



ACION 8000 Series

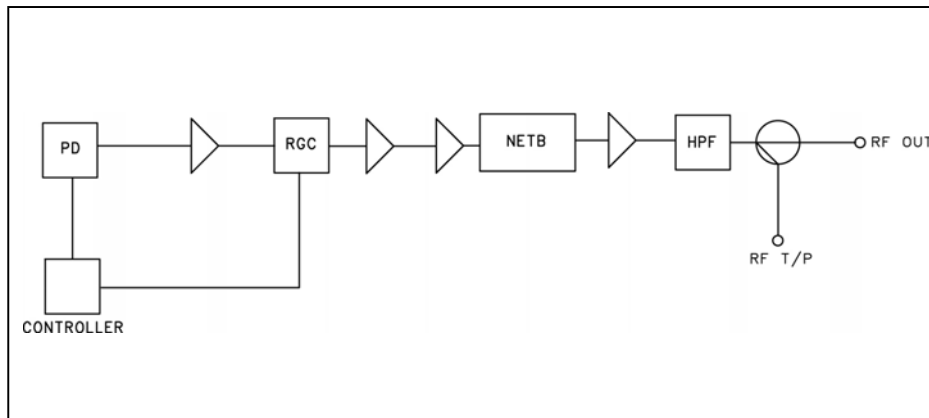
A8KFR3 QAM CWDM QAM Forward Optical Transmitter

The A8KFR3 QAM is an advanced CWDM Forward Optical Receiver designed for HFC network, with high reliability, scalability, low input optical power and cost-effectiveness. The A8KFR3 QAM has wide range of operation wavelength from 1260 to 1620nm. In multi wavelength CWDM application, the capacity of the HFC network can be increased substantially without installing new optical fiber. The module is hot-swappable with integrated management through A8KPCM and remote management by HMS SNMP.

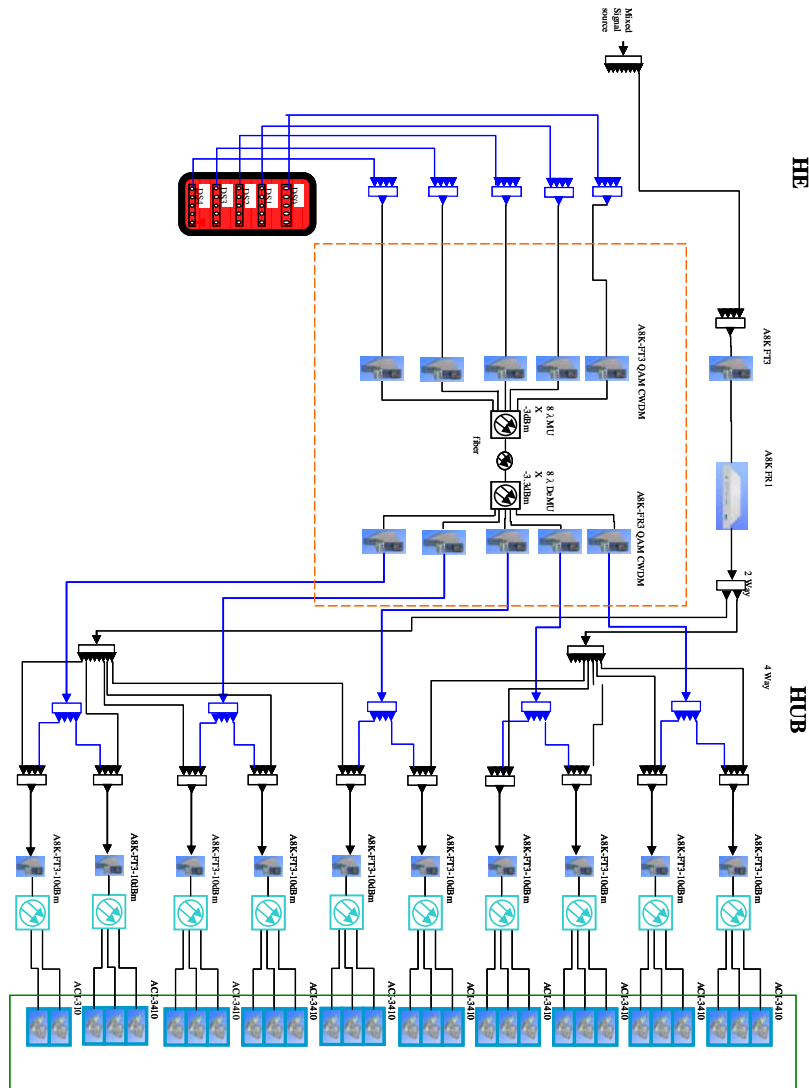
Features

- ◆ Bandwidth 55 MHz~870 MHz.
- ◆ Input Wavelength CWDM 1260~1620nm
- ◆ Hot-swappable.
- ◆ Remote monitor and control function by HMS SNMP.
- ◆ RF test point on front panel.
- ◆ Optical connector: SC/APC with shutter (standard), FC/APC or E2000/APC (optional).

Block Diagrams



Application



Specifications

| ACI | | ACION8000 Series A8KFR3QAM CWDM QAM Forward Optical Receiver | | |
|--|----------------|---|--|-----------------------------|
| PARAMETERS | CONDITIONS | UNITS | SPECIFICATION | NOTES |
| Optical Specification | | | | |
| Optical Wavelength | | nm | 1260 ~ 1620 | |
| Connector Type | | | SC/APC(standard), FC/APC, E2000/APC (optional) | |
| Input Optical Power | | dBm | -10 ~ -14 | |
| RF Parameters | | | | |
| Operating Bandwidth | | MHz | 55 ~ 870 | |
| RF Input Return Loss | | dB | 17 | |
| RF output Level | Min | dBmV/ch | 45@-12dBm | ★1 |
| RGC Gain Control | | dB | 0 ~ -20 (±1) (Total 50Ω RF Input Level 0±0.5) | Step 1 dB |
| Flatness (Peak-to-Valley) | 55 to 870MHz | dB | ± 0.75 | |
| Slope | | dB | 0 ± 1 | |
| Test Point | | dB | -20 ± 0.5 | |
| Distortion Performance | | | | |
| MER | 6 ch QAM | dB | ≥ 37, 64QAM ≥ 37, 256QAM | tested with FT3 QAM ★2★3 |
| BER | 6 ch QAM | dB | < 1.0E -9, 64QAM < 1.0E -8, 256QAM | tested with FT3 QAM ★2★4 |
| Electrical/Environmental/Mechanical | | | | |
| RF Connector Type | Rear Panel | | F type female | |
| Module Width | | slot | 1 | |
| Dimensions | D×H×W | in. (mm) | 16.1 x 5.0 x 1.0 (410.0 x 127.0 x 25.9) | |
| Operating Temperature | | °F (°C) | 32 to 122 (0 to 50) | |
| Storage Temperature | | °F (°C) | -40 to 149 (-40 to 65) | |
| Storage Relative Humidity | Non-condensing | % | 0 to 90 | |
| Power Consumption | Max. | W | 14.8 | |

★1: Forward Transmitter OMI= 12% at Optical Input Level -12 dBm.

★2: The optical fiber length is 20 Km. The RF output level of A8KFR3 should be 45 dBmV/ch at -12 dBm optical input.

★3: The MER of QAM signal source should be 40 dB (equalized) at least.

★4: The BER of signal source should be 1.0E -9 at least for 64 and 256QAM.

Ordering Matrix

| | | | | | | | | | | | | | |
|---|-------------------|-----------------------|---|-----------------|---|---|-----------------------|---|---|------------|---|---|---------------|
| A8KFR3 QAM Configuration Sheet | | | | | | | | | | | | | |
| Customer: _____ | | | | | | | | | | | | | |
| Created By: _____ | | | | | | | | | | | | | |
| ORDERING MATRIX | | | | 2009/5/4 | | | | | | | | | |
| Position | | | 1 | 2 | | | | | | | | | |
| PART NUMBER | A8KFR3 QAM | — | | | | | | | | | | | |
| <p>1-2. Connector</p> <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;">S</td> <td style="text-align: center;">C</td> <td>= SC / APC (standard)</td> </tr> <tr> <td style="text-align: center;">F</td> <td style="text-align: center;">C</td> <td>= FC / APC</td> </tr> <tr> <td style="text-align: center;">E</td> <td style="text-align: center;">C</td> <td>= E2000 / APC</td> </tr> </table> | | | | | S | C | = SC / APC (standard) | F | C | = FC / APC | E | C | = E2000 / APC |
| S | C | = SC / APC (standard) | | | | | | | | | | | |
| F | C | = FC / APC | | | | | | | | | | | |
| E | C | = E2000 / APC | | | | | | | | | | | |
| NOTES: | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |



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