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 systems of all sizes, the Eclipse Series 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.

Product Highlights
- QBA and MPEG2 Compliant
- Flexible Channel Selection Capability
- Broadcast Quality MPEG2 Encoder
- Dolby Digital 2.0 Audio
- QAM De-mod Tuner
- ASI Input and Output
- Low Power Consumption
- Packaged as 1RU, Secured Wall-mount and Table Top Mini Unit
- User Friendly Graphical Interface
- QAM, ASI and Optical Outputs
- Continuous quality and feature upgrades via firmware releases without service plans
- 24/7 Support and 24 Hour RMA Process
Product Benefits

Featuring standard definition encoding, with features as MPEG-2 multiplexing, ASI Input/Output, DeQAM tuner and QAM modulation and up conversion, the QRF5000 allows operators to receive the existing RF transport from the headend and then drop and/or add locally encoded services. With the DeQam it allows systems to not only reuse the RF spectrum by reutilizing existing frequencies, but also, since mapping the new service to predefined program IDs, the current Set Top Box channel map can remain.

With bandwidth being as valuable as some precious metals these days the Radiant Eclipse series further decreases operational overhead costs allowing operators to make the transition to digital, with an ideal, flexible and future-proof path to the all-digital domain.

Radiant QRF5000 is an embedded, hardware-based solution compliant with all relevant industry standards. It was built with the operator in mind—a simple to use front panel provides complete control over the platform, while an IP interface allows for an external modem to provide remote functionality. The feature-rich platform consumes little power and generates less noise. In addition, it is designed to be placed anywhere in the building, from the basement to the lobby.

Applications
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

**QAM De-mod Tuner:**
- Annex B54/256 F-Type, 75 Ohm Input
- Frequency Range: 57-861MHz
- Input Power: -12dBmV to +23dBmV

**TS In/Out:**
- DVB-ASI BNC, 75 Ohm, 54M CBR MPTS/SPTS GigE
- SFP TS Output, up to 54M

**Management Interface:**
- Front panel LCD/Keypad (QRF5000 and QRF5000W only)
- Out of Band Management via GUI and HTTP

**Environmental:**
- Power 30W@90 to 240VAC (DC Power Brick), fully loaded
- Operating Temperature: 0° to 50° C
- Storage Temperature: -10° to 60° C

**Certifications:**
- EMC Directive: 89/336/EEC
- Generic Emissions Standard: EN61000-6-3:2001
- Product Specific Emissions: EN55022 Class A, FCC Part 15 Class B
- Generic Immunity Standard: EN 61000-6-1:2001
- Electrostatic Discharge: EN 61000-4-2
- Radiated Susceptibility: EN 61000-4-3
- Electrical Fast Transient/Burst: EN 61000-4-4
- Surge: EN 61000-4-5
- Conducted Susceptibility: EN 61000-4-6
- Voltage Dips and Interruptions: EN 61000-4-11

**QAM Modulator:**
- QAM 64 or 256 per ITU-J.83 Annex B
- RF Output Level 44 - 58 dBmV
- RF Output Adjustment Step Size 0.5 dBmV
- RF Output Accuracy +/- 2 dB +/- 5000 Hz
- RF Output Stability +/- 1 dB relative to RF Output level RF
- Output Return Loss >14 dB 177 - 750 MHz, >13 dB 750 - 870 MHz
- Frequency Range: Agile 93 MHz (Ch 7) to 876 MHz (Ch 137)
- RF Muting Ratio >65 dB
- In-Channel Spurious and Noise >41 dBc Equalized MER

**Optical Output:**
- 1310nm, 1550nm, CWDM, 1mW DFB laser, SC/APC or LC/APC
- Input Level: 0 - +35dBmV

**Dimensions and Weight:**
- 1RU 17.0” W x 9.0” D x 1.75” H, 5lb
- Wallbox: 13.0” W x 9.0” D x 11.0” H, 14lb
- Mini Table Top: 8.5” W x 6.65” D x 2.75” H, 2.5lb

**Harmonic Current:** EN 61000-3-2
**Voltage Fluctuations & Flicker** EN 61000-3-3
- ASTM D4169-Distribution Cycle 13- Assurance Level 1 Schedule A: Handling
- ASTM D4169-Distribution Cycle 13- Assurance Level 1 Schedule C: Vehicle Stacking
- ASTM D4169-Distribution Cycle 13- Assurance Level 1 Schedule F: Loose Load Vibration
- ASTM D4169-Distribution Cycle 13- Assurance Level 1 Schedule E: Vehicle Vibration
- MIL-STD-810 Method 507.2 Procedure III-Aggravated Humidity
- HALT Testing -10 to +70 degrees C @ 4g, 8g & 12g
- IEEE C62.41 Surge Resistance Test ± 1000V on video inputs
### ORDERING INFORMATION

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<td>1 Channel 1RU Chassis QAM Inserter</td>
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<tr>
<td>QRF5000-2</td>
<td>2 Channel 1RU Chassis QAM Inserter</td>
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<td>QRF5000-3</td>
<td>3 Channel 1RU Chassis QAM Inserter</td>
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<tr>
<td>QRF5000-4</td>
<td>4 Channel 1RU Chassis QAM Inserter</td>
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<tr>
<td>QRF5000-1/MR</td>
<td>1 Channel 1RU Chassis QAM Inserter, SD SDI Input</td>
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<tr>
<td>QRF5000-2/MR</td>
<td>2 Channel 1RU Chassis QAM Inserter, SD SDI Input</td>
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<tr>
<td>QRF5000-1/DQ</td>
<td>1 Channel 1RU Chassis QAM Inserter w/Demod QAM Tuner</td>
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<tr>
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<tr>
<td>QRF5010-1</td>
<td>1 Channel 1RU Chassis Encoder/Expansion Unit</td>
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<td>QRF5000M-1</td>
<td>1 Channel Mini Chassis QAM Inserter</td>
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<tr>
<td>QRF5000W-1</td>
<td>1 Channel Wall mount Chassis QAM Inserter</td>
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### UNIVERSAL COMPONENTS

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<tbody>
<tr>
<td>QRF5000-ENC</td>
<td>MPEG2 Encoder Card, CVBS, S-VIDEO, 10k RCA Audio</td>
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<tr>
<td>VL4125B-ENC</td>
<td>MPEG2 Encoder Card, CVBS, S-VIDEO, 600 Ohm Audio</td>
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<tr>
<td>QRF5000-HDMI</td>
<td>MPEG2 Encoder Card, HDMI</td>
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<tr>
<td>QRF5000-FX</td>
<td>Fiber Output Card</td>
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