8Gbps ODU2r (OTU2r No FEC) signal.

**Typical Applications**

**Example: 6 x CPRI-3 signals**



**Example: 3 x CPRI-4/5 signals**



**IPL8001MX CPRI over OTN Processor IP Core: Key Features and Benefits**

<p><b>Line Ports:</b></p> <ul style="list-style-type: none"> <li>• OTU2r (12.639Gbps)</li> <li>• ODU2r (11.846Gbps)</li> <li>• Integrated GFEC</li> <li>• G.709 performance Monitoring and Alarms</li> </ul>	<p><b>CPRI Multiplexing:</b></p> <ul style="list-style-type: none"> <li>• 6 x CPRI-3 signals byte interleaved to CPRIm.</li> <li>• 3 x CPRI-4 signals byte interleaved to CPRIm.</li> <li>• 3 x CPRI-5 signals byte interleaved to CPRIm.</li> <li>• CPRIm mapping to OPU2r container</li> </ul>	<ul style="list-style-type: none"> <li>• Compliance with ITU-T G Suppl. 56 Section 8</li> <li>• Meets CPRI-3/4/5 requirements</li> <li>• Jitter/Wander control by flexible timing methods</li> </ul>
<p><b>Client Ports:</b></p> <ul style="list-style-type: none"> <li>• CPRI option 3 (2.457Gbps)</li> <li>• CPRI option 4 (3.072Gbps)</li> <li>• CPRI option 5 (4.915Gbps)</li> <li>• PCS Monitoring and Alarms</li> </ul>	<p>Extremely low latency:</p> <ul style="list-style-type: none"> <li>• Less than 0.7 <math>\mu</math>Sec End-to-End CPRI signal delay</li> <li>• Less than 6<math>\mu</math>Sec End-to-End CPRI signal delay with GFEC.</li> </ul>	<ul style="list-style-type: none"> <li>• Alarm supervision, suite of maintenance capabilities.</li> <li>• Register based Configuration and Control</li> <li>• Easy and Simple integration into Xilinx’s Kintex UltraScale FPGA family</li> </ul>
<p><b>Xilinx FPGA Utilization:</b></p> <ul style="list-style-type: none"> <li>• <b>75,000 flip-flops</b></li> <li>• <b>80,000 LUTs</b></li> <li>• <b>200,000 memory bits</b></li> <li>• <b>7 transceivers (GTH), operating speed up to 12.65Gbps</b></li> </ul>		