



4 Mbps M Series 1+1 Modular Indoor Unit



CFM-M4P-MUX IDU provides 1+1 HSB/SD/FD protection switching for CFM radio installations. The IDU supports one or two interface modules with total traffic capacity from 0 Mbps to 4 Mbps.

-  [Radio specifications](#)
-  [Management System](#)

The CFM-M4P-MUX features:

- IDU can be equipped with 1 or 2 power supply hot-swappable plug-in modules. If there is only one module installed, CFM-M4P-MUX operates in 1+0 mode; for 1+1 operation two power supply modules are required. Both plug-in modules operate in a load-sharing mode to power IDU components and provide DC-DC conversion for each radio.
- Enclosed power supply supervisor measures voltage, reports to the management system and performs base-band signal switching
- Maximum capacity of each module slot is 4 Mbps
- Maximum switchover time is 50 ms

1+1 IDU can be equipped with 2 interface modules, - 10/100Base-T Ethernet Bridge module, 1xE1 module, V.35 module.

The typical 1+1 link installation consists of two CFM-M4P-MUX units, 4 L4 Outdoor Units (ODU) and IDU-ODU interconnection cables.

The 1+1 Protection Switch IDU can be optionally equipped with Alarm port (I/O port), which is implemented on DB-25 connector and provides 4 programmable alarm outputs and 4 user inputs. The alarm outputs notify radio-related problems and power supply failures.

TECHNICAL PARAMETERS	
Model name	CFM-M4P-MUX
Operating capacity	4 Mbps
Number of slots for modules	2
Optional interface modules/connectors	Single-port E1 module, balanced (RJ-45) + unbalanced (BNC) Single-port 10/100 Base-T Ethernet (RJ-45) V.35 module (M.34)
Port capacity configuration options	Slot 1: 0-4 Mbps; Slot 2: 0-2 Mbps; 2 Mbps step
Compatibility with following CFM radio	CFM L4
Maximum switchover time	50 ms
MANAGEMENT	
Remote management via service channel	+

Web management	+
Telnet/ASCII console support	+
SNMP monitoring/Traps	+
Alarm port	Optional, 4 inputs, 4 outputs
Performance monitoring	According to ITU-T rec. G.826
Physical interface	DB-9 & RJ-45
Interface	RS-232 & 100 Base-T Ethernet
Loopback test facility	E1, V.35, base-band modem, RF loopback
Network management	SAF Network management system (NMS), built-in terminal management tools - web, SNMP, Telnet (local & remote), IDU LCD
Engineering orderwire	via optional VoIP handset
ELECTRICAL	
Power consumption, IDU	less than 17W (depending on modules installed)
Power consumption, ODU	less than 13W per ODU
Power supply	20 to 60 V DC, any polarity can be grounded
Protection circuit	1.5A
Cable (IDU-ODU)	Single coaxial, up to 300 m LMR 400 (or similar) or up to 100 m RG-213 (or similar), N-type connectors/ up to 20 dB attenuation @ 350 MHz
ENVIRONMENTAL	
Ambient temperature IDU	-5°C to +45°C
Ambient temperature ODU	-33°C to +55°C
Humidity IDU	5% to 95%
Humidity ODU	15% to 100%
Altitude	in accordance with climatic standards
MECHANICAL	
IDU HxWxD mm/weight kg/ H in U	88 x 482x270/ 2.3/ 2U
ODU/FODU mm/weight kg	280x85/2.5 (FODU 3.0)
STANDARDS	
Standard compliance	ETSI, ITU
EMC	EN 301 489
Operational, ODU	EN 300 019, Class 4.1
Operational, IDU	EN 300 019, Class 3.1E
Storage, ODU & IDU	EN 300 019, Class 1.2
Transportation, ODU & IDU	EN 300 019, Class 2.3
Safety	EN 60950