

**PRODUCT
SPECIFICATION**



Cost effective solution for enhancing indoor coverage and higher data rates for 2100 MHz UMTS applications

Andrew MR2118 gives designers a simple tool to solve their small area 2100 MHz UMTS coverage and performance issues.

The MR2118 is a bi-directional amplifier used to enhance signals between User Equipment (UE) and a Node B (Base Station) in a 2100 MHz UMTS network. It has been designed to increase signal strength in small and medium sized areas such as offices, shops, and basements.

MR2118 Repeater

Indoor Coverage and High Speed Data Enhancer for 2100 MHz UMTS Applications

By boosting the signal level the MR2118 increases indoor coverage and allows high data rate connectivity.

The MR2118 is easy to install. Also a web-based LMT simplifies to commission and configure the equipment. The RF link (donor) towards the Node B is typically fed from an outdoor antenna while the coverage area is fed by an indoor antenna. The opportunity to adjust the passband of repeater helps to cover any specific segment of 2100 MHz frequency band.

Due to modular design various combinations with MR2118, for example variable triple segment or variable dualband versions will be possible within one cabinet.

Autogain functionality enables automatic gain adjustment in order to maximize the performance, however gain may be set manually if desired. An alarm interface with LED's indicates the status of the equipment locally. Moreover the status and alarms of the MR2118 can be queried in the web-based LMT.

The MR2118 will have an optional remote

monitor function that provides equipment alarming and basic configuration settings via an SMS. Alarm SMSs (including heart beat) can be sent to the common Andrew OMC or to any standard SMS receiver (even a mobile phone). Moreover the MR2118 can be connected to LAN.

- Easy to install due to light weight, small dimensions and autogain functionality
- Easy commissioning via web-based LMT
- Automatic level control (ALC)
- Variable bandwidth
- LED's for local alarm indication
- Status and RSSI indication via display
- Meeting 3GPP
- Optional remote control via SMS
- Connection to LAN
- Multi-functional miniRepeater Family Modularity

MR2118 - Product Specification

Electrical

| | |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Frequency range, MHz | |
| UMTS2100 | Uplink 1920 to 1980 Downlink 2110 to 2170 |
| RF output power, dBm | Uplink +18 @ 1 carrier +15 @ 2 carriers Downlink +18 @ 1 carrier +15 @ 2 carriers |
| OICP3, dBm | Uplink +41 Downlink +41 |
| P-1dBc, dBm | Uplink +28 Downlink +28 |
| Noise figure Uplink/Downlink, dB | Maximum gain 8.0 |
| Spurious emission, dB | According to 3GPP |
| Gain, dB | 70 |
| Gain adjust range, dB | 30 in steps of 1 |
| Bandwidth options, MHz | variable 1 to 25 in steps of 10 kHz |
| Flatness, dB | ±2.5 |
| Delay, µs | 5 |
| Delay ripple, ns | ±200 |
| EVM | 8% |
| PCDE @ SF=256, dB | -42 |

| | |
|--------------------------|---------------------------------------------------------------|
| Power Supply | Mains Power, Vac 100 to 240 Local Power, Vdc 6 |
| Power consumption, watts | 20 |
| Antenna port | Connector SMA Female Return loss, dB 10 |
| Indoor antenna | Optional |
| Antenna gain, dBi | 2 |
| Radiation | Omni |

System Supervision and Control

| | |
|---------|-----------------------------------------|
| Alarms | Temperature, Current, ALC |
| Options | Remote control via SMS, Heartbeat |

Environmental

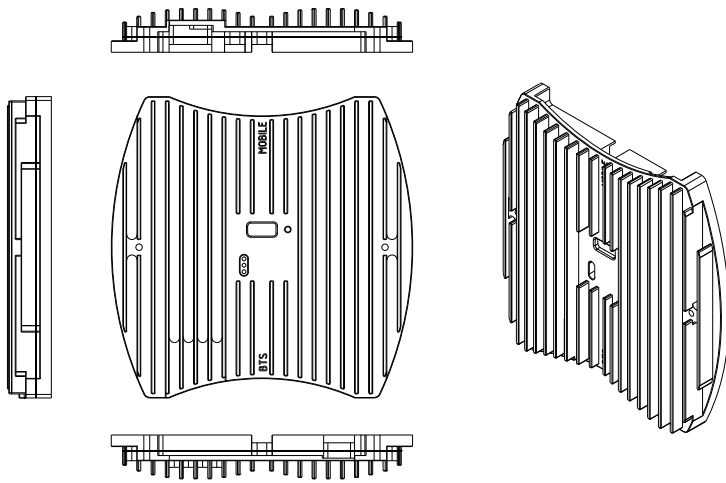
| | |
|---------------------------------|-----------------|
| Operating temperature range, °C | +5 to +40 |
| Ingress protection | IP30 |

Mechanical

| | |
|-------------------------------|-------------------------------------------------|
| Height, width, depth, mm (in) | 240 x 240 x 35 (9.5 x 9.5 x 1.4) |
| Weight, kg (lb) | 1.5 (3.3) |

All figures are typical values

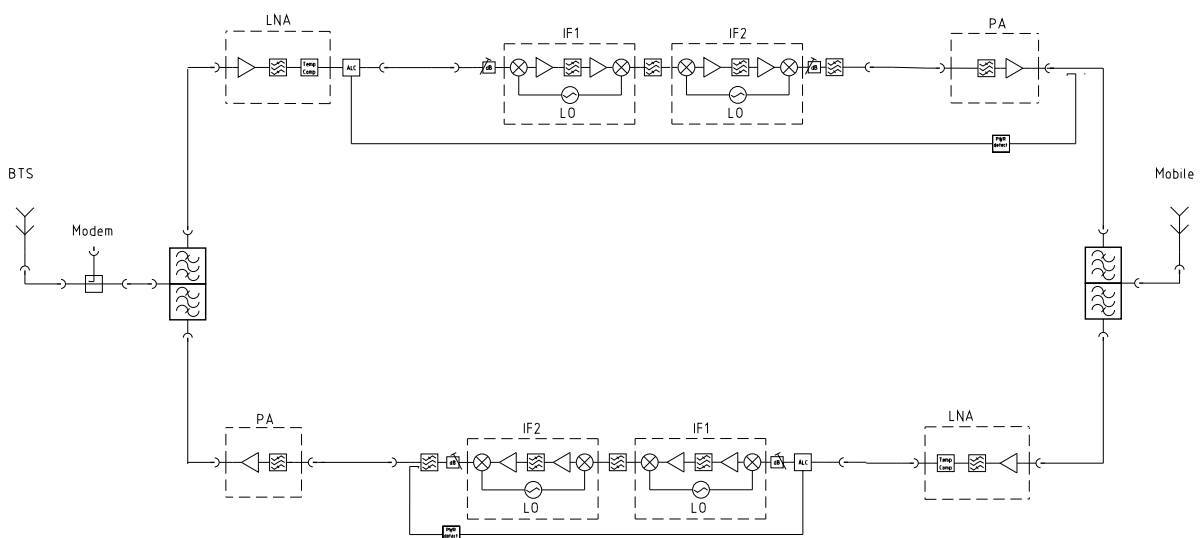
MR2118 - Product Specification



MRx18



Optional Equipment: Coverage Antenna for MRx18



Block diagram MRx18

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ANDREW® MRx18

Alarms

| Repeater | MR2118 | Severity |
|------------------------|--------------------------------|-------------------------------------------------|
| ALC Alarm DL | <input type="checkbox"/> | Disabled <input type="text" value="new value"/> |
| ALC Alarm UL | <input type="checkbox"/> | Disabled <input type="text" value="new value"/> |
| RSSI Alarm | <input type="checkbox"/> | Disabled <input type="text" value="new value"/> |
| Current Alarm | <input type="checkbox"/> | Disabled <input type="text" value="new value"/> |
| Local Oscillator Alarm | <input type="checkbox"/> | Disabled <input type="text" value="new value"/> |
| Temperatur Alarm | <input type="checkbox"/> 34 °C | Disabled <input type="text" value="new value"/> |

Critical Major Minor Warning OK Disabled

Alarms

ANDREW® MRx18

Status

| Repeater | MR2118 |
|-----------------|------------|
| Current Gain DL | 70 |
| Current Gain UL | 70 |
| RSSI Level | <-80 |
| Output Power DL | <-10,0 |
| Output Power UL | <-10,0 |
| ALC DL | not active |
| ALC UL | not active |

Status

ANDREW® MRx18

Technical Setup

| Repeater | MR2118 |
|--------------------|---------------------------------------------------------------------------|
| Duplexer Range DL | 2110 - 2170 MHz |
| Duplexer Range UL | 1920 - 1980 MHz |
| Userband DL | <input type="text" value="2120"/> - <input type="text" value="2145"/> MHz |
| Userband UL | 1930 - 1955 MHz |
| Gain Setting DL | 70 dB <input type="text" value="new value"/> |
| Gain Setting UL | 70 dB <input type="text" value="new value"/> |
| Autogain | enabled <input type="text" value="new value"/> |
| Autogain Inbalance | 0 dB <input type="text" value="new value"/> |
| Autogain Mode | 0s/24h <input type="text" value="new value"/> |
| Max Outputpower DL | 18 dB <input type="text" value="new value"/> |
| Max Outputpower UL | 18 dB <input type="text" value="new value"/> |
| Powerdown | disabled <input type="text" value="new value"/> |

Technician Setup



www.commscope.com

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Bulletin PA-102905-EN (11/08)