

## FMC series

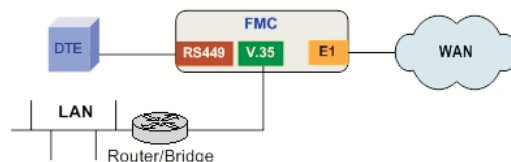
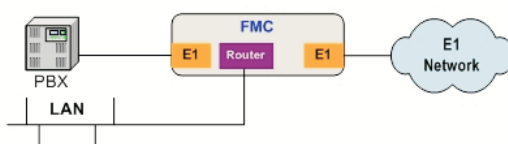
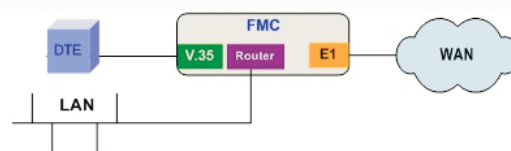
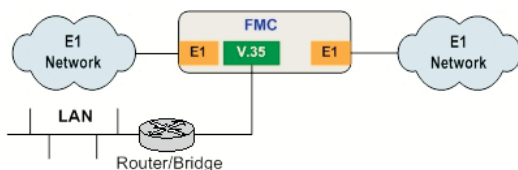
### CSU/DSU (Channel Service Unit/Data Service Unit)

#### Description

Olencom's FMC CSU/DSU product series provides a very flexible economic solution of E1 network access. One flexible E1 line interface and up to two different customer equipment interfaces allow use the FMC when needed only part of 31 DS0 channels or all 32 DS0 channels (clear channel) with maximum effect. Choice of customer equipment interfaces includes E1 ICSU, serial DTE (EIA530, V.35, X.21, RS232, RS449) and built-in router (100Base-TX) in any combinations and flexible DS0 mapping between them.

FMC CSU/DSU series support local control and diagnostics using 2-line by 16-character LCD display and keypads or RS232 console port. This allows users to execute in-service diagnostics and fault isolation. The FMC CSU/DSU also provides multicolor LED indicators on the front panel. Using SNMP Network Management Systems and Telnet connection, users can remotely control and diagnose the FMC from anywhere.

#### Applications



#### Features

- ✓ DSU functionality integrated with an intelligent CSU in a compact package.
- ✓ One/two versatile customer equipment interfaces include E1 ICSU, serial DTE and router.
- ✓ Connection to LAN/WAN, CAD/CAM, or Hosts to E1 Network Services.
- ✓ Local control and diagnostic via RS232 port or 2-line by 16-character LCD & keypad.
- ✓ Multicolor LED indicators.
- ✓ SNMP Network Management Systems.

# FMC series

## CSU/DSU (Channel Service Unit/Data Service Unit)

### Product Specification

#### Line Interface (E1 Interface) - Network & Customer

Line Rate	2.048 Mbps 50 ppm
Line Code	AMI / HDB3 (selectable)
Input Signal	ITU G.703
Jitter	ITU G.823
Framing	ITU G.704
Connector	BNC/RJ48C (specify on order)
Output Signal	ITU G.703
Electrical	75 Coax/120 twisted pair

#### Serial DTE Port

Data Port	Single DTE
Data Rate	N x (56 or 64) Kbps, (n=1 - 31)
Connector	EIA530, V.35, X.21, RS232, RS449 via external adaptor

#### DS0 Mapping

Maps	2 sets of DS0 maps with provision for automatic switching between the 2 maps
Remote Send	Send active DS0 maps to remote site

#### Router Interface

Number of ports	1
Physical Interface	10/100 BaseT x 1
Connector	RJ45
Supporting Routing Protocol	RIP-I, RIP-II
Data Rates	N x 64 Kbps up to E1 capacity, 15,000 frames per second
Supporting Protocols Management	TCP/IP, PPP VT-100, SNMP, LCD Panel

#### Inband Management

Management Protocols	HDLC, PPP
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#### Clear Channel (Unframed Option)

Data Rate	2048 Kbps (32 * 64Kbps)
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#### Performance Monitor

Performance Store	Last 24 hours performance in 15-minute intervals and last 7 days in 24-hour summary line, user, and remote site
Performance Reports	Date & Time, Errored Second, Degraded Minutes, Unavailable Second, Bursty Errored Second, Severe Errored Second, Controlled Slip Second, and Loss of Frame Count
Alarm History	Date & Time, Alarm Type (i.e. Master Clock Loss, RAI, AIS, LOS, BPV, ES, CSS), and Location (i.e. line, DTE)

Alarm Queue	Maximum 40 alarm records which record the latest alarm type, location, and date & time
Threshold	Bursty Seconds, Severely Errored Second, Degraded Minutes

#### System Configuration Parameters (All in non-volatile memory)

Active Configuration	Current working configuration
Stored Configuration	User stored configuration
Default Configuration	Manufacture default configuration (permanent)

#### Console Port

Connector	For FMC-S: RJ11 at front panel For FMC-1S and FMC-2S: DB9S at front panel
Electrical Protocol	RS232 interface Menu driven VT-100 terminal, or Embedded SNMP (optional)

#### Diagnostics Test

Loopbacks	Line Loopback, Payload Loopback, Local Loopback, DTE Loopback, and Router Loopback
Test Pattern	15-bit PRBS, 3-in-24, 1-in-8, 2-in-8, 1:1 patterns
Idle Channel	Use of idle channel to perform PRBS diagnostic test
Remote Loopback	Line Loopback, Payload Loopback, and DTE Channel Loopback (V.54 or Olencom proprietary)

#### Front Panel

Keypad	4-key: left arrow, right arrow, ESC, and ENTER
LCD	2 lines by 16 characters
<b>Physical/Electrical</b>	
Dimensions	22 x 6 x 29 cm (WxHxD)
Power	90-250Vac, 20 to 60 Vdc, 50/60 Hz, 5 watts
Temperature	0 -50C
Humidity	0-95% RH (non-condensing)
Mounting	Desk-top stackable

#### Compliance

ETSI	ETS 300420, ETS 300419
Pan European	CTR 12/13, CE 168X
BABT	NTR4
ITU	G.703, G.704, G.706, G.732, G.736, G.823
EMI/EMC	EN50082-1, EN55022 Class A

