

FEATURES

- Eliminates Optical Beat Interference (OBI) from RFoG networks, allowing operators to deploy high capacity, FTTH networks that leverage the DOCSIS® infrastructure
- Multiple CWDM upstream transmitter wavelength options for re-transmission to headend or hub
- Enables DOCSIS 3.0 upstream network capability
- Dedicated upstream and downstream ports
- Expands network reach and adds capability for higher split ratios in the optical network
- Compatible with standards-based 1550/1610 nm RFoG deployments, integrating seamlessly with existing headend and customer premise equipment

The CommScope AgileMax® is an exciting new breakthrough in RF-over-Glass (RFoG) FTTH network technology. Replacing the optical splitters commonly found in traditional RFoG architectures, AgileMax optical distribution technology allows operators to completely eliminate Optical Beat Interference (OBI) from their networks—even in networks with multiple, active upstream lasers. By eliminating OBI, operators can significantly expand their networks' upstream and downstream capacity and data speed without changing back-office infrastructure. As a result, AgileMax deployments overcome the cost, scalability, and capacity restrictions that limit RFoG performance, while greatly reducing operational complexity in these networks.



CWDM Upstream Options for Segmentation

AgileMax AM3217A units have a dedicated CWDM Return Transmitter that is available in multiple wavelength options. The transmitter provides a return link back to the headend or hub, enabling several AgileMax modules to share a common return fiber.

Future-Proof Current Networks

Current solutions for mitigating the effects of OBI in the network typically rely on techniques such as limiting simultaneous upstream transmissions via the use of only a single upstream channel, utilizing CMTS scheduling algorithms in DOCSIS 3.0, or utilizing wavelength management techniques in the RFoG ONU. These techniques limit network capacity and add cost and complexity to RFoG deployments.

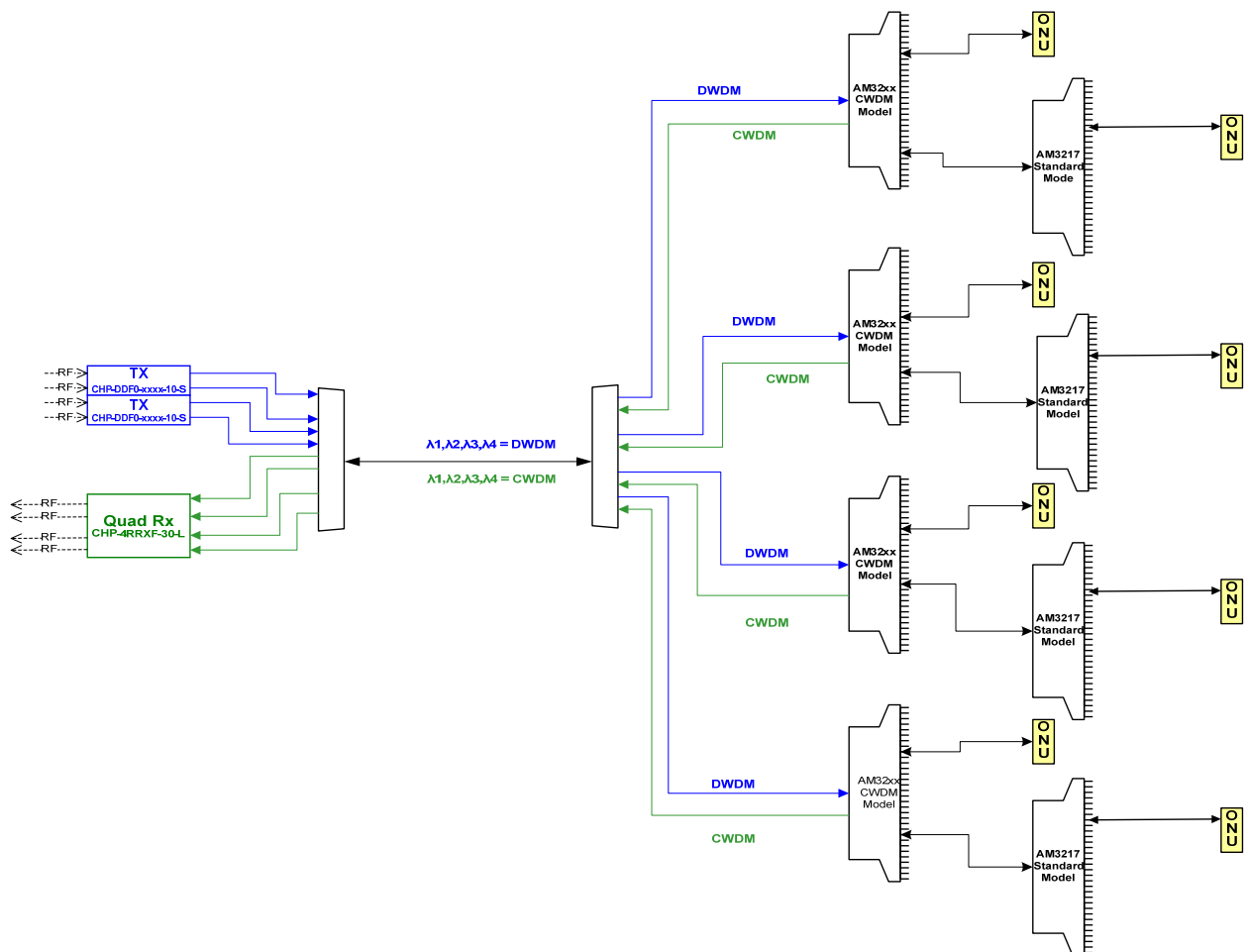
As operators migrate to higher-capacity DOCSIS 3.0 networks, they will need a way to eliminate OBI without compromising network performance. AgileMax meets this need by enabling full DOCSIS 3.0 support, allowing operators to expand the efficiency of their fiber infrastructure.

AgileMax also provides full support for 1G and 10G PON wavelengths, enabling RFoG and PON networks to coexist over the same fiber deployments. This capability provides a future-proof solution which allows operators to maximize their fiber assets, migrating to PON-based solutions as necessary

Long Reach, Large Splits

The AgileMax solution provides the flexibility to expand optical reach and split ratio, allowing operators to more easily deploy new FTTH networks as needed to support growing customer demand. AgileMax network deployments also can easily achieve twice the reach of traditional RFoG. By using AgileMax instead of passive splitters, operators can achieve service groups up to 1024 ONUs to a single headend optical receiver port with absolutely no OBI in the upstream.

Typical Multiwavelength 1RU AM3217 Network Architecture



SPECIFICATIONS

| Characteristics | Specification |
|--|---|
| Physical | |
| Dimensions | 1.72 in H x 19.00 in W x 10.20 in D (4.37 x 48.26 x 25.91 cm) |
| Weight | 8.5 lbs (3.86 kg) |
| Environmental | |
| Operating Temperature Range | -40° to +140°F (-40° to +60°C) |
| Operating/Storage Humidity | 5% to 95%, non-condensing |
| General | |
| Optical Connector | SC/APC |
| Number of Subscriber Ports | 32 |
| Downstream Operating Wavelength | 1551 ± 7.5 nm |
| Upstream Operating Wavelength | 1611 ± 10 nm |
| Output Power, Downstream | -1 dBm |
| Insertion Loss Uniformity, Downstream | ± 1.0 dB |
| Output Power, Standard Upstream ¹ | 3 dBm |
| Output Power, Low Output Upstream | -12 dBm |
| Upstream Optical Input Level (Distribution Ports) ² | -3 to +3 dBm |
| Downstream Optical Input Level ³ | -3 to +6 dBm |
| Upstream Transmitter Wavelengths | 1471, 1491, 1591, or 1611 nm |
| PON Wavelength Compatibility ⁴ | 1260–1360 nm, 1480–1500 nm, 1575–1581 nm |
| Power Requirements | |
| Input Voltage Range | 22–26 Vdc |
| Maximum Input Voltage (+24 Vdc) | +29 Vdc |
| Power Consumption | 8.7 watts |
| DC Current | 360 mA |

NOTES:

1. Upstream output power is +3 dBm, with the presence of upstream optical input on any distribution port within the specified wavelength and optical input range. If there is no upstream optical input power present on the distribution port, the upstream output power level will be approximately -6 dBm or lower.
2. For a cascaded AgileMax architecture, the upstream optical input range is 0 to +3 dBm.
3. > -1 dBm optical input recommended for optimum performance.
4. PON needs to be injected externally to the AgileMax on the Downstream Common Port. The HFC 1611 nm ONU Upstream has a dedicated port.

ORDERING INFORMATION

| | | | | | | | | | | | | | | | | | |
|----------|----------|----------|----------|----------|----------|----------|---|----------|-----------|-----------|---|-----------|-----------|-----------|-----------|-----------|-----------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | — | 9 | 10 | 11 | — | 13 | 14 | 15 | 16 | 17 | 18 |
| A | M | 3 | 2 | 1 | 7 | A | | C | N | N | | N | 1 | N | N | F | S |

| | | | |
|--------------|---|-----------|--------------------------------|
| 1 – 2 | Module Type | 13 | Future |
| | Rack Mount | | N — None |
| 3 – 4 | Optical Split Ports | 14 | Package |
| | 32 | | 1 — 1RU |
| 5 – 6 | EDFA Power (dBm) | 15 | Dedicated Upstream Port |
| | 17 (only option for CWDM model) | | Y — Yes |
| 7 | Upstream Receiver Port | 16 | Future 2 |
| | 1610 nm | | N — None |
| 9 | Return Laser Type | 17 | Powering |
| | A — 1611 nm | | F — +24 Vdc |
| | B — 1471 nm | | |
| | C — 1491 nm | | |
| | D — 1591 nm | | |
| 10 | Additional Ports | 18 | Optical Connectors |
| | N — None | | S — SC/APC |
| 11 | Local PON Injection Port | | |
| | N — None (not available on CWDM models) | | |

RELATED PRODUCTS

| | |
|-----------------------------|-----------------------|
| CHP CORWave® 3 Transmitters | CP8xxxx RFoG ONUs |
| CHP EDFAs | HT3545 Transmitters |
| CH3000 | NH4000 VHub |
| FA35xx EDFAs | Installation Services |

Contact Customer Care for product information and sales:

- United States: 866-36-ARRIS
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Note: Specifications are subject to change without notice.

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