Radiant QRF5000 Series leverages advanced engineering and intelligent, user-friendly design to rapidly and cost-effectively deploy all-digital lineups to low-cost digital set-tops. Affordable for HFC, Fiber Deep N+0, RFoG, Hybrid PON and PON deployments of all sizes, the unit is ideal for MDUs, hotels, hospitals, gated communities, casinos, and retirement centers.

QRF-5000 Encoder - a plug-and-play device that encodes local baseband video and audio channels and multiplexes them with a built-in QAM modulator and a broadcast agile RF up converter for distribution into existing cable network.

With digital services increasingly being used to deliver video to the home, operators are focused on enhancing the subscriber’s viewing experience by increasing the variety of services they offer and improving quality, while still maintaining a cost-efficient and easy-to-manage infrastructure.

QRF5000FXGA
One unit for any network.
Featuring QAM, Analog ITU laser, DFC GigE Laser output, IP and ASI outputs.

Product Highlights
- QBA and MPEG2 Compliant
- Flexible Channel Selection Capability
- Broadcast Quality MPEG2 Encoder
- Dolby Digital 2.0 Audio
- ITU Analog Laser Output
- 40km SBS suppression
- DFC GigE Output
- QAM and ASI Outputs
- Low Power Consumption
- User Friendly Graphical Interface
- Single or Multiple node insertion
- Continuous quality and feature upgrades via firmware releases without service plans
- 24/7 Support and 24 Hour RMA Process
Applications

Single Node QAM over fiber insertion for Fiber Deep, RFoG and FTTx

The QRF5000 for optical video insertion in N+0, PON with overlay and RFoG networks is a cost effective solution to insert locally generated MDU content as MPEG-2 SD QAM RFoG streams.

For Remote PHY, EPON/GPON the insertion can be done over IP via GigE DFC port on the unit.
Specifications

Encoder:
From 1.5 to 15M MPEG2 Encoder
Resolutions: 720, 704, 528, 480 and 352x480
Video Input: CVBS or S-Video
Audio Input: 10k Unbalanced RCA, 600 Balanced
Audio Codec: Dolby Digital AC3 2.0, 128-384kbps

Management Interface:
Out of Band Management via GUI and HTTP

Environmental:
Power 40W@90 to 240VAC (DC Power Brick), fully loaded
Operating Temperature 0° to 50° C
Storage Temperature -10° to 60° C

Dimensions and Weight:
8.5” W x 6.65” D x 2.75” H, 3lbs

QAM Modulator:
QAM 64 or 256 per ITU-J.83 Annex B
RF Output Accuracy +/- 2 dB +/- 5000 Hz
RF Output Stability +/-1 dB relative to RF Output level RF
Output Return Loss >14 dB 88-750 MHz, >13 dB 750-870 MHz
Frequency Range - Agile - 54MHz to 1GHz
In-Channel Spurious and Noise >41 dBC Equalized MER

Optical Output:
Wavelength: 1310nm, 1550nm, CWDM 1270-1610nm, DWDM ITU from ch18 to ch.54
Output Power: 7dBm
Frequency Range : 47MHz to 1GHz
OMI 11%

GigE Output:
MPEG-TS MPTS output over standard GigE SFP port

<table>
<thead>
<tr>
<th>Model</th>
<th>HFC</th>
<th>N+0</th>
<th>RFoG</th>
<th>RFoG/PON</th>
<th>QAM/PON</th>
<th>EPON/GPON</th>
<th>DFC</th>
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<tbody>
<tr>
<td>QRF5000</td>
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</table>

1 Insertion into the output of a single node via RF QAM, for multi node insertion use analog laser output option unit
## ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>QRF5000-Y</td>
<td>1RU, QAM and GigE Output Edge Encoder</td>
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<tr>
<td>QRF5000-MY</td>
<td>Modular, QAM and GigE Output Edge Encoder</td>
</tr>
<tr>
<td>QRF5000-YFXZ</td>
<td>1RU, Analog ITU Laser Output Edge Encoder</td>
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<tr>
<td>QRF5000-YMFXZ</td>
<td>Modular, Analog ITU Laser Output Edge Encoder</td>
</tr>
<tr>
<td>QRF5000-YFXGZ</td>
<td>1RU, GigE SFP and Analog ITU Laser Output Edge Encoder</td>
</tr>
<tr>
<td>QRF5000-YMFXGZ</td>
<td>Modular, GigE SFP and Analog ITU Laser Output Encoder</td>
</tr>
<tr>
<td>QRF5000-YFXGAZ</td>
<td>1RU, QAM, ASI, GigE SFP Analog and ITU Laser Encoder</td>
</tr>
<tr>
<td>QRF5000-YMFXGAZ</td>
<td>Modular, QAM, ASI, GigE SFP and Analog ITU Laser Encoder</td>
</tr>
<tr>
<td>QRF5000-ENC</td>
<td>MPEG2 Encoder Card, CVBS, S-VIDEO, 10k RCA Audio</td>
</tr>
<tr>
<td>VL4125B-ENC</td>
<td>MPEG2 Encoder Card, CVBS, S-VIDEO, 600 Ohm Audio</td>
</tr>
<tr>
<td>QRF5000-HDMI</td>
<td>MPEG2 Encoder Card, HDMI</td>
</tr>
</tbody>
</table>

**Note:**

Replace (Y) in the part number for number of Channels/Encoders, Up to 2 for QRF5000M Series and up to 4 for QRF5000 Series.

Replace (Z) in the part number with desired wavelength or ITU channel for the analog laser.

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