Key Features

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COMPACT DESIGN with front connectors and dual DC to allow easy integration on waterproof case for remote application

LOW NOISE DESIGN to allow great coverage when used to remote receiving antennas

HIGH INTERFERENCE IMMUNITY thanks to high IIP3 design and a control/compensation of gain

EASY TO USE thanks to integrated RF/optical power meter and optical power compensation

REAL-TIME CLOCK with a backed-up static RAM to monitor and record internal RF levels and service data (i.e. laser life time)

TX UNIT (remote RF reception, i.e. diversity antennas):
MFLC units can incorporate a digitally tuned filter (25 MHz bandwidth, center frequency tunable over 404-788 MHz).
It can route RF through an external filter or to additional receiver (redundancy) to easily implement a failsafe configuration that can switch on a redundant receiver or transmitter if any fault is detected
It automatically monitors RF levels and intervenes to avoid fiber saturation

RX UNIT (RF transmission, i.e. single-frequency master/slave areas)
It can route an IFB high power signal to transmit locally and send low power IFB carrier over fiber to slave units.
When it is working along with a MTK952N-MS in slave configuration, the fiber loss is automatically recovered and the units increase the gain so that the transmitter power equals the target level (measured with an SWR meter integrated into the MTK952N-MS)

REMOTE MONITOR/CONTROL thanks to a data link on Ethernet 10/100 Base Tx

RF INPUT/OUTPUT:
- 4 SMA-F connector female 50Ω with switchable 12V boosting power (only on *transmitter modules*)
- 4 SMA-F 50Ω each optical *transmitter module*, failsafe option or external RF filter
- 4 SMA-F 50Ω each optical *receiver module*, failsafe option

OPTICAL INPUT/OUTPUT: 2 connectors SC-APC type

DATA LINK: RJ45: 10/100 Base TX + Can-bus: DB25 connector

POWER SUPPLY:
Dual DC INPUT: 10-28Vdc thru DB25 connector

Description

MFLC provides wideband optical link for up to 4 RF channels combined in a single fiber thanks to CWDM technology.

It is designed to allow for a flexible and modular configuration thanks to a mainboard that can be fitted with up to 4 plug-in boards that can be any combination of two types:

- TX: Laser optical transmitter, (CDWM) plug-in board
- RX: Optical-receiver plug-in board

Example: MFLC-TTTT is 4 lase

r transmitter unit that works with a MFL-RRRR with 4 channel receiver.
Other configurations are also possible like MFL-RR / MFL-TT or a mixed like a MFL-RRTT with both receiver and transmitter channels.

To simplify the usage we give a name of the final configuration that easy identify the CWDM channels and a color code for the RF connectors (N type). We use as default 4 laser wavelength although the CWDM standard can allow to use much more with a 20nm wavelength separation:

- Channel 51 short name for wavelength 1510 nm
- Channel 53 short name for wavelength 1530 nm
- Channel 55 short name for wavelength 1550 nm
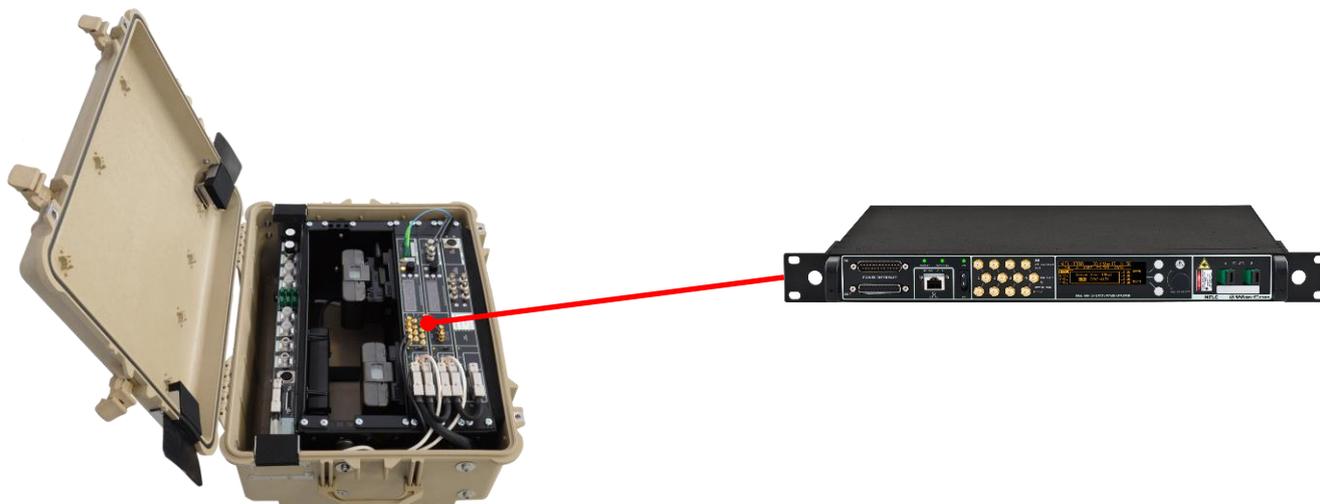- Channel 57 short name for wavelength 1570 nm

Wavelength and Color Coding:

Channel	Wavelength	Color Identifier
51	Wavelength *1510 nm* laser, single mode	Blue
53	Wavelength *1530 nm* laser, single mode	Green
55	Wavelength *1550 nm* laser, single mode	Yellow
57	Wavelength *1570 nm* laser, single mode	Orange

For example:

- MFLC-TTRR has 2 Tx on ch.51/53and 2 Rx on ch 55/57
- MFLC-RRTT has 2 Rx on ch.51/53 & and 2 Tx on ch 55/57
- MFLC-TT-- has 2 Tx on ch.51/53 and no module on ch 55/57
- MFLC-RR-- has 2 Rx on ch.51/53 and no module on ch 55/57

NAME (i.e.)	Ch. 51	Ch. 53	Ch. 55	Ch. 57
MFLC-TTRR	T	T	R	R
MFLC-RRTT	R	R	T	T
MFLC-TT--	T	T	-	-
MFLC-RR--	R	R	-	-

* The images are purely for information. This represent one of the possible configurations

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