

# RF over Glass (RFoG)

RFoG SDU R-ONU

with 42/54, 65/87, 85/105, and 204/258 MHz Options

## FEATURES

- AGC controlled receiver with -6 to +2dBm optical input range
- 18 dBmV RF output level for single subscriber (SDU) applications
- Burst mode is supported
- Input optical level test points (1V/mW)
- 54/87/105/258–1218MHz forward on 1550 nm and 5–42/65/85/204MHz return on 1610 nm wavelengths
- 1610nm DFB laser transmitter supports full DOCSIS® 3.0 operation
- DC power supported via RF port or dedicated power port
- 10/10, 10/1, 2/1, 1/1Gbps PON pass-through and no PON pass-through options

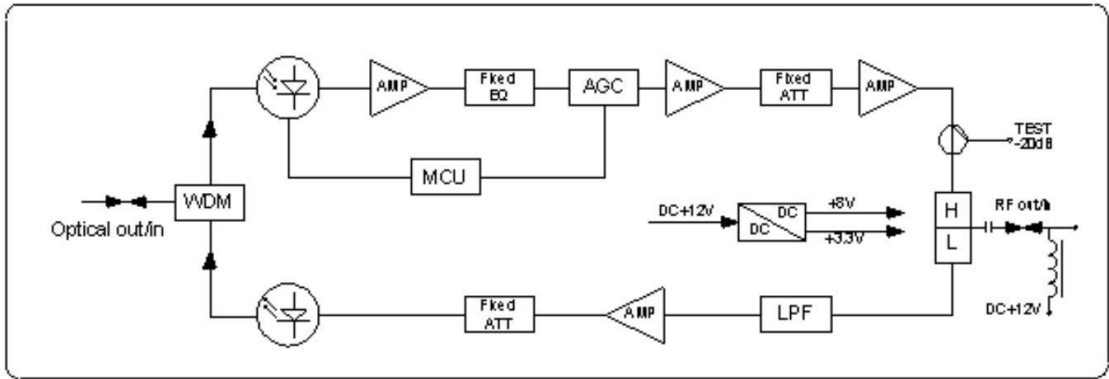


## PRODUCT OVERVIEW

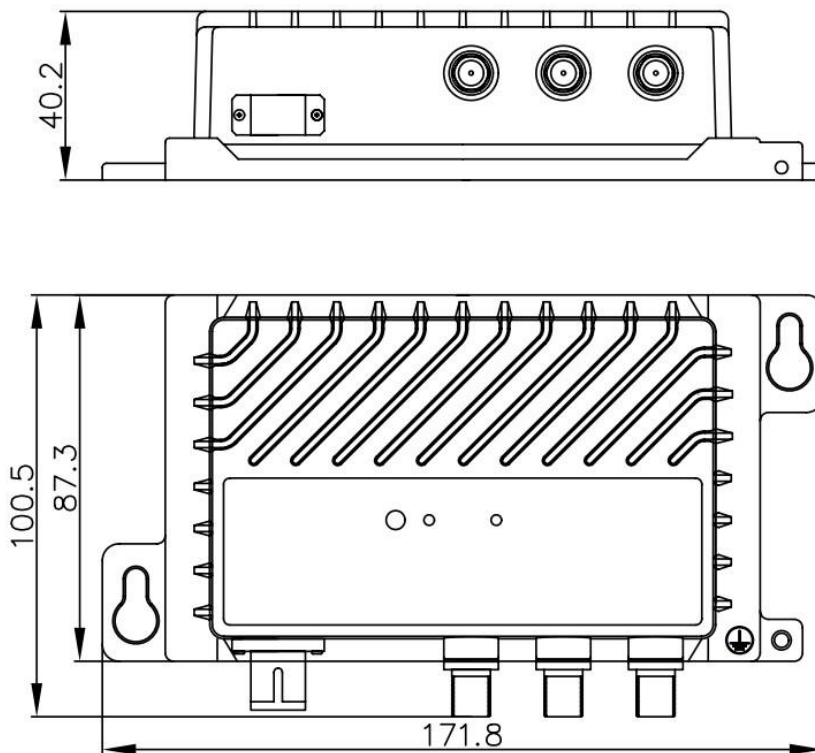
The SANLAND SDU RFoG D01 Optical Network Unit (R-ONU) for Single Dwelling Unit (SDU) applications support cost-effective deployment of full interactive video, voice, and data services over an RFoG network. SDU RFoG D01 enables multiple simultaneous upstream RF channel transmissions, enabling multiple MAC domains and full DOCSIS 3.0 channel usage to efficiently coexist.

The 18 dBmV RF output with AGC (Automatic Gain Control) supports a wide array of SDU designs, with a 5–42/65/85/204MHz return path using 1610 nm wavelength optics and a 54/87/105/258–1218MHz forward path on 1550 nm wavelength optics.

### BLOCK DIAGRAM



### DIMENSIONS



### SPECIFICATIONS

#### 1) Physical

| Item       | Specification    |
|------------|------------------|
| Dimensions | 172×100.5×40.2mm |
| Weight     | 0.25Kg           |

#### 2) Environmental

| Item                        | Specification            |
|-----------------------------|--------------------------|
| Operating Temperature Range | -40℃~60℃                 |
| Storage Temperature Range   | -40℃~65℃                 |
| Protection Class            | IP41                     |
| Humidity                    | 5% to 95% non-condensing |

#### 3) Power Requirement

| Item                   | Specification |
|------------------------|---------------|
| Input Voltage Range    | AC(90~265)V   |
| Power Consumption, max | 4W            |

#### 4) Connectors

| Item   | Specification  |
|--|--|
| Optical Interface                                  | IEC 61754-4 compliant SC/APC recessed female fiber connector                                       |
| Optical Interface<br>(PON pass-through model only) | IEC 61754-4 compliant SC/APC recessed female fiber connector for 1490/1310nm or 1577/1270nm GE PON |
| RF Interface                                       | 75 ohm coax "F-female" connector   |
| DC power Interface                                 | 75 ohm coax "F-female" connector   |
| Forward Path RF -20 dB Test Point                  | 75 ohm coax "F-female" connector   |

#### 5) Downstream

| Item                    | Specification         |
|-------------------------|-----------------------|
| <b>Optical Receiver</b> |                       |
| Input Wavelength        | 1535-1565nm           |
| Input Power Range       | +2~-8dBm              |
| <b>RF Performance</b>   |                       |
| RF Passband             | 54/87/105/258-1218MHz |

|                           |  |
|---------------------------|--|
| Channel Loading           | Analog PAL-D(up to 550MHz), 64QAM(550-1GHz)                |
| AGC Range                 | +2~-6dBm(LED lights green within AGC range, otherwise red) |
| RF Output Level           | 18±1dBmV at DS22   |
| Slope                     | 3~5dB  |
| Flatness(excluding Slope) | ±1dB   |
| Output Return Loss        | <-16dB   |
| Output Level Stability    | ±2.0dB (over +1 to -5 dBm input power)                     |
| CSO                       | <-58dB(at 0 dBm input power)                               |
| CTB                       | <-62dB(at 0 dBm input power)                               |
| C/N                       | ≥47dB(at -5 dBm input power)                               |

### 6) UPSTREAM

| Item   | Specification     |
|--|-------------------|
| <b>Optical Transmitter</b>                                 |                   |
| Transmission Wavelength                                    | 1610±10nm         |
| Output Power   | 2.5±0.5mW         |
| <b>RF Performance</b>                                      |                   |
| Upstream Passband  | 5-42/65/85/204MHz |
| Flatness in Band   | ±0.75dB           |
| RF input Return Loss                                       | <-16dB            |
| RF Input Range   | 15-45dBmV         |
| Laser on Level   | 10±1dBmV          |
| Laser off Level  | 5±1dBmV           |
| Maximum Delay from Monitoring<br>RF Power on to Laser on   | 1.3us             |
| Maximum Delay from Monitoring<br>RF Power off to Laser off | 1.6us             |